

Abstracts of the IPOS 11th World Congress of Psycho-Oncology

PLENARY PRESENTATIONS

Plenary 1

Plen 1.1

Cancer as a Social Disease

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According to the World Health Organization (WHO) report issued at the end of 2008, approximately 25 million persons are living with cancer throughout the world. Cancer is the second leading cause of mortality worldwide, killing more people than AIDS, tuberculosis and malaria combined. In 2007 about 8 million people died of cancer, accounting for about 13% of all deaths. It has been estimated that approximately 72% of these deaths occurred in developing countries. If current trends continue, annual global cancer mortality will rise to about 11.5 million persons by 2030. About one-third of cancer cases can be prevented and another third can be cured if detected early and treated properly. A three-year study conducted on behalf of the WHO by policy makers, academics, former heads of states and ex-ministers of health, and entitled 'Closing the Gap in a Generation: Health Equity through Action on the Social Determinants of Health', showed that life expectancy is linked to the social environment where persons are born, live, grow, work and age. The WHO report found that wealth alone is not sufficient to determine the health of citizens and that a majority of people in the world suffer of poor health due to a 'toxic combination' of bad policies, economics and politics. As global health systems will not naturally move towards equity, the WHO stressed the need for all stakeholders to show unprecedented leadership in order to overcome existing social inequities. A global plan to tackle the growing cancer crisis in developing countries, now contained in the 2008 World Cancer Declaration, recommends 11 cancer-busting targets for 2020 and is intended as a guide to tailor the efforts of different local communities. The targets encompass both medical and psychosocial aspects of cancer control worldwide, including reducing myths and

misconceptions about cancer, providing access to pain relief and supportive and palliative care to cancer patients and support to their families, and assuring education and training for patients and oncology and psycho-oncology professionals. Cancer control is both a development priority related to the right of every person to health care through access to an effective health care system, and a matter of human rights and human dignity. As IPOS we should be key players in addressing patients' and families' psychosocial concerns as part of cancer care during all illness phases, from diagnosis to end-of-life or survivorship.

Plen 1.2

Lung Cancer as a Social Disease

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Among lay public and professionals, social context of cancer in general, and of lung cancer as one of the most frequent types of neoplastic diseases is often ignored. Indeed, stories of celebrities passing away after a long and debilitating illness leave an impression that cancer does not distinguish rich from poor, or well educated from manual workers. Yet, the truth is far from that and detailed study reveals a significant correlation between low social class and the burden of lung cancer. Our recent epidemiological study compared patients with lung cancer and those with cancer of the large bowel and confirmed significant differences in education, profession, and living conditions, all pointing to a lower social class of patients with lung cancer. These differences have implications for all aspects of the disease. The disadvantage starts with risk factors: unhealthy habits such as smoking, alcohol and poor diet, and exposure to carcinogens in workplace, in micro-environment (such as suburban slums) and in the household. Next are difficulties in implementation of actions aimed at cancer screening and in recognition of early symptoms of the disease. Several obstacles prevent poor people from responding to screening programmes or seeking early medical advice: poor education, communication problems, and

uncertainties regarding compensation for unemployment and costs of health care. With overt disease, patients from low social class face obstacles in longer waiting time for diagnostics and treatment. In addition, uneducated patients from low social background are often treated in local hospitals, rather than in specialised cancer centers. The success and side effects of surgery, radiotherapy, and chemotherapy critically depend on the level of supportive care—another clear disadvantage for patients from low social background. Low education, communication problems, and disintegrated family relations are obstacles to good psychological support and contribute to poor compliance and increased rate of complications of anti-cancer treatment. Finally, in case of incurable disease, palliative treatment critically depends on patient's social network. In conclusion, our activities in cancer prevention, and our approach to patients diagnosed with lung cancer should consider special needs of individuals from low social class. As the first and the most important practical step to help this vulnerable group of patients, we should strive towards improving communication.

Plenary 2

Plen 2.1

Gender Differentiation: Is Care Giving an Egalitarian Concept?

Lea Baider

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Literature claims that different cultures, social structures and gender roles create and foster development of divergent languages and perceptions about the nature of care giving. Care giving variations within these social groups occur via family values, gender role differentiation and norms of care. As men and women create different structures in their caregivers roles. Studies have suggested fundamental differences in how men and women caregivers perceive themselves, with deleterious effects disproportionately accruing to women as compared to men. Women are more socio-centric and assembled, and the experiential content of their relationships with others are basic and relevant. As men enter the world of instrumental and emotional care giving, all known rules change. The world of domestic chores and psychological care is far removed from the familiar social roles of public exposure and financial remuneration. Nonetheless, compassion, satisfaction and mutuality in care giving are some of the strongest buffers against the accumulative psychological and physical stress of caring for the ones we love.

Plen 2.2

Life and Death: How Patients with Metastatic Cancer and Their Partners Face It

Gary Rodin, Camilla Zimmermann, Sarah Hales, Christopher Lo, Lucia Gagliese, Frances Shepherd, Malcolm Moore

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BACKGROUND: There has been widespread agreement on the need for better detection of distress amongst cancer patients and their families. However, research is still in its early stages to delineate the pathways to distress in this population. We have been conducting longitudinal research with patients with metastatic GI and lung cancer and their spouse caregivers to identify the determinants of distress, the quality of death and dying and bereavement morbidity. **METHOD:** 406 patients with metastatic GI and lung cancer and 283 of their spouse caregivers have been recruited thus far from outpatient clinics in a comprehensive cancer center to participate in a mixed methods longitudinal study. The assessment of patients and spouse caregivers includes psychometric measures of adjustment, and semi-structured qualitative interviews with a subset of patients and with spouse caregivers, 6-8 months after the death of their ill spouses. **RESULTS:** We found physical and emotional suffering to be common in patients with metastatic GI and lung cancer and their spouse caregivers prior to the end of life. Distress was even more common in spouse caregivers than in patients but the distress of patients and spouses was linked at all stages of the disease trajectory. Psychosocial factors that protected from distress included hope, self-esteem, attachment security and spiritual well being. The quality of dying and death in patients was related to less severe stress response symptoms in caregivers, 6-8 months after bereavement. **CONCLUSIONS:** The findings from this study confirm that distress in patients and their spouse caregivers arises as a final common pathway of distress. They also confirm that patients and their caregivers constitute an interactive system and that interventions to prevent distress should consider couples and families as the unit of care. Early psychosocial and palliative interventions may not only help to help to prevent distress as disease progresses but may also diminish bereavement morbidity. **RESEARCH IMPLICATIONS:** Identification of specific psychosocial risk factors in patients and their spouses may help in the design of specific targeted interventions to relieve distress and to promote wellbeing in patients and their family members. The role of early detection of distress and of preventive interventions remains to be established. **CLINICAL INDICATIONS:** Routine psychosocial screening that includes not only distress but also the clustering of such factors as

spiritual well-being, attachment anxiety, self esteem and physical distress can help to identify individuals and their spouse caregivers who are most at risk to become distressed. Interventions should be directed not only to distress but to risk factors that contribute to its emergence. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research.

Plen 2.3

Impact of Paediatric Cancer on Patients' Mothers and Fathers: State of the Art

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Having a child diagnosed with cancer that needs to undergo painful medical procedures and repeated hospitalizations, and dealing with the possibility of his/her death challenges parents' emotional stability and the relationship between them. Different models have been used to describe parental reactions to having a chronically ill child (Clubb, 1991). Time bound models suggest that parents' progress through sequential stages when coping with their child's condition. A second model used to explain parental reactions to a child's illness is one of chronic sorrow that occurs in reaction to the loss of long-term plans for the child and to the loss of a complete, healthy child. Likewise, the development of psychological and psychiatric symptoms including emotional distress, subclinical PTSD, anxiety, depression, sleeping disturbances, obsessive-compulsive symptoms, questions about the ability to parent effectively, guilt, and others, has been described in parents of the ill child. Gender differences within the couple have been widely reported in

this respect (Hoekstra-Weeber *et al.*, 1998, 1999; Wijnberg-Williams *et al.* 2006) and correlate with perceived family support, marital satisfaction, concurrent stressors and open communication within the couple, among others. This conference will describe and illustrate the impact of paediatric cancer on parents of the ill child.

Plen 2.4

The Caregiver the Hidden Patient

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Aging may be associated with functional dependence that may be exacerbated by chronic diseases such as cancer. The aging of the population has highlighted the home caregiver as a central player in the management of cancer in the older aged person. Care giving may be a highly stressful experience due to the serious nature of the disease and to the competing obligations of the caregiver. These may include care of his/her own health, management of his/her own profession and of his/her own family. We propose a model of caregiver reward to transform the stress of the caregiver into one of his/her own assets. This should include: 1) The attention of the health care professional should be considerate of the caregiver as well as of the patient. This should include instructions related to the management of the patients and consideration for what the caregiver can and cannot do; 2) repeated interview of the caregiver alone to acknowledge his/her dedication and the value of his/her role. Ideally this should be inscribed in the patient's own value system; 3) support of the caregiver family and highlighting the important role of the caregiver as the unsung hero in today society.

Symposia

S 1.1.1

Psycho-oncology and Palliative Care: Highlights from the 2nd Edition of the Oxford Handbook of Psychiatry and Palliative Medicine

Jimmie Holland

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BACKGROUND: Dr. Holland will discuss the 3 presentations by Drs. Wellisch, Kissane & Rodin which represent highlights of the chapters and content of the 2nd Edition of the Oxford Handbook of Psychiatry and Palliative Medicine. **METHOD:** as above. **RESULTS:** as above. **CONCLUSIONS:** as above. **RESEARCH IMPLICATIONS:** as above. **CLINICAL IMPLICATIONS:** as above. **ACKNOWLEDGEMENT OF FUNDING:** as above.

S 1.1.2

Demoralization Syndrome in Palliative Medicine: Its Recognition and Treatment

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BACKGROUND: 'I do not see the point anymore. There is no reason to go on living.' A common form of existential distress in palliative care is meaninglessness and hopelessness. **METHOD:** A review of research on loss of meaning and hope across the past 25 years and our own in the past 8 years will examine evidence for validity of the construct of Demoralization. **RESULTS:** Prevalence rates of Demoralization vary between 8.5% and 31.7% in populations of medically ill patients. Recent data from a cohort of head & neck cancer patients will be shared. The core feature of anhedonic depression is loss of interest and pleasure in the present moment, while the core feature of demoralization is the loss of anticipatory pleasure and sense of meaning and purpose. **CONCLUSIONS:** Demoralization syndrome is a useful diagnostic category in palliative care because not all of these patients go on to become depressed,

yet they may desire death, and their inherent distress warrants intervention. **RESEARCH IMPLICATIONS:** Further validation studies and field trials are needed across cultures and clinical settings. **CLINICAL IMPLICATIONS:** Approaches to the treatment of demoralization include meaning-based therapies that explore the role, sense of purpose, beliefs, the value of relationships and the worth of the self. Folkman's research on the contribution of meaning-based coping to the development of resilience and positive affect states informs these therapies. **ACKNOWLEDGEMENT OF FUNDING:** MSKCC Survivorship fund.

S 1.1.3

Family Therapy in Palliative Care

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BACKGROUND: This is a presentation outlining fundamental issues in the family therapy of the dying patient. This presentation will focus upon the impacts of the dying process on: the marital (or non married) dyad, the adult-child/parental relationship and the dependant-child/parental relationship. Family therapy in this context has goals including maintenance of open communication, reducing guilt and stress and resolution of family emotional unfinished business where possible. **METHOD:** This presentation will survey fundamental family issues including homeostasis, bonding, basic type of family systems and resilience. It will also examine patterns of family emotional functioning when a family member has died, including hostility level, cohesiveness, and expressiveness. Questions such as where the family is in the life cycle and the role of the ill family member in the family will be a focus. Guidelines for conducting a routine family meeting in palliative care will be presented. Types of marital relationships that evoke crisis in this context will be reviewed. The literature on the impacts of advanced parental cancer on dependant (latency) ages children will be described. **RESULTS:** Younger couples facing terminal illness are more likely to

experience relationship stresses stemming from shifts in independence/dependence. Older couples experience stresses stemming from situational factors like fatigue, and guilt. Families in the mid range of adaptability experience less distress than families who are rigid and chaotic functioning. Families that are able to communicate and make joint decisions function better than families who do not. Approximately 80% of families are able to consistently supportive while 20% cannot while facing terminal cancer. Within the 20% those that are sullen versus overtly conflicted do far less well after a death occurs. **CONCLUSIONS:** Family therapy in palliative care is a highly complex set of interventions potentially involving several 'sub-systems' in a family with the overall goals of facilitating family and patient coping in the end-stage of the patient illness and facilitating family emotional recovery in the post-death bereavement phases of therapy. The aims in the bereavement phase are to preserve family integration and to identify and reduce the risks of complicated grief stemming from pathological family interaction in individual family members. **RESEARCH IMPLICATIONS:** To examine the outcomes of high risk versus normal risk families in terms of variables such as depression, coping, quality of life, and ability to preserve family integration in the family with a terminally ill member. This high risk group generally reflects 20% of the couples/families faced with terminal cancer. **CLINICAL IMPLICATIONS:** This presentation will facilitate the clinician dealing with families on a terminal trajectory in several areas. The presentations will highlight variables to focus upon to identify risk in: couples, family styles of interaction, places in the family lifecycle, and patterns of parent-child interactions. The presentation will outline interventional goals, key issues, and a structure for diagnostic interviewing with families on a terminal trajectory. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.1.4

Psychotherapeutic Approaches in Palliative Care

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BACKGROUND: Therapists working with the seriously ill become implicated in the most profound questions related to the human condition: the meaning of life, the fear of suffering and the problem of living in the present while facing the certainty of death. Although individual psychotherapy is the most common and desired modality of treatment for such patients, there have been few models of brief intervention which have been systematically in this context. **METHOD:** We have developed a brief individual psychotherapeu-

tic approach for patients with advanced and terminal disease, based on elements of supportive-expressive, relational and existential therapy. This effectiveness of the teaching and delivery of this intervention is now being evaluated. **RESULTS:** The basic principles and unique aspects of this intervention will be described and preliminary data will be presented from the evaluation of this intervention. **CONCLUSIONS:** Individual psychotherapy is a fundamental and necessary treatment modality in the context of palliative care, which may be complemented by family and group interventions. Models of such treatment are emerging which are feasible to be taught and delivered in clinical psycho-oncology settings. **RESEARCH IMPLICATIONS:** Research conducted thus far on individuals with advanced disease has shown the effects of psychotherapy on depressive symptoms to be comparable to those obtained with anti-depressant medication. Most research has been conducted thus far on group interventions and many such studies have used only symptom-based outcomes. Further studies are needed to evaluate the effects of individual psychotherapy on other outcomes related to the broader goals of such interventions. **CLINICAL IMPLICATIONS:** Serious illness may unite patients and therapists in an intimate bond, which may be found only in those who share an experience of tragedy. Therapists are also required to face feelings related to their own mortality, to the limitations of their therapeutic influence and to the potential loss of someone with whom they develop an intimate professional relationship. The resulting possibilities for personal growth for both patient and therapist may be considerable. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.2.1

Physicians' Hidden Distress: Confrontation with Their Own Emotions

Lea Baider

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When the internship in oncology begins, most physicians are subject to high levels of psychological distress, demands, responsibilities and lack of private space and time. While they have mastered many basic clinical skills, most physicians are emotionally unprepared for the routine encounter with serious illness, prognostic ambiguity suffering and death. Empathy and compassion may overwhelm the young physicians in such a way as to transform their emotions into self-doubt and denial. To learn a new language of 'silence and self-reflection', physicians should be first aware of their own nonverbal dimension of their emotional suffering, hope, and failures. We will describe an intervention technique called 'Partnership of Care', designed

particularly for medical intern in oncology. We will also discuss the concept of clinical empathy as a learning tool to enhance physicians' own emotional resilience.

S 1.2.2

Physicians, Team Work and the Cancer Patient: The Acquisition of Communication Skills as a Promoter of Care Quality and as a Professional Stress Antidote

Darius Razavi

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Communication skills are now recognized as a core clinical skills in medicine in general and in cancer care in particular. Communication skills training programs designed for health care professionals have been the focus of several research endeavors of our group in Brussels. The efficacy of several communication skills training programs has been tested in studies using a controlled design and role playing techniques. Studies varied as regards study sample, type of role-plays, duration of training and outcome measures. This research program aimed at finding out which training techniques and program duration promoted the transfer of learned skills to clinical practice. The training programs developed by our group were based on adult theory for complex learning. They were learner-centered, skills-focused, practice-oriented and tailored to the participants' needs. Another choice that we made was to specifically focus part of the training program on the issue of communicating with a patient when one of his or her relative is present. The latest program we developed and tested focus not only on the acquisition of patient and relatives oriented skills but also on team work oriented skills. All the studies conducted by our group used a randomized pre-test-post-test design in order to assess the amplitude of induced changes. As it could have been expected, a dose-effect of training on some communication skills learned was found. Given this, the transfer of key communication skills to clinical practice is possible. Given this also, training programs focusing on patient-centered communication skills acquisition may produce changes on a patient-based outcome such as satisfaction. All our studies included also the measure of level of psychological stress experienced by trainees before and after training. One of our study assessed not only psychological stress but also biological stress (heart rate and cortisol). Models based on the results of our studies and designed to understand how and how much the acquisition of communication skills affects patients, relatives and health professionals will be presented.

S 1.2.3

Cultural Aspects of Physicians' Education in Cancer Care

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Cross-cultural encounters in oncology are rapidly increasing in modern societies, and are often a source of bedside misunderstandings and disagreements. Cross-cultural differences may lead to ethical dilemmas regarding communication, decision-making, treatment choices and end-of-life decisions. When cultural differences put a strain on the patient-doctor relationship, patients and their families suffer, but also oncology professionals are more easily burned-out. Cultural competence is a practical set of tools and skills, based on oncology professionals' specific knowledge and on their moral virtues, which enables them to provide quality care to all cancer patients, regardless of cultural differences between patients and oncology care providers. There are different methods to teach cultural competence in medicine, including those based on providing to oncology professionals basic knowledge of cross-cultural differences in truth-telling or in family involvement. While it is impossible to know every culture, teaching programs aim at enhancing cancer care givers' knowledge of their own communities of practice. The Institute of Medicine suggests a patient-centered approach to cross-cultural care, based on assessing core cross-cultural issues, exploring the meaning of health and illness to the patient, determining the social context in which the patient lives, and negotiating difference of health values and norms with patients and their families in order to strengthen the therapeutic alliance and encourage cancer patients' adherence to therapeutic measure from which they could benefit. These methods, often combined together, are meant to be applied in the course of a long lasting patient-doctor relationship, but also during brief encounters. A recent study of last year US residents' attitudes about cross-cultural care found that a minority of respondents did not feel generally prepared to care for diverse cultures, while many did not feel ready to deal with specific cultural differences, such as patients' health beliefs different from those of western medicine or religious beliefs that affected treatment. Major barriers to cultural competence appear to be lack of training in cross-cultural care, beyond what is mandatory in US medical schools, along with lack of time and of role models. Teaching, training and research in cultural competence should be a priority in cancer care to improve patients' quality of care and life, to reduce health disparities and to enhance patients and physicians' satisfaction with their clinical encounters.

S 1.2.4

Stress and Burnout in the Cancer Treatment Team

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With a demanding workload and emotional burden psycho-oncology team is under the treat of various emotional problems. Recent rapid developments in psycho-oncology in Turkey increased the awareness regarding the field and experiences and needs of the professionals working with cancer patients. Burnout is characterized by a progressive loss of energy, commitment and purpose in the care of their patients, leading to role dissatisfaction, exhaustion and negative attitudes towards patients, colleagues and self and can lead to further psychological problems. Therefore it is crucial to recognize and prevent burnout in the treatment team in order to preserve physicians own health and the quality of the care given. Results of an ongoing study on burnout in the oncology treatment team in Turkey will be discussed with specific cultural differences and also the experiences of grief in team members and its effects will be presented. Conclusions will be made by highlighting specific recommendations on program development in health care facilities.

S 1.3.2

Therapeutic Bridges to Meaning: An Existential Qualitative Analysis of the Co-Creation of Meaning in Individual Meaning-Centered PsychotherapyShannon Poppito¹, Tasha Prosper¹, William Brendel², Beatriz Moreno-Milan³, Carla Garcia¹, Kathleen Galek⁴, William Breitbart¹

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BACKGROUND: Individual Meaning-Centered Psychotherapy (IMCP), based on the existential work of Viktor Frankl (1959, 1969) and adapted into cancer care by William Breitbart and colleagues (2000, 2002), was developed to help advanced cancer patients find, maintain and enhance a sense of meaning in life as they faced advanced illness. An overview of this IMCP intervention will be offered, along with a qualitative analysis of how meaning is co-created between patient and therapist within this intervention. **METHOD:** IMCP is a seven session, thematically-structured, manualized (Breitbart and Poppito, 2006) therapeutic intervention. Its goal is to help patients learn to identify and explore different sources of meaning in life (e.g., identity, legacy, attitude, creativity, responsi-

bility) as they face advanced illness. IMCP transcripts were thematically analyzed and coded using a 'hybrid' existential-phenomenological qualitative approach. Coders assessed how patients expressed meaning in their advanced cancer experiences, and tracked existential issues and 'meaning-shifts' that occurred over a lifetime, as well as over the IMCP intervention. Five discrete qualitative domains were established to explore meaning: 1. IMCP content (e.g., sources of meaning), 2. Therapeutic Process (e.g., therapeutic bridges to meaning), 3. Existential issues (e.g., angst, despair, guilt, etc.), 4. Developmental issues (e.g., life-tasks and milestones) and 5. Crisis Points (e.g., major life-transitions). **RESULTS:** The guiding theme of this qualitative analysis lies in the 'Therapeutic Process' code termed 'therapeutic bridge' which purposefully connects IMCP content with patients' lived experience(s) of meaning; thereby rebridging meaning to other key domains (e.g., existential and developmental crisis points). In such a therapeutic arc, the therapist directly draws upon specific IMCP content (sources of meaning: identity, legacy, attitude, creativity and experiential sources of love and beauty) to reconnect patients' back to +/- or forward toward a lived-embodied narrative of who and what has been most meaningful in their lives. This therapeutic bridge to meaning was found to be an essential component of IMCP; linking the didactic and supportive elements of IMCP together to promote and bolster patients' ability to re-awaken and tap into sources of meaning. **CONCLUSIONS:** The literature has revealed that meaning-making may be a very strong buffer for mental, emotional, spiritual and existential distress at the end of life. Individual Meaning-Centered Psychotherapy was developed to harness the spiritual and existential benefits of what Viktor Frankl challenged as every human beings' inherent capacity to 'find meaning in life and suffering up to one's very last breath.' Research has captured what the cognitive and spiritual elements are of finding and making meaning in life. This study sought to qualitatively assess how meaning may be formed and transformed (i.e., co-created) within the therapeutic relationship between therapist and advanced cancer patient. The 'therapeutic bridge' between therapist's IMCP content and patient's lived experience of meaning was found to be the prime ingredient for the co-creation of meaning in IMCP. **RESEARCH IMPLICATIONS:** Meaning is always co-created within a dialectic relationship between self-other-world. It is not enough to know the identifiable facts of *what* gives meaning to advanced cancer and dying patients. Research needs to broaden its horizons to explore the therapeutic process(es) involved in *how* patients and practitioners work together to co-discover meaning in their relationships. More novel

psychotherapeutic intervention studies must be developed and qualitatively assessed to track this co-construction of meaning; bridging both therapeutic process and content. **CLINICAL IMPLICATIONS:** By qualitatively assessing how meaning-centered interventions help to form and transform meaning in advanced cancer patients, clinicians may ultimately come to realize precisely *how* their presence matters as both a care-giver and teacher. Clinicians can come to learn how to purposefully co-create ‘*therapeutic bridges*’ between their therapeutic content (sources of meaning) and patients’ stories. In so doing, they have the potential to teach patients how to reconnect with personal sources of meaning; thereby making them meaningful re-sources in their lives. **ACKNOWLEDGEMENT OF FUNDING:** The Kohlberg and Martell Foundations (U.S.A.).

S 1.3.3

Awakening to the Experience of Meaning During the Therapeutic Encounter

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BACKGROUND: A long history of trauma, severe mental illness, and other significant psycho-social stressors can significantly affect some patients’ ability to relate to the discourse of meaning in life, especially in the midst of the advanced cancer and end-of-life narrative. This presentation will discuss how the logotherapy framework can be used to facilitate the experience of meaning and purpose in very vulnerable patients. **METHOD:** Using three patients’ case examples, (a patient with recurrent major depression, a patients with a history of sexual and physical abuse, and a patient who received a cancer diagnosis four months prior to her death) this presentation will explore how the therapeutic content areas of self-discovery, uniqueness, and transcendence can offer patients with advanced cancer and significant psycho-social challenges the opportunity to experience ‘a sense of meaning’, within the framework of logotherapy. **RESULTS:** The therapeutic encounter can offer the experience of ‘meaning of the moment’, that can be received by patients as messages of connectedness, safety, and order. Moments of ‘awakening to meaning’ can help patients who are facing end of life break the cycle of fear and despair. **CONCLUSIONS:** Not every patient relates to or understands the discourse of meaning and purpose. Especially vulnerable patients may easily develop frustration and hopelessness when encouraged to explain or connect with the sense of meaning in their life. The therapeutic encounter within the framework of logotherapy can provide these patients with the

experience of ‘meaning of the moment’, which can help them reframe their personal narrative of suffering into one of resilience and hope. **RESEARCH IMPLICATIONS:** Future research should identify interventions that can help develop a sense of meaning and purpose in vulnerable cancer patients. **CLINICAL IMPLICATIONS:** The logotherapy framework can provide clinicians with a model that can help develop a sense of meaning and purpose in very vulnerable cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.3.4

Patients and Resident Physicians Co-Constructing Meaning at the End-of-Life: The Impact of the Dignity Interview as an Educational Intervention

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BACKGROUND: Education in end-of-life care (EOLC) has been inadequately addressed internationally. Resident physicians report educational deficits in psychosocial and existential aspects of EOLC. Chochinov and colleagues developed a ‘dignity interview’, based empirically on patients’ conceptualizations of dignity; it helps patients make meaning of their life and create a legacy document. We are used the ‘dignity interview’ as an educational intervention to teach first year family medicine and psychiatry residents about meaning at the end-of-life. **METHOD:** Twelve first year family medicine and psychiatry resident physicians administered a ‘dignity interview’ to a dying patient. Pre- and post- intervention measures examined the impact on attitudes toward death. The main focus, however, was a qualitative interview to examine the residents’ experience of administering the interview and its impact on understanding of meaning at the end-of-life, and on future practice. In parallel, we are also examining the discourse in patients’ dignity interviews, particularly around the added sense of legacy entailed in being ‘teachers’ to residents. **RESULTS:** Twelve first year resident physicians co-administered dignity interviews with dying patients. We will present quantitative data as well as qualitative data describing the main themes and discourse use in the patient interviews and how this impacts the resident physician, as evinced in qualitative interviews. In brief, residents find this experience of engaging intimately with patients in a dignity interview very different from the rest of their practice and training; they feel the medical culture does not support or model this engagement. Despite this, trainees articulate an enriched understanding of what’s most important to patients and feel it may impact future practice style. **CONCLUSIONS:** While medical curricula have a dearth of opportunities for education about meaning making

at the end-of-life, the current intervention provides a learning opportunity which is known to be therapeutic for the patient, while at the same time providing an opportunity for resident physicians to learn from patients about meaning-making at the end-of-life, and indeed to co-construct such meaning. While residents described a positive experience and articulate how it will impact practice, it was clear they found it very different from all other medical training experiences, and from what they were taught was valued in practice. **RESEARCH IMPLICATIONS:** This research contributes to the neglected area of end-of-life education research. It points to the potency of clinically-oriented educational intervention, one which here involves the patient as teacher. As evidence mounts that the dying experience is very much an existential one, future research must continue to examine how the formal and hidden curricula of medical education do not prepare trainees to engage in meaning making with dying patients, or model its importance. **CLINICAL IMPLICATIONS:** The educational intervention described here is based on an evidenced-based psychotherapeutic intervention for dying patients. This study points to the possibility that an educational experience of engaging in a dignity interview and reflecting on its impact, may have a substantive impact on a physician's understanding of what's most important to patients, and on the importance of helping patients to make meaning. **ACKNOWLEDGEMENT OF FUNDING:** 1. The Royal College of Physicians and Surgeons of Canada Medical Education Grant. 2. The National Cancer Institute of Canada—Socio-behavioral Cancer Research Network.

S 1.4.2

More Than Just Communicating—A Training Package for Healthcare Professionals to Improve the Detection and Management of Psychological Distress

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BACKGROUND: Up to fifty percent of all patients with cancer can suffer significant distress at some point. Research shows that healthcare professionals are often poor at detecting those people who may require formal input for their psychological needs. Communication skills training alone does not always improve this detection rate. A training package was therefore required to train healthcare staff in the detection and management of specific psychological disorders as well as generalised distress. **METHOD:** A four half-day programme was developed after an extensive

review of the literature. The sessions cover listening skills, screening, detection of disorders and interventions appropriate for healthcare staff. The package is delivered to staff at tiers 1 and 2 of a Four Tier model (e.g. doctors, nurses, allied health professionals), by staff at tiers 3 and 4 (psychologists and counsellors). Staff complete confidence questionnaires at pre, post and 6 month follow-up. These were developed from the literature and measure 9 domains (e.g. confidence in asking about suicide, managing distress) on a Likert scale, where 1 = not confident and 10 = very confident. **RESULTS:** Over 3 years, 255 sets of data have been collected. The data shows a significant improvement in staff confidence across all domains measured ($p = 0.0001$). These improvements are maintained at 6 month follow-up. **CONCLUSIONS:** Whilst the results have limitations, we can conclude that this course significantly improves staff confidence in dealing with psychological distress and that these improvements are maintained over time. Further studies will examine the effect of the training on the incidence of psychological screening, staff and patient satisfaction and the quality of referrals to a Psychological Support Team. **RESEARCH IMPLICATIONS:** This training package has been published and therefore these results can be replicated in other settings, with other staff groups. Staff who have completed the training have also been trained as cascade facilitators and so data will soon be available as to its effectiveness when delivered by staff at Level 2 of the Four Tier model. **CLINICAL IMPLICATIONS:** This training package has improved staff confidence in dealing with psychological distress in patients, families and themselves. This should lead to improved psychological care from staff at Levels 1 and 2 of the Four Tier model, as well as more appropriate referrals to specialist Psychological Support Teams. It is hypothesised that this will increase staff and patient satisfaction, as well as increasing the incidence of psychological screening. **ACKNOWLEDGEMENT OF FUNDING:** This project was funded by the generosity of the Wessex Cancer Trust.

S 1.4.3

The Efficacy of a Communication Skills Training Program on Successive Sequences of Breaking Bad News Simulated Consultation: A Randomized Controlled Study

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BACKGROUND: No study has yet assessed the efficacy of training programs on communication skills used in the successive sequences of consultations conducted by physicians. The purpose of this study is to assess the efficacy of a 40-hour training program on residents' communication skills used in the successive sequences of breaking bad news simulated consultations. **METHOD:** Residents were randomly assigned to a 40-hour communication skills training program or to a waiting list. The assessment included a two- and a three-person simulated breaking bad news consultation. Consultations were audiotaped at baseline and after training for the training group, and 8 months after baseline for the waiting list group. Residents' communication skills used in 4 successive sequences of 5 minutes were tagged from transcripts with a computer-assisted program (LaComm). Group by time effects on communication skills in these successive sequences were assessed using MANOVA. **RESULTS:** Communication skills improved significantly more in the training group compared with the waiting-list group mostly in the first ten minutes of the two-person as well as the three-person simulated consultation: group-by-time repeated measures analysis of variance showed a significant increase in assessment and supportive skills (from $p < .001$ to $p = .040$). **CONCLUSIONS:** Communication skills training programs have a different efficacy on the successive sequences of breaking bad news simulated consultations, most improvements in communication skills being noticed in the first ten minutes. **RESEARCH IMPLICATIONS:** Future research focusing on the efficacy of communication skills training programs should take into account the successive sequences of the assessed consultations. **CLINICAL IMPLICATIONS:** Trainers and trainees should be aware of the difficulty to improve their communication skills in the last minutes of a consultation. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium, by the C.A.M., training and research group (Brussels—Belgium).

S 1.5.1

A Baby's Memory of His Cancer Treatment

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BACKGROUND: Parents in a paediatric oncology department of a comprehensive cancer centre, which includes a psychoanalyst and a psychologist, teachers, an art workshop, clowns, meetings with parents, etc., often ask: 'Do babies understand the situation and how do they understand what is

being done to them? What memory they will have of their treatment; and how can we prevent traumatic memory and psychological sequelae?' Medical staff also ask the same thing. **METHOD:** We present seven drawings that an eight-year old boy did during his psychotherapeutic interviews. He had been treated for neuroblastoma when 6 months old. He suffered from phobias and nightmares, could not leave his mother and feared the other children. He did these drawings freely and was asked to comment on them. His parents, behind him, told what each detail evoked for them. With their help, a meaning was assigned to each drawing and to the series, and the child was helped to regain a coherent acceptable, non-disturbing memory of his early history of cancer. **RESULTS:** His symptoms disappeared, completely. The meanings assigned to the drawings were: 1. A figure cannot enter a house (fear of never returning home). 2. The roof has been damaged (cancer) and rain can enter (fragility, insecurity). 3. The road is blocked by a hole full of rats (cancer). 4. Sharks fighting in a river (the violence of cancer, the search for a cause). 5. Grass along the road, fresh painting on the house (towards recovery). 6. A crocodile in the hole; zoo-wardens will catch it (confidence is back). 7. The house is repaired, surrounded by two trees (his father and himself). **CONCLUSIONS:** Babies perceive the changes in their environment, in their parents' mood and behaviour, in their bodies, in themselves. They can feel anxious, insecure, distressed and express it. Their perceptions (of sounds, colours, sensations) and their feelings can remain unconsciously and silently present for many years. This can later cause neurotic symptoms. The parents can help the babies maintain confidence in their environment, explain in simple words what is done. Later, they can help them (eventually with a psychoanalyst's help) regain a coherent memory of what happened, so that this part of their life does not remain inaccessible and thus frightening. **RESEARCH IMPLICATIONS:** Cancer and its treatment are ordeals for babies and their parents. Parents are not always confident about their parental competence and legitimacy. They can be distressed by their child's reactions (cries, refusal of eating, of sleeping, etc.) and by their own emotions. Little is known about the diverse elements of parents' and babies' experience of pediatric cancer and its treatment or about the prevention and treatment of psychological sequelae. **CLINICAL IMPLICATIONS:** Current medical staff and parents are attentive to babies' pain and, hopefully, to all the elements of the babies' experience of cancer: body discomfort, feelings of fragility, insecurity, loneliness, loss of landmarks (day rhythm, parents' behaviour, etc.). Thus the medical staff can help parents keep their parental habits and skills and their confidence in themselves, and can enhance

their understanding of their child's behaviour and demands. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.5.2

Long Term Psychosocial Impact of Pediatric Sarcoma: Persistent Distress and Resilience

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BACKGROUND: Therapeutic regimens delivered to patients with pediatric solid tumors are among the most difficult to endure due to intensive chemotherapy, invasive surgery or radiation therapy, and long periods away from school or work. As these tumors are most frequently diagnosed during adolescence/young adulthood, psychosocial stresses often include changes in body image and loss of fertility. Survivors of bone sarcomas are believed to have a higher risk for chronic health conditions than other pediatric cancers. **METHOD:** Thirty-four patients participated in a cross-sectional study examining medical, psychosocial and psychiatric late effects of pediatric sarcoma treatment, an average of 17 years after their treatment ended. Each completed standardized measures assessing Posttraumatic Stress Disorder and psychological distress. An in-depth clinical interview provided additional qualitative data pertaining to the transition back to school or work, coping with uncertainty, and how the cancer experience has impacted their lives. The qualitative data from the clinical interviews will be reviewed and discussed. **RESULTS:** Significant persistent psychological distress characterized this cohort of patients. Current distress associated with intrusive thoughts and avoidant behaviors, difficulty readjusting to work/school after treatment, and enduring worries about health was emphasized throughout the clinical interviews. Yet, the majority of participants reported that they are a better person today because of the cancer diagnosis and treatment that they survived. Their sense of resilience was tempered by concern and uncertainty about future health problems. **CONCLUSIONS:** Clinical evaluation of psychological distress in a cohort of pediatric sarcoma survivors treated with intensive multimodal cancer therapy suggests that many of these survivors are at high risk for adverse psychological outcomes. This speaks powerfully to the need for an ongoing mechanism for assessment, support, and treatment. As social disruption and loss of social support during treatment may be an additional predictor of unfavorable long-term effects, keeping connections strong is recommended. Through the presentation of data and case material, factors that influence risk, skills that balance uncertainty with hope, and interventions that can support these individuals will be reviewed. **RESEARCH IMPLICATIONS:** Compared to most

psychological survivor studies whose data are derived from mailed self-administered questionnaires and chart reviews, we had the opportunity of evaluating each participant in person. The rich data and ability to capture both the growth and stresses that influenced the lives of these survivors came from qualitative data obtained during the clinical interviews. In order to capture the trajectory of a survivors' experience, future studies should consider a mixed methodology approach. **CLINICAL IMPLICATIONS:** Persistent psychological distress and the correlation of symptoms of PTSD in a cohort of pediatric sarcoma survivors suggest that the investigation and treatment of the medical and psychological consequences of disease be provided concurrently within a specialized program designed for survivors. Resiliency and positive psychological growth experiences should also be explored. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported [in part] by the Intramural Research Program of the NIH, National Cancer Institute, Center for Cancer Research.

S 1.5.3

The Evolution of Multidisciplinary, Integrated Psychosocial Care in a Pediatric Cancer Survivors' Clinic

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BACKGROUND: The physical and psychological sequelae experienced by many pediatric cancer survivors make it difficult for community practitioners to provide appropriate long term care. This abstract describes a psychosocial clinician's role in an evolving, multidisciplinary, pediatric cancer Survivors Clinic operating for 15 years. Survivors are seen at the clinic two years after completing treatment. Group programs, individual psychotherapeutic interventions, and implications for effective long term psychosocial care for growing numbers of survivors are described. **METHOD:** The psychosocial clinician is integrated into our Survivors Clinic team and assesses survivors on their first clinic visit and on annual follow-up visits. Psychosocial self-report measures are part of the assessment. Survivors also meet with key medical providers. The clinician's feedback to the team is integrated into patients' treatment plans. The clinician also offers focused therapeutic interventions, makes outside referrals and facilitates groups and workshops, some co-led with medical staff. Several groups will be described, as will therapeutic interventions with three patients, two known to the clinician for 20 years, and one in a medical crisis. **RESULTS:** As patient volume grows, all survivors continue to be assessed on their first clinic visit and many on follow-up visits. Some survivors with minimum

distress may opt out or reduce frequency of follow-up meetings. Self-report questionnaires facilitate identification of problems in those not regularly seen. The psychosocial groups are positively rated by participants, but serve limited numbers. Multidisciplinary workshops with psychosocial components have high attendance and positive evaluations. The success and challenges of individual psychosocial interventions will be illustrated by the reduced anxiety and greater treatment compliance in two cases; recurring difficulties in the third case are discussed. **CONCLUSIONS:** Inclusion of psychosocial clinicians in multidisciplinary programs is key in providing pediatric cancer survivors with comprehensive follow-up care. As survivors increase, treatment approaches may vary—from uniformly providing psychological services to reaching out to identified, high-risk subgroups. Self-report questionnaires are helpful, but are not substitutes for a psychosocial clinician. Medically focused groups including a psychosocial component may reach more survivors, but specific psychosocial groups have a role. Individual interventions are most effectively done by therapists familiar with patients' treatment histories and their medical caregivers. Continuity of care can also have therapeutic value. **RESEARCH IMPLICATIONS:** Follow-up data should be collected to monitor survivors' psychological health and pinpoint at-risk survivors—both within and across disease groups—so better outreach and psychosocial follow-up can be provided to these survivors and useful information about psychological sequelae can be provided to survivors and their families. As the numbers of pediatric cancer survivors increase, new ways of delivering multidisciplinary and integrated follow-up care should be evaluated, with screening costs and relative utility studied. **CLINICAL IMPLICATIONS:** An effective pediatric cancer survivorship program must include psychosocial clinicians. These clinicians need to be aware of the range of survivors' psychological needs as these can change over time as attitudes about and treatments of pediatric cancer change. Consultation with medical staff to offer flexible, consistent psychological care to identified survivors in distress is critical. To increase the availability of community support, psychosocial clinicians should consider ways to educate outside therapists about survivors' psychological needs. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.5.4

The Importance of Early Psychosocial Assessment to Help Adolescent Survivors in a Pediatric Cancer Survivors

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BACKGROUND: Oncologic treatment during the important developmental stages of childhood and adolescence may significantly affect the quality of life of childhood cancer survivors. Therefore CATT—Clinic After the End of Therapy—was established as part of Boldrini Children's Center to assist pediatric cancer survivors. In CATT, the psycho-oncologist and the other members of the staff identify and help the survivor cope with the long term medical and psychological late effects of childhood cancer. **METHOD:** Between October 2002 and December 2008, 250 adolescents and young adults were assessed at CATT. The psycho-oncologist's initial assessment included a semi-structured interview, psychosocial questionnaire and projective tests. Patients with existing emotional disorders were referred to a psychologist or psychiatrist in CATT or, if needed, to a local mental health clinic. To illustrate the importance of psychotherapy to help integrate the physical and emotional sequelae resulting from cancer and its treatment, we will present two cases. One survivor had leukaemia, three relapses and a bone marrow transplant. The other survivor had retinoblastoma, a hereditary cancer, in childhood. **RESULTS:** The majority of the patients showed psychosocial difficulties related to their cancer experience particularly anxiety, depression, low self-esteem and family conflicts. Analysis of narratives and drawings of the two selected patients showed that the first patient with physical sequelae and chronic disability presented with impaired body image. Psychotherapy helped repair the narcissistic damage to her body image. For the second patient, the recurrence of traumatic experiences triggered intense anguish and sometimes difficulty in dealing with reality. This patient's psychotherapy allowed him to transform conflicts into lessons about how to value life and give it new meaning. **CONCLUSIONS:** The careful psychotherapeutic approach in the survivorship clinic is needed for all cancer care centers because many problems are only identified later when residual symptoms and the impact of late effects can be observed. Early assessment and treatment of the unresolved emotional problems improves psychosocial reintegration. **RESEARCH IMPLICATIONS:** Research is needed to determine which psychological interventions are effective in helping patients accept the sequelae resulting from their disease and treatment. In addition, the particular psychosocial implications and psychological counselling needed in cases of hereditary pediatric cancer should also be investigated. **CLINICAL IMPLICATIONS:** The way child and adolescent cancer survivors experience their disease affects and may compromise their lives. Outcomes can be negative, such as post-traumatic distress, or may result in emotional growth. Our work suggests the importance of the early identification of survivors' emotional problems

and psychosocial intervention within a clinic for survivors. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.6.1

The Multidisciplinary Therapeutic Decision and the Mentalization of the Choice of the Treatment of Cancer Patients

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BACKGROUND: To bring to light the variables allowing to know the level of patients participation to their therapeutic protocol. Then to adjust, the medical information to them. To organize by communicational marks for physicians about the psychic impact of the medical information about patient. **METHOD:** A descriptive, longitudinal study. 150 patients, underwent adjuvant or neo-adjuvant treatment for breast-cancer. The sample is shared in two groups specified by the stages of their therapeutic protocol: the protocol of treatment's announcement and before the 1st cure of chemotherapy. Assessment for each group of co-factors of decision-making: personality and defence mechanisms. Adaptation, perception and psychopathology of patient. As for 5 doctors we study the verbal and non-verbal modes of communication with objective questionnaires, recordings videos and research-interview with patient then oncologist. **RESULTS:** This study leads up to implementation of concrete actions concerning at first definition, perception, representation and evaluation of choice of patients. Secondly the physician information allowing to reach this choice. The mentalization of assent to therapeutic protocol is determined by personality and psychic strategies of patient, acquired during his psychic development. The pathogenic aspects of diagnosis disclosure carry weight on the decision-making of patient in his treatment. The modes of communication adopted by physician influence the modalities of decision-making of patient in his therapeutic choice. **CONCLUSIONS:** On psychological level, this approach is particularly new, still underestimated, confused with communication. The multidisciplinary reflection hired by this research allows a wider vision, leaning on several aspects of the maintaining human sciences widely used by the medicine. On human level, the patients are the first beneficiaries of this approach put in perspective by diagnosis disclosure. The traumatizing aspects of which will be widely estimated and limited from now on. **RESEARCH IMPLICATIONS:** In the Anglo-Saxon countries, propositions of revelation of a lethal diagnosis allow to find recommendations for lack of a precise protocol. So this study is a premise before the experiment of a specific training to the diagnosis disclosure validated in France.

CLINICAL IMPLICATIONS: This study contributes to set up a clinical approach of the subject which allows to prepare the revelation of diagnosis oncology. Adapt the modes of communication used by oncologist, to the 'level of participation' of patient to his therapeutic protocol. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.6.2

Patients' Groups in Oncology: Many Experiences for Some Recommendations

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BACKGROUND: Patients' groups have been developed since about 1980 in oncology. D. Spiegel was one of the forerunners, proposing Supportive Expressive Group as a model of psychosocial intervention. In Europe, especially in France, until the nineties there was reticence about patients groups. Oncologists were in opposition to regroup patients feared of medical power loss; psychiatrists and psychologists, feared psychopathologic destabilization. **METHOD:** First, in 1998, we tried to replicate Spiegel's trial in Normandy Cancer Center. We had to break randomization, but we led 87 weekly meetings. Secondly, in a General Hospital, we have set up an open group for women with gynaecologic or breast cancer. This group is only a clinical practice, every 3 weeks. Since 2000, we had 125 meetings for more than 70 participants. Lastly, since 2006 we have organized 2 groups out of hospital, in Caen downtown. **RESULTS:** Patients' integration and attendance depend of medical doctors' encouragement. Patients with metastasis relapse want to build bonds and to exchange about existential questions: They show solidarity and are regular in meetings. Patients beginning treatments wait for exchange of information and experience about illness, side effects of treatments, breast cancer reconstruction's possibilities, condition of return to work. **CONCLUSIONS:** New patients, who hope to be cured and fear recurrence, don't tolerate confrontation with metastasis patients; if there is traumatic encounter most of them prefer to leave quickly. We set 2 groups with Against Cancer League Area Committee: every two weeks, during four months, with possibility to go on. Time limited group is more dynamic for attendance and allow to leave group without embarrassment. The first group is proposed during initial cancer treatments or under medical supervision; second group concerns patients with metastasis relapse. **RESEARCH IMPLICATIONS:** In France, patients groups' organization is difficult apart from research's context. Oncologists fail to propose groups. Furthermore, French patients remain ambivalent. **CLINICAL IMPLICATIONS:** Even group

attendance presupposes acceptance of differences, avoiding patients with relapse is a condition for new patients' participation. A metastasis recurrence must be called to mind into the group as the same way for a death. It is easier to hold anxiety in a time limited setting. You have to take account of bonds built in the group. All these difficulties require psycho-oncologists to be active, rigorous but also inventive in setting group. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.6.3

Support Group for Children of Cancer Patients: Evaluation of 14 Years of Practice

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BACKGROUND: In December 1994, the Gustave Roussy Institute started a support group for children whose parents have cancer. This pioneering experiment in France has since been aiming at supporting parents in speaking with their children about cancer, their illness or even death. The aim of this research study is to assess retrospectively the impact of participating to this group on the life experience of the focal families. **METHOD:** The targeted population comprises children and their parents, who participated between October 1995 and June 2007. All families received a letter informing them of the research study and asking for their agreement to participate in a phone interview conducted by an independent psychologist. Upon receiving their approval, each member of the family was interviewed individually. The interviews were semi-directive. The interview schedule addresses several themes: their a priori expectations, their experience and the perceived benefits, the repercussions of the cancer illness on their family and the children, and the perceived changes following their participation to the group. **RESULTS:** The letter was sent to 328 families. 62 families responded and agreed. 98 phone interviews were conducted. The qualitative analysis is currently on-going. 73 letters came back, not delivered (60 of whom are dead). **CONCLUSIONS:** The 20th first interviews analysis shows that more than 90% of the families are satisfied. They found a real help to speak about cancer with their children and feel a great relief. **RESEARCH IMPLICATIONS:** A rigorous framework is needed providing guidelines for the implementation of such support groups for children and their families. **CLINICAL IMPLICATIONS:** This evaluation study will allow us to determine if the support group, in its current form, meets the expectations and needs of the children and their families. Based on our findings, the support group

could be adjusted if necessary. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.6.4

Blog Writing by Breast Cancer Patients. A Specific Art of Writing as Psychological Therapy

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BACKGROUND: With internet popularization more studies are published about cancer blogs writers. We continue to study specificities of blogs writing as a full therapy in breast cancer patients. Thematic analysis of those blogs improves knowledge in psychopathology, i.e. in dealing with trauma consequences. **METHOD:** We have sampled thirty blogs. All writers are women, living in various francophone countries. In majority younger than 40 years. We determined motivations to write, aspiration to communicate with thematic analysis. This time we compared blog writing and book writing. To find therapeutic aspects we compared psychological state of blogging cancer patient at beginning and end of her blogging. **RESULTS:** We observed the same apprehension of the illness whatever age or origin. Cancer means death. Death anxiety is very important. Disintegration feelings are particularly present. Traumas are numerous. The hardest to live is in terms of body-image is the downfall of the hair (confirmed by two recent studies). Therapeutic effects of blog writing: patients beginning to dream again, being in a better mood, satisfied to be read and supported by others, feeling to belong to a social network. **CONCLUSIONS:** Blog is often a cry out at the beginning. Blogs are related to difficult life events. Some blogs are held on many years. Blogs could be used as a real clinical tool. Blog writing helps cancer female patients to rebuild a fragile narcissism. Blog writing is more specific in immediate life actuality. It's a sort of 'mental barometer' where it's possible to follow the oscillations of the psychic life from writer. The message is sent to a community of co-patients or co-readers who helps the writer by imaginary or real identification. **RESEARCH IMPLICATIONS:** Analysis of blog writing is a real screening tool. With permission of patients it could be used by clinicians or it could stay a personal tool. **CLINICAL IMPLICATIONS:** Blogs reading is really a good pedagogic tool for young care-givers or doctors to learn what is life with cancer. On quality of life interrogations it helps to find unexplored or underestimated domains of impaired life. Blogs are helpful to understand dysregulations of mood in patients. It could be used in hospital collectivities or in extra-hospital associations. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.6.5

Mentalization in Psychodynamic Support Psychotherapy of Cancer Patients: Analysis of the Therapeutic Process

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BACKGROUND: To assess the psychodynamic approach in psychotherapeutic work by psychoanalysis trained psycho-oncologist undergoing clinical interviews. Narrative productions in patient/psychologist interaction are analysed, transference effects are studied in this psychosomatic context. **METHOD:** This research interests 30 people dealing with a sarcoma (17–45 years old) in the Medical Oncology Service in La Timone Marseille, whatever the stage of severity. Each interview is recorded on an audio-tape from 6 months to two years, transcribed and thematic-analyzed by Alcest software. The second aim is to assess psychologist's mental activity through metacommunication with the QPPS questionnaire (questionnaire pré-psychothérapeutique de la Salpêtrière, D. Widlocher). **RESULTS:** Preliminary results show that psychodynamic approach is relevant in Oncology. It allows the patient a re-appropriation of his own story. This is possible with the work of thoughts and mentalizations in the psycho-oncologist/patient interactive space. This work allows the patient to modify his psychologic resources, accept his perceptions, his history as well as his experiences and possible future. **CONCLUSIONS:** Through the preliminary examination of 30 patients' speech we identify invariant and regular processes according to the pathology as well as to progress in psychotherapy. This work points out the interest of supporting psychodynamic psychotherapy with persons dealing with cancer. The psychodynamic approach shows that recovery of patient's own psyche leads to better mental capacity, possibility of establishing long-term relationships and improvement in quality of life. **RESEARCH IMPLICATIONS:** To recognize and have qualitative as quantitative results on the place of narration in identity and biography rebuilding of cancer patient. **CLINICAL IMPLICATIONS:** The autobiography told by the patient is seen as a weight in the patient-doctor relation. It is on the contrary a fundamental part of that relation. It helps patient to restore his mentalization abilities weakened by the traumatizing disclosure of cancer, to establish bonds with his doctor and care-givers, to feel recognized in his domestic life, to ask intimate knowledge questions about him and family life and to rebuild proper identity. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 1.7.1

Frankly Speaking About Cancer—The Irish Experience

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BACKGROUND: Globally, more than 11 million new cases of cancer will be diagnosed this year. By 2020, that number will grow to 16 million. Cancer causes 12.5 percent of deaths worldwide. Research indicates that psychoeducational programs provide a safe haven for patients to learn new information, develop more adaptive ways of coping, express emotions, and better communicate with their doctors and health care team. Ultimately, psychoeducational programs decrease the burden of cancer. **METHOD:** In June 2008 two nurses from ARC Cancer Support Centre, Dublin, Ireland completed the training the trainers course for Frankly Speaking About Cancer Treatment: Take Control of Side Effects Through Medicine, Mind, and Body (FSACT) as created by The Wellness Community (TWC). This training was achieved through a partnership agreement signed in 2008 between ARC Cancer Support Centre, Dublin and TWC. **RESULTS:** The training was cascaded through other staff in ARC Cancer Support Centre and the Programme was then subsequently slightly modified to suit the Irish population. A pilot programme was conducted in November 2008 and there was an overwhelming response to the invitation to attend. Twenty eight people attended the pilot course and were evaluated. There were some problems with the second evaluation period due to holidays. **CONCLUSIONS:** The results of the Irish study coincide with the results of the FSAC programmes facilitated in other parts of the world. A second one-day course is planned for March 2009. **RESEARCH IMPLICATIONS:** The research implications are to investigate the delivery of psychoeducational programs in different countries looking at changes in side effects management as well as looking at improved doctor-patient communication. **CLINICAL IMPLICATIONS:** This demonstrates the ability to cost effectively adopt a previously developed program to meet the needs of patients and caregivers in Ireland. **ACKNOWLEDGEMENT OF FUNDING:** A grant was received from The Wellness Community and the Amgen Foundation for training and program delivery.

S 1.7.2

AIMaC's Findings from the Partnership with The Wellness Community International Network Program: Preliminary Data

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BACKGROUND: The Italian Association for Cancer Patients (AIMaC) is a support organization with a ten-year experience as information provider to cancer patients, their families and friends through a free-phone helpline. In 2008, AIMaC received 3.735 contacts (1% in person, 64% telephone, and 35% e-mail) regarding: 14.4% collateral effects; 7.3% psychological support; 2.2% pain therapy and 1.2% about CAM. 11% of booklets downloaded was concerning chemo and radio therapy and 30% about disease collateral effects and therapy. **METHOD:** AIMaC is partner of The Wellness Community(TWC) to build an international model on psychoeducational support in oncology. In 2008 AIMaC participated to the conference Innovative Models of International Psychosocial Oncology Training, sharing with TWC the 'active patient concept'. AIMaC is committed to developing information strategies to help people to be empowered of their own choices on health and wellness. AIMaC, in collaboration with the Italian Association of Psycho-Oncology (SIPO) has translated, updated and adapted the psycho-educational program: Frankly Speaking about Cancer Treatment: Take Control of Side Effects Trough Medicine, Mind and Body (FSACT) into Italian. **RESULTS:** A contact with Paola Varese, MD, Ovada (Alessandria) Oncology Outpatient Unit and Luigi Grassi, MD, Psychiatry Unit, University of Ferrara, has been established to run the pilot workshops in their departments. The first will be held in March 2009, to get the first results and application efficacy of this model in Italy. We will report on the findings from this program at the symposium. **CONCLUSIONS:** AIMaC would like to develop a new model, scientifically tested, to best answer the information and emotive needs of people that face cancer. Keeping the partnership with TWC and coordinating and assessing the different value models to be applied locally constitutes an important research and development opportunity. AIMaC, in collaboration with oncology and psycho-oncology health services in Ovada and Ferrara, will run the first Italian study of the impact of the TWC psycho-educational program FSACT. This program impact assessment will be quantitative (pretest and 30 day follow-up using the Italian validated version of SF-12 and BSI-18) and qualitative. **RESEARCH IMPLICATIONS:** The research implications are to investigate the delivery of American psycho-educational programs in Italy looking at changes in side effects management as well as looking at improved doctor-patient communication. **CLINICAL IMPLICATIONS:** The application of this model follows the general aim of informing and leading people who face cancer to become truly active regarding a series of actions, behaviors and attitudes that will improve their perceived quality of life, may enhance the

possibility of recovery and could have a positive effect also on the doctor-patient communication. **ACKNOWLEDGEMENT OF FUNDING:** AIMaC would like to thank the Italian Society of Psycho-Oncology (SIPO), the Division of General Medicine, Azienda Sanitaria Locale di Ovada and the Section of Psychiatry, University of Ferrara for their support in the project.

S 1.7.3

Maggie's and The Wellness Community's International Network Program: An Innovative Model of Psychoeducational Programming and Training

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BACKGROUND: Maggie's has centres located alongside NHS Cancer Centres in nine UK cities (www.maggiescentres.org) and is the only charity that provides evidence-based psycho-educational support programmes using a multi-professional team including cancer support specialists, welfare rights experts and clinical psychologists. Maggie's Centres (MC) are communities of people, actively encouraging and supporting each other as they manage the impact of cancer in award-winning, architecturally beautiful, healing spaces. **METHOD:** In partnership with The Wellness Community (TWC), Maggie's delivered the workshop 'Frankly Speaking About Cancer Treatment: Taking Control of Side Effects with Medicine, Mind and Body' in four MC's (Dundee, Edinburgh, London, Oxford). Each Centre's Cancer Support Specialist and Psychologist facilitated the workshops, which were open to people at any stage of cancer and carers, but limited to 10 participants. The 1/2 day workshops included professionally-developed slides that focused on treatment options, fatigue, exercise, body image, relationships and transition back to work. All discussions were professionally-facilitated and participants shared a healthy meal. In order to assess the impact of the program, participants completed a workshop evaluation questionnaire, the SF-12v2, BSI-18 (pre-workshop and 30 day follow up). **RESULTS:** 25 people participated across 4 MC locations. The majority were >40 yrs, white, within 24 months of diagnosis, in active treatment. Cancer diagnosis included prostate, breast, lung, skin and haematological. Post workshop measures showed: self rated levels of knowledge had increased significantly ($p = 0.001$; $n = 20$), 80% participants rated an increased sense of control over managing their side effects. Psychosocial symptoms reduced significantly between baseline and 30 day follow up ($p = 0.03$; $n = 15$), SF-12 showed no change. Workshop structure was rated highly, particularly the combination of factual information and sharing

experiences with others. **CONCLUSIONS:** Maggie's main purpose is to help people help themselves, helping them to gain and understand cancer information, manage the stress of a cancer experience and so ultimately get the best out of medical treatment. This pilot study demonstrates that the 'Frankly Speaking About Cancer Treatment' (FSACT) brief workshop style of cancer psycho-education can be adapted effectively for use within a Maggie's Centre setting and existing programme of cancer support. **RESEARCH IMPLICATIONS:** Research is required with increased participant numbers to explore more fully the short and long-term impact of the FSACT programme upon participant's knowledge, psychosocial functioning, and changes in behaviour to enhance quality of life. **CLINICAL IMPLICATIONS:** As demonstrated in this study, international partners can successfully collaborate to adapt psycho-educational programmes and provide training in the programme delivery. Potential cost saving in such collaborations is enormous. FSACT provides a brief, accessible means of introducing people to the benefits of cancer information and support from others in similar circumstance. Further collaborations could enable the development of similar evidence-based psycho-educational programmes for people facing the demands of survivorship, palliative treatment and death. **ACKNOWLEDGEMENT OF FUNDING:** This study was part of a international collaboration funded by an Amgen educational grant.

S 1.7.4

Testing a Generic Psychoeducational Program: Lessons from the Field

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BACKGROUND: The Wellness community (TWC) in the United States created a generic program for patients entitled, 'Frankly Speaking about Cancer Treatment'. Hope & Cope was one of the Canadian sites chosen to participate in the training, delivery, and evaluation of this project. The objective of this presentation is to provide the perspective from a 'test' centre, focus on the advantages and disadvantages of a generic program, and compare the outcomes with other sites. **METHOD:** Hope & Cope is a peer volunteer support program for cancer patients and their families in Montreal, Canada. The idea of using a generic program appealed to us as one method of potentially providing psychoeducational care to a wide range of patients living in rural and urban centers. We attended a training session with other centers in Canada

and Britain, led by TWC. and presented the program some months later to an audience of patients and caregivers. **RESULTS:** Evaluations from patients and staff were positive and supportive of the method and content. We changed about 15% of the American content particularly in terms of finances, insurance issues, and cultural views of the doctor-patient relationship, and we translated the program into French. Another major finding was the need to achieve a buy-in and create a positive mindset in staff and volunteers before using generic programs. Buy-in was helped by stressing the positive research findings, the financial and human resource savings to the organization, the professionalism of the TWC printed materials, having a basic agreement on content, and the potential ease in expanding the program to other communities. We also noted that each center added their own flavor by using local speakers and molding the content to local needs. **CONCLUSIONS:** The advantages to using a generic program were well established and we are currently testing another TWC generic program for survivors. Being aware of the advantages and disadvantages can help organizations move forward in this direction with confidence. **RESEARCH IMPLICATIONS:** The future of good health care may depend on our willingness to use and recommend generic psychoeducational programs and to adapt them locally, as necessary to ensure cultural and language sensibilities. It is important to compare outcomes from diverse test sites especially with regard to language and culture. **CLINICAL IMPLICATIONS:** Being aware of the advantages and disadvantages of generic psychoeducational programs can help organizations move forward with confidence, clarity and collaboration with survivors and health care professionals. **ACKNOWLEDGEMENT OF FUNDING:** The Amgen Foundation.

S 2.9.1

Individual and Dyadic Relations Between Spirituality and Quality of Life Among Cancer Survivors and Their Spousal Caregivers

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BACKGROUND: There is evidence that cancer generates existential and spiritual concerns for both survivors and caregivers, and that the survivor's spirituality affects his/her own quality of life (QOL). Yet the degree to which the spirituality of each member of the couple has an independent association with their partner's QOL is unknown. Thus, this study examined individual and dyadic effects of

spirituality on the quality of life of couples dealing with cancer. **METHOD:** A total of 363 married survivor-caregiver dyads participating in the ACS's Study of Cancer Survivors-I and Quality of Life Survey for Caregivers provided complete data for the study variables. Spirituality was measured using FACIT-SP; and QOL (mental and physical health) was measured using MOS SF-36 for both survivors and caregivers. Each person's age and the survivor's stage of cancer were included in the analyses as covariates. **RESULTS:** Survivors and caregivers were moderately similar in their levels of spirituality and QOL. Actor Partner Interdependence Model revealed that each person's spirituality was the strongest predictor of his or her own mental QOL (higher spirituality, better mental health). Each person's spirituality was also positively related to his or her partner's physical QOL. **CONCLUSIONS:** Results help identify subgroups of cancer survivors and their caregivers who are vulnerable to poor quality of life relating to lower spirituality, namely having difficulty with finding meaning out of cancer experience. **RESEARCH IMPLICATIONS:** Examination of potential mediators and moderators of the associations between spirituality and QOL deserve further investigation. **CLINICAL IMPLICATIONS:** Both survivors and caregivers may benefit from interventions that enhance their ability to find meaning and peace during the cancer experience. This ability may be positively associated with each person's own mental health and the physical health of their partner when dealing with cancer. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the American Cancer Society National Home Office, intramural research.

S 2.9.2

Daughters of Breast Cancer Patients: A Comparison of a Community Versus High Risk Clinic Population

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BACKGROUND: This is a comparison of two samples of daughters of breast cancer patients. One sample ($N = 37$) was drawn from the American Cancer Society data-base 'National Quality of Life Study: Caregivers'. The other was drawn from the Revlon UCLA High Risk Clinic ($N = 27$). Most consistent significant differences are in the area of spirituality, with the clinic based sample lower on all dimensions (Faith, Meaning and Peace). **METHOD:** This two sample comparison is cross-sectional. Each sample was evaluated in seven overall areas with the same measures. This included: 1) Care tasks-frequency, 2) Care-tasks-difficulty (Assessed by Caregiver Reaction Assessment), 3) Social Support Availability (Assessed by Interpersonal Support

Evaluation List), 4) Coping Strategies (assessed by B-Cope), 5) General psychological distress (Assessed by Profile of Mood States), 6) Depressive Symptoms (assessed by Center for Epidemiologic Studies Depression Index), and 7) Spirituality (assessed by Functional Assessment of Chronic Illness Therapy-Spirituality). Results were calculated by T-tests and Step-Wise Regression Analyses. **RESULTS:** The groups were demographically similar with the clinic group significantly more educated ($P < .05$). The clinic group had significantly greater difficulty in care tasks with obtaining emotional support ($P < .05$) and tangible support ($P < .05$). The clinic group was significantly more likely to engage in Active-Coping ($P < .01$), Behavioral Disengagement ($P < .01$), Planning ($P < .001$), and Self Blame ($P < .01$). The clinic group reflected lower levels of Total Spirituality ($P < .001$), Faith ($P < .001$), Meaning ($P < .001$), and Peace ($P < .001$). Combining both groups, Disengaged coping was predicted by depressive symptoms ($P < .01$) and lower spirituality ($P < .01$). **CONCLUSIONS:** (See Research & Clinical Implications). **RESEARCH IMPLICATIONS:** This is the first comparison of daughters of breast cancer from a community versus clinic based sample set. The demographic similarities strengthens the validity of the comparison effort. The two data sets are least consistently different in terms of care task frequencies and difficulties, and most consistently different in terms of coping strategies and spiritual issues. The interaction of care giving difficulty and disengagement coping was significantly related to level of spirituality ($B = .31$, $P < .01$). **CLINICAL IMPLICATIONS:** The clinic based group reflected more difficulties in obtaining emotional and tangible support. This did not eventuate in levels of general psychological distress or depressive symptoms significantly different from the community based group. The clinic based group reflected however, significantly lower levels of spirituality on all dimensions, which appear to be related to different coping strategies and care giving difficulties. For each group of caregivers, spirituality was lower than for patients with cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.9.3

Evaluation of Religion and Spirituality in Cancer Patients and Their Family

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BACKGROUND: Religion is a source of comfort and peace of mind for many individuals. In the course of serious diseases, religion may provide valuable support to the patient and the patient's family. This study aims to develop effective ways to take a person's religious history, to utilize the religious history in the course of treatment, and to

assist the dying patient. **METHOD:** Structured interview (FICA) to obtain qualitative data was conducted. The interview was designed to assess various aspects of the support from religion/spirituality and a religious community, including ability of finding a meaning to one's suffering, understanding caregiving as an opportunity to manifest one's love, and belief in after life. **RESULTS:** Results demonstrated the validity of FICA, a very simple instrument, revealing that the provider did not have to share the patient's beliefs to be able to talk his or her language. Knowledge about personal religious history was important to communicate with the patient and to elicit from the patient a positive coping response. In addition, a religious community represented a source of social support for patients and family. **CONCLUSIONS:** Understanding the religious perspective of a patient (or the lack thereof) is essential to the communication between patient and provider. **RESEARCH IMPLICATIONS:** The role of religion and spirituality as an important emotional and social resource for patients undergoing cancer treatment and for those close to die needs to be further investigated. **CLINICAL IMPLICATIONS:** Religious beliefs (or lack thereof) determine one person's language. Therefore it is important for the health care professional to be familiar with these beliefs. FICA can be an excellent instrument that lends itself to use in busy clinical practice. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.9.4

Spiritual Well-Being in Patients with Cancer: Does It Have a Unique Protective Role?

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BACKGROUND: There has been a dramatic recent increase in interest in spirituality in the field of psycho-oncology and palliative care. Research in this area has been facilitated by the availability of self-report measures, but the significance of spiritual wellbeing and its unique predictive value remain unclear. We examined to what extent spiritual well-being predicted psychological outcomes in a longitudinal study of patients with metastatic GI and lung cancer. **METHOD:** 406 patients with metastatic GI and lung cancer were recruited from medical oncology outpatient clinics in a comprehensive cancer center in Toronto, Canada. Measures included the Beck Hopelessness Scale, Beck Depression Inventory, Rosenberg Self-Esteem Scale, Memorial Symptom Assessment Scale and the FACIT-sp. The FACIT-sp has

subscales that measure Meaning and Peace (a sense of meaning, purpose and peace in one's life) and faith (a sense of strength and comfort from one's faith and beliefs). We determined, using structural equation modeling, to what extent spiritual well-being predicted psychological outcomes of depression and hopelessness. **RESULTS:** In the baseline data, we identified a model which accounted for 58% of the variance in depression and 40% of the variance in hopelessness, in which there were distinct predictors of hopelessness and depression. Depression was most strongly related to the severity of physical distress, whereas spiritual wellbeing most strongly protected against symptoms of hopelessness. The protective effect of spiritual wellbeing was evident for both Meaning and Peace and for Faith. **CONCLUSIONS:** Our findings suggest that spiritual wellbeing protects from symptoms of hopelessness, whereas depression is most closely linked to the physical burden and course of the disease. The protective effect of spiritual well-being is related both to the sense of meaning and purpose, which may be found in those with or without religious beliefs, as well as to belief systems that may be associated with religion. **RESEARCH IMPLICATIONS:** These findings support the unique predictive value of spiritual wellbeing in protecting from demoralization in patients with metastatic cancer. Our longitudinal data will help to clarify the stability of spiritual well-being over time and its relevance to psychological distress which emerges near the end of life. Further research is needed to disentangle the construct of spiritual well-being from other psychological variables. **CLINICAL IMPLICATIONS:** Spiritual well-being is an aspect of psychological adjustment that warrants specific attention in both research and clinical settings. Assessment of this dimension has the potential to enhance engagement and to promote meaningful dialogue, as to well as to identify, amongst individuals with advanced disease, those at greatest risk to become distressed. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research.

S 2.10.1

Psychopharmacologic Management of Delirium in the Cancer Patient

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BACKGROUND: Delirium is the most common neuropsychiatric complication in the patient with cancer, occurring in up to 85% of cancer patients in the last weeks of life. This lecture will teach participants how to diagnose delirium accurately, undertake appropriate assessment of etiologies,

and understand the benefits and the risks of psychopharmacologic interventions currently available for managing delirium in the cancer setting. **METHOD:** Delirium is characterized by an abrupt onset of disturbances of consciousness, attention, cognition, and perception. Delirium is associated with increased morbidity and mortality in cancer patients, causing distress in patients, family members, and staff. Delirium can interfere dramatically with the recognition and control of other physical and psychological symptoms, such as pain. Delirium is a sign of significant physiologic disturbance, usually involving multiple medical etiologies, including infection, organ failure, and medication side effects. The management of delirium involves the concurrent search to identify and treat the medical causes of delirium while utilizing pharmacologic and non-pharmacologic interventions to control the symptoms of delirium. **RESULTS:** This lecture will review the existing literature on the use of neuroleptic and sedative agents in the management of the symptoms of delirium in cancer. Randomized clinical trials of typical and atypical antipsychotics and sedative agents will be reviewed. In addition studies on the efficacy of Haloperidol, Chlorpromazine, Lorazepam, Olanzapine, Risperidol, Quetiapine, Apiprazole and other agents will be reviewed. Side Effects of typical and atypical antipsychotics will be reviewed including extrapyramidal syndromes, neuroleptic malignant syndrome, metabolic syndrome, and cardiovascular syndromes. **CONCLUSIONS:** Psycho-oncologists and clinicians who care for cancer patients must be able to diagnose delirium accurately, undertake appropriate assessment of etiologies, and understand the benefits and the risks of psychopharmacologic interventions currently available for managing delirium in the cancer setting. Typical and Atypical anti-psychotic medications play an important role in the effective management of the symptoms of delirium in the cancer patient. **RESEARCH IMPLICATIONS:** Clinical trials of newer agents that have efficacy and minimal side effects are needed. **CLINICAL IMPLICATIONS:** Delirium, particularly the hypoactive sub-type of delirium, is too often undiagnosed and undertreated. Delirium is distressing and so there are compelling reasons to utilize psychopharmacologic agents to control the symptoms of delirium. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.10.2

Integrating Psychopharmacology into Psycho-Oncology Practice: The role of Clinical Psychologists

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BACKGROUND: Adequate care of patients with cancer includes assessment and treatment of psychiatric disorders that may precede the cancer diagnosis, or may develop following the diagnosis. Depression, Anxiety Disorders and Delirium are the most common disorders in patients with cancer. Clinical psychologists are often directly involved in the diagnosis and management of these disorders. This presentation will illustrate how knowledge of psychopharmacology can be integrated into interdisciplinary care in psycho-oncology by nonmedical mental health professionals. **METHOD:** In the United States, the majority of mental health services for patients with cancer are provided by clinical psychologists, social workers, and other nonmedical therapists. Many clinical psychologists are directly involved in medication treatment. As primary therapists, they may assume a major role in diagnosing disorders such as delirium, depression, and anxiety in cancer patients and monitoring patients' response to psychotropic medications. These practitioners are in most frequent contact with patients and may be in the best position to observe symptomatic improvement, side effects problems, and issues involving medication compliance. Clinical psychologists who are well-versed in the use of psychiatric medication can play an active (albeit collaborative) role in recommending particular medications and dosage adjustment. **RESULTS:** It is increasingly important that mental health professional working in psycho-oncology develop familiarity with psychiatric medication treatment. The ability of nonmedical professionals to accurately communicate with oncologists and other medical providers to discuss diagnosis, target symptoms, presumed etiology, and treatment modalities is an important aspect of interdisciplinary care in psycho-oncology. This presentation will discuss how clinical psychologists and other mental health professionals can use their knowledge of psychopharmacology to develop a successful collaboration with oncologists and other medical professionals involved in the care of patients with cancer. **CONCLUSIONS:** Clinical psychologists and other nonmedical clinicians caring for patients with cancer need to develop expertise in diagnosing and managing psychiatric disorders. The quality of the care they provide can be significantly enhanced by knowledge of psychopharmacological treatments available, including their risks and benefits. **RESEARCH IMPLICATIONS:** More research is needed to identify ways that nonmedical clinicians working in psycho-oncology can integrate knowledge of psychopharmacology in the context of the treatment team. **CLINICAL IMPLICATIONS:** Nonmedical clinicians who integrate psychopharmacology management issues with their expertise in the diagnosis and treatment of psychiatric disorders can provide a higher level of care to patients with cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.10.3

Depression and the Terminally Ill: An Overview for the Non-Psychiatrist

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BACKGROUND: The diagnosis of a terminal illness is a devastating event. In addition to the medical and physical consequences of such a diagnosis, there are various psychological and emotional consequences to be considered. Episodic appearance of depressed mood is understandable when someone is facing a serious medical illness with a grave prognosis. If lingering sadness is accompanied by other depressive symptoms, the diagnosis of major depression should be considered. **METHOD:** This presentation will review the current medical literature pertaining to the diagnosis and treatment of depression in the context of terminal illness. This will include an overview of diagnostic and screening approaches, risk factors; and the association between depression and other psychosocial dimensions of terminal illness. Finally, treatment considerations will be reviewed. Both psychological as well as psychopharmacological treatments have proven effective in patients with major depression and they should be undertaken hand in hand within this patient population. **RESULTS:** About 10–25% of dying patients fall within the classification of major depression. Under-diagnosing and under-treating depression can further impair the quality of life, and thus add to the burden of suffering for patients with advanced disease. **CONCLUSIONS:** Understanding how to diagnose and treat depression is an important skill set for clinicians working in palliative care. This presentation should make attendees more familiar with how to identify and attend to depression in the context of palliative, end-of-life care. **RESEARCH IMPLICATIONS:** There is still much research to be done in the area of depression and palliative care. Large well conducted clinical trials targeting major depression will further inform the field and help establish best practices. **CLINICAL IMPLICATIONS:** All clinicians working in palliative care must have some basic awareness of the issue of depression. This should be accompanied by familiarity with the therapeutic options that are available to address this psychiatric complication of terminal illness. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research.

S 2.10.4

Psychopharmacologic Management of Anxiety in Cancer Patients

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BACKGROUND: Anxiety represents a common problem among cancer patients throughout the several phases of disease trajectory. A first important issue in dealing with anxiety is separating transient, physiological or paraphysiological states from those which meet the criteria for a psychiatric diagnosis according to the DSM or the WHO-ICD. Clinical anxiety can in fact be part of more structured and persistent disturbances both in Anxiety Disorders, in Adjustment Disorders, in Depressive Disorders or in other disorders (e.g. Delirium). **METHOD:** The psychopharmacological management of anxiety in cancer patients is the focus of the presentation within this workshop. **RESULTS:** The treatment of anxiety consists mainly in the employment of Benzodiazepines which, by acting on the GABA system, have a sedative, anxiolytic and relaxation effect. BDZ should be used for short periods of times or on prn basis and can help patients in reducing anxiety states before medical or surgical procedures, chemotherapy or any anxiogenic situation. Short-acting BDZ are usually employed in clinical practice. More recently, other drugs, acting on the re-uptake of serotonin (SSRIs), have been introduced as effective treatment of anxiety disorders. Among them citalopram, escitalopram, sertraline and paroxetine have been used successfully. Interesting reports are also available on the use of dual-acting agents, such as venlafaxine, duloxetine and mirtazapine. In certain clinical situations, other drugs (e.g. antihistamine, atypical antipsychotics) can also have a role in psychopharmacological treatment. **CONCLUSIONS:** Anxiety is a common disorder in cancer patients and the integration of psychopharmacology and psychological intervention should be part of optimal care in cancer centers. **RESEARCH IMPLICATIONS:** Research has demonstrated the role of drugs with anti-anxiety properties in cancer patients and the need to explore more in detail the characteristics (pharmacokinetics, pharmacodynamics, interaction) of these drugs in clinical settings. **CLINICAL IMPLICATIONS:** The guidelines in the use of the mentioned drugs in anxiety will be described and short clinical vignettes will be presented during the workshop. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.11.1

Is Art Therapy Effective in the Management of Symptoms in Adults with Cancer? A Systematic Review of the EvidenceMichele J. M. Wood^{1,2,3,4}

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BACKGROUND: Living with the symptoms of cancer and its treatment is a challenge. A variety of interventions have been developed to address these difficulties and promote good symptom management; one of these is art therapy. The purpose of this research was to assess the available evidence for the effectiveness of art therapy in the management of symptoms in adults with cancer. **METHOD:** A literature search of electronic databases (e.g., EMBASE; PsychINFO; CINAHL; MEDLINE; AMED; BNI), key journals, and the 'grey' literature, along with hand searching and personal contacts with authors of these was undertaken. Keywords searched were the exploded MeSH terms 'art therapy' and 'cancer' or 'neoplasm'. The inclusion criteria were: research studies of any design; adult cancer population; art therapy intervention. There were no language or date restrictions. Data extraction of retrieved studies occurred and quality appraisal was undertaken using different systems for qualitative and quantitative studies. Data were analyzed using narrative synthesis due to heterogeneity across included studies. **RESULTS:** 14 papers reporting 12 research projects met the inclusion criteria. Papers came from Europe ($n = 7$), USA ($n = 5$), Israel ($n = 1$) and Australia ($n = 1$). Eight used quantitative research designs. Only 3 were RCTs; others were observational before-and-after studies, quasi-experimental, and mixed methods. 4 qualitative studies used content, thematic or narrative approaches. Outcomes investigated encompassed emotional functioning, physical functioning, social functioning, global functioning and existential/spiritual concerns. Measures used were questionnaires, in-depth interviews, patients' artwork, therapists' narratives of sessions, and salivary samples. Art therapy interventions were group and individual sessions, varied between single sessions and 22-week courses. Participants ranged from those undergoing active treatment and post treatment to those described as cancer survivors. No total overall effect size was determined due to heterogeneity of studies, however most studies showed significant improvements in symptoms. **CONCLUSIONS:** An extensive search for studies into the use of art therapy for symptom management in adults with cancer yielded a small number of results. However, although these findings are limited they constitute the best available evidence. The findings support the following conclusions: 1) art therapy offers something distinct from art activity; 2) the art therapy experience seems to be beneficial to improve symptoms, to enhance coping, to strengthen the person with cancer; 3) art therapy is an especially versatile clinical resource, as it may be employed at all stages and in different treatment settings. **RESEARCH IMPLICATIONS:** The positive findings must be tempered with caution: most recruited small numbers, art

therapy techniques varied and different outcome measures were employed. Further research addressing these methodological shortcomings is needed. Further research should include the experiences of people participating in art therapy and their motivations for accessing services, especially men, and an assessment of cost-effectiveness. Multi-centred research trials of art therapy would build upon the positive findings highlighted by this review. **CLINICAL IMPLICATIONS:** The use of art therapy at all stages of the cancer trajectory and in different treatment settings indicates it is a versatile clinical resource. Enhancement of coping and re-adjustment of personal boundaries suggest art therapy makes a valuable contribution to rehabilitation and survivorship, and even a modest intervention can have long-term benefits. For men with cancer art therapy may be a more acceptable form of psychosocial support. (7 studies recruited men M:F = 101:193). **ACKNOWLEDGEMENT OF FUNDING:** A scholarship given by Cancer Experiences Collaborative, UK enabled the researcher to undertake this systematic review.

S 2.11.2

Art Therapy with Women with Breast Cancer—Results from a Randomized Study

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BACKGROUND: Between 2001 and 2004 forty-two women with primary breast cancer, 37–69 years old, participated in a study carried out at the Department of Oncology, Umeå University Hospital in northern Sweden. The aims of the study were to describe women's experiences of breast cancer and to describe the effects of an art therapy intervention. **METHOD:** The women were randomized to an intervention group with individual art therapy during postoperative radiotherapy, or to a control group. Each woman completed questionnaires about quality of life, coping resources, symptoms, and self-image in connection with three interview occasions during six months. All women were also asked to write a weekly diary during the six months of their participation. **RESULTS:** The results showed significant increase in coping resources and quality of life aspects and a decrease in a range of symptoms in the intervention group compared to the control group after six months of participation. No significant changes in the women's self-images were observed. Discourse analysis of the women's interviews and diaries showed a connection between participation in art therapy and talking about protecting one's own boundaries. There was also a connection between those in the control group and talking about conflicts. Results showed that art therapy acted as a 'safe space' for

enacting alternative subject positions. **CONCLUSIONS:** This study provides new knowledge about women with breast cancer and their trajectories, in art therapy, and indicates that art therapy can be helpful in the women's management of restraining boundaries. **RESEARCH IMPLICATIONS:** There are still few randomised studies about art therapy in oncology settings and this study adds new results. **CLINICAL IMPLICATIONS:** This study provides new knowledge about art therapy to clinicians in oncology settings. The design of the art therapy sessions is described in detail as well as why the participating women found the art therapy sessions to be helpful. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.11.3

On the Therapeutic Use of Silence: Caring for Cancer Patients Who Don't Find Talking Groups Beneficial

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BACKGROUND: Although 'talk therapy' has demonstrated efficacy for many cancer patients, there is a subset of patients who are distressed but may not choose to engage in traditional support groups. These patients often express the need to withdraw from everyday activities and report that this is not appreciated by health care providers and families, who rather emphasize the return to social life. Innovative interventions need to be devised to meet the needs of these patients. **METHOD:** Three types of supportive psychological interventions will be described in which silence was used as a therapeutic tool. (1) Silence as the main tool (meditation and mindfulness workshops); (2) Silence and Image-Making as two interacting tools (art therapy); (3) Silent Creative Retreats (one day or longer): multi-disciplinary interventions based on the integration between silence/meditation and a number of creative activities, offered in a structured retreat setting. All three types of intervention have been offered to patients of the Memorial Sloan-Kettering Cancer Center, New York. A four-day international retreat for cancer patients has been conducted for the past seven years in Assisi, Italy. **RESULTS:** The authors will report on the results of questionnaires completed by participants as well as informal comments and letters later sent by participants. **CONCLUSIONS:** Patients' reports on the experience of silence within a therapeutic context have suggested a number of benefits: (a) strengthening the sense of self; (b) increased capacity to deal with negative thoughts; (c) a new experience of freedom; and (d) re-birth of hope. **RESEARCH IMPLICATIONS:** These clinical

findings suggest the need for studies comparing verbal and non-verbally oriented therapeutic approaches with this population. **CLINICAL IMPLICATIONS:** This analysis supports the idea that patients who express difficulties in participating in verbally oriented support groups may be offered alternative interventions where silence may be used as a therapeutic tool, either independently or in conjunction with creative activities. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.13.1

Empirical Evidence on Bereaved Survivors of Cancer Patients' Quality of Life, Regional Brain Activation and Inflammatory Markers

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BACKGROUND: In clinical and research fields, the crucial importance of grief is apparent in those who survive family members with cancer. Chronic stress and grief promote dysregulated immune activity, and this affects behavior and brain function. Inflammatory cytokines are associated with low mood and anhedonia, which are orchestrated by the brain. The present study investigated the hypothesis that inflammation is associated with greater subgenual anterior cingulate cortex (sACC) activation in surviving family members. **METHOD:** Twenty-three women who had experienced the death of a mother or a sister to breast cancer were interviewed. They provided saliva samples and had functional magnetic resonance imaging (fMRI) scans during a grief-elicitation task. Inflammation was measured by salivary concentrations of interleukin-1 β and soluble tumor necrosis factor receptor II. To test whether the brain regions associated with local levels of IL-1 β and sTNFrII were part of a motivational state that shaped the perceptions of the participant, the recall of grief-related and neutral words was correlated with regional activation. **RESULTS:** Analyses revealed that both inflammatory markers were positively associated with ventral prefrontal activation (e.g., the subgenual anterior cingulate cortex (sACC)). These brain activations correlated with free recall of grief-related word stimuli, but not neutral word stimuli. **CONCLUSIONS:** This study demonstrates brain regions in bereaved individuals that are associated with high levels of inflammation. The sACC is a reliably activated region in major depression. The sACC activation was correlated specifically with the recall of grief-related words. Biased memory retrieval for mood-congruent words has been found in other mood disorders. The strong positive correlation between the recall of grief-related words and sACC activation (and no correlation with neutral words) suggests that those with the highest local inflammation attend

preferentially to grief-related (i.e., mood congruent) information. **RESEARCH IMPLICATIONS:** This is the first study to demonstrate the relationship between emotional processing, regional brain activation and localized inflammation in bereaved family members of cancer patients. We propose that future research should continue to explore the biological correlates of grief, and potentially identify the mechanism from bereavement to brain activity and inflammation, in order to address the physiological consequences of bereavement stress in this population. **CLINICAL IMPLICATIONS:** This presentation reviews empirical evidence on bereaved survivors' quality of life, including physiological and emotional aspects. Grief in this population is a unique experience because survivors of cancer patients have frequently been long-time caregivers and may have increased personal risk for cancer. We believe that results of this study indicate the importance of identifying and intervening on behalf of bereaved survivors who are struggling to adapt. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported in part by the California Breast Cancer Research Program Grant No. 10IB-0048, NIA K01-AG028404, T32-MH19925, the Cousins Center for Psychoneuroimmunology and the Friends of the Semel Institute for Neuroscience and Human Behavior.

S 2.13.2

Daughters of Breast Cancer Patients: A Comparison of Those with a Deceased versus Surviving Mother

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BACKGROUND: This is a study of two groups of daughters of breast cancer patients, all drawn from the Revlon UCLA High Risk Clinic. One group had mothers deceased from breast cancer ($N = 178$) and one group had mothers who survived breast cancer ($N = 183$). We sought to evaluate the effects of maternal death versus survival on three key constructs: 1) cancer-related health behaviors, 2) role stresses/strains, and 3) emotional functioning. **METHOD:** Both groups assessed at admission to the High Risk Clinic with: 1) The Breast Cancer Risk Management Program Structured Interview, 2) The Center for Epidemiologic Studies-Depression Index (CES-D), and 3) The State-Trait Anxiety Inventory (STAI). Differences between the two groups were assessed to identify potential demographic and medical covariates. Subsequent differences between the two groups were evaluated in covariate-adjusted multiple regression models. Differences in compliance (cancer related health behaviors) were tested using logistic regression modeling. The Holm Modification of the Bonferroni correction was used to protect against Type I and II error in analyses of

the three key study constructs. **RESULTS:** Group Differences in Cancer-Related Health Behaviors: Survival status did not significantly affect anxiety related to pap testing, or mammography, mammography compliance, breast self exam compliance, or compliance with dietary recommendations. Those who's mother died had significantly higher levels of anxiety about BSE ($P = .002$). Group Differences in Role Stress. Those with a deceased mother showed significant changes in body image ($P = .008$), life plans ($P = .0001$), and in daily routines during mothers cancer ($P = .04$). Group Differences in Emotional Functioning: None for state anxiety or general depression. Those who's mother died report greater cancer related depression ($P = .009$). **CONCLUSIONS:** (See Research & Clinical Implications). **RESEARCH IMPLICATIONS:** Standardized testing (CES-D & STAI) did not capture the affective impacts of the daughters experiences as well as did the structural interview. The significant differences in changes in long term plan argue for longitudinal, sequential assessments such daughter-caretakers as their changes and difficulties are likely to evolve over time. The study argues for the predominance of the Complicated Grief Model over the Relief Model in daughters of breast cancer patients. **CLINICAL IMPLICATIONS:** Survival status of high risk daughters does not appear to affect their compliance with necessary medical evaluations as much as their feelings of distress about them. Death of a mother does not appear to emotionally de-stabilize the daughters-survivors but appears to have lasting effects in grief, long term plans, body image, and memories of the care taking period. This argues for the creation and maintenance of complicated grief in a sub-set of high risk daughters. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.13.3

Supporting the Family as a Caregiving System at the End of Life

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BACKGROUND: Family Focused Grief Therapy (FFGT) is an empirically supported psychosocial intervention delivered to families during palliative care. A premise of FFGT is that promoting shared expression of illness-related concerns will strengthen teamwork and mutual support within families. The purpose of this study was to examine changes in communication and associated outcomes across sessions of FFGT. Additionally, we examined the role of therapeutic alliance in empowering families to improve communication at the end of life. **METHOD:** Data for this study were collected within a larger randomized controlled trial of FFGT. FFGT targets families determined to be

at risk for psychosocial morbidity based on poor relational functioning. Fourteen families (56 individuals) participating in FFGT completed the following questionnaires following each therapy session: the *Family Session Disclosure Measure* (FSDM) a measure of perceived in-session disclosure about cancer-related concerns (adapted from Manne *et al.*, 2004a); the *Family Therapy Alliance scale* (Pinsof *et al.*, 2008), which inquires about alliance within the family and between the family and therapist; and the *Positive and Negative Affect Schedule* (Watson, Clark, and Tellegen, 1988). RESULTS: Linear mixed-effects models were specified to examine changes in communication and associated outcomes across sessions of FFGT. Results indicated that from baseline to session 5, in-session communication scores increased by an average of .52 points per session ($t = 2.39$, $p < 0.05$). A subsequent analysis examined the immediate impact of increased communication on individuals' post-session affect. Results indicated that for every unit increase in disclosure from session to session, positive affect increased by 1.1 ($t = 6.06$, $p < 0.0005$), whereas no significant impact was evident on negative affect. Finally, therapeutic alliance predicted changes in perceived communication over time. CONCLUSIONS: Our results suggest that psychosocial support delivered to distressed families at the end of life can catalyze significant changes in communication. Interestingly, increased expression of illness-related concerns across sessions of FFGT did not appear to generate more distress (i.e., no impact on negative affect), but was strongly associated with an increase in positive affect among family members. Furthermore, family members who perceived a strong alliance with the therapist were more likely to report increased communication across sessions of FFGT. RESEARCH IMPLICATIONS: The results of this study contribute to the empirical validation of the FFGT model and suggest a potential moderator (therapeutic alliance) of its impact on family communication. This research addresses an increasingly recognized need to identify change mechanisms in psychosocial interventions for cancer patients. In this study, tracking proximal change processes across sessions of FFGT yielded an evidence-based description of how families benefit from this intervention. CLINICAL IMPLICATIONS: FFGT targets caregiving families at the end of life, who are beset by conflict, communication constraints and/or poor cohesiveness. These attributes are known to place families at risk for adverse outcomes following the loss of a loved one. A precise description of how FFGT helps families find relief and gain strength will contribute to its effective delivery in the palliative care setting. ACKNOWLEDGEMENT OF FUNDING: Data from this study were

collected as part of a larger, ongoing R01 NCI-funded study (5 R01 CA115329) led by Dr. David Kissane (PI).

S 2.13.4

Family Caregivers' Quality of Life: Comparison Caregivers Actively Providing Care at 5 Years Post-diagnosis with Bereaved Caregivers

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BACKGROUND: The family caregivers' quality of life (QOL) beyond the initial phase of illness trajectory remains less known, particularly about the diverse aspects of QOL other than psychological distress. This study documents the levels of various aspects of QOL and identifies caregiving-related factors that relate to QOL, comparing two groups of family caregivers at different phases in the caregivership trajectory. METHOD: A national longitudinal survey for caregivers targeted family caregivers who were actively providing care to cancer survivors ($n = 155$) or lost the care recipient ($n = 178$) at 5 years post-diagnosis. QOL studied include psychological distress (POMS-SF), mental health (MOS SF), physical health (MOS SF), and spiritual adjustment (FACIT-Sp) of caregivers at 5 years post-diagnosis. Predictors include caregiving stress, caregiver esteem, caregiving duration, care-recipient's mental and physical functioning levels when caregivers were providing assistance. Participants were middle aged (58 yrs) and mostly female (70%), educated (58% > college), affluent (50% income > \$40,000), and spouses of the care recipient (56%). RESULTS: The levels of QOL were equivalent between bereaved caregivers (BC) and those who were actively providing care (AC). Both groups of caregivers reported higher levels of psychological distress and poorer mental health, compared to an age-matched normative sample. Results of generalized linear modeling revealed that caregiving stress was associated with higher levels of psychological distress among both AC and BC. Caregiving stress was also negatively related to mental health only among BC and to physical health only among AC. Care-recipients' physical functioning level was positively related to caregivers' physical health only among AC. Finally, caregiver esteem was positively associated with better spiritual adjustment only among AC. CONCLUSIONS: These findings document the cancer caregivers experience heightened psychological distress and poor mental health beyond the initial phase of illness trajectory. Findings also provide the evidence about adverse impact of caregiving stress on caregivers' QOL when they continue or resume the caregiving role 5

years after their relatives' cancer diagnosis and even after they stop the role. **RESEARCH IMPLICATIONS:** Further investigation to identify psychosocial and demographic correlates of QOL and caregiving stress years after the initial caregiver-ship phase is warranted. **CLINICAL IMPLICATIONS:** Interventions help minimize stress associated with providing care appear to be beneficial for caregivers not only when they are actively providing care but also after they complete the caregiver role due to death of the care recipient. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the American Cancer Society National Home Office intramural research.

S 2.14.1

Attachment Dimensions, Adjustment and Posttraumatic Growth in Breast Cancer Patients and Their Partners

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BACKGROUND: The importance of support and quality of dyadic relations in adjustment of breast cancer patients and partners has been confirmed in studies. However, role of personality variables (attachment dimensions) is not clear enough. The present study looks into relationships of attachment dimensions with adjustment (mental, dyadic and psycho-social) and with post traumatic growth of these patients and their partners. It also examines the role of perceived support and coping as mediators in these relationships. **METHOD:** Self report, identical questionnaires were anonymously administered to 132 breast cancer patients and their partners. Questionnaires included: 1. Demographic and medical, 2. Coping scale, 3. Attachment scale, 4. Psycho-social adjustment, 5. Perceived support, 6. Dyadic adjustment (sexual, intimacy, marital satisfaction). Analysis of results included 4 parts: 1. Prediction of adjustment and posttraumatic growth by attachment variables. 2. Examining the role of perceived support and coping as mediators of attachment dimensions and dependent variables (adjustment and growth). 3. Cluster analysis identifying types of couples according to each partner's attachment dimension. 4. Examining differences among couple clusters regarding dependent and mediating variables in patients and in partners separately. **RESULTS:** As expected, attachment anxiety and avoidance were found to predict adjustment and posttraumatic growth. Emotional focused coping is a partial mediator for attachment anxiety and adjustment variables while problem focused coping and perceived support partially mediate avoidant attachment and dependent variables. As to cluster

analysis, three types of couples were identified: 1. secure (both partners are low on avoidance and on anxiety), 2. anxious (both partners are low on avoidance and high on anxiety) 3. mixed (women high on anxiety and avoidance and partners very high on avoidance). Avoidant attachment within couples demonstrated considerable effect in reducing sexual adjustment and intimacy. **CONCLUSIONS:** Similarly to other high stress conditions, attachment dimensions seem to play a role in adjustment and posttraumatic growth of breast cancer patients and partners. The way by which avoidant attachment affects perceived support can offer one possible explanation for the question 'when and how, support is perceived as such by recipient?' A special interest can be found in the role avoidant attachment plays in dyadic relations of breast cancer patients and their partners. Issues of causality are still not resolved (the need for prospective studies). **RESEARCH IMPLICATIONS:** In the present study, patients are women and care givers are men. It will be of interest to replicate the study with other cancer populations, to control for gender effects. **CLINICAL IMPLICATIONS:** Applicability of results to psychotherapeutic thought and tools is clear. Also there is an interdisciplinary importance: concepts of attachment are generally relevant in various professional encounters with patients in Oncology. Evaluation of attachment patterns can contribute to a deeper understanding of emotional needs of patients and partners and to enrich communication. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 2.14.2

Relation Between Social Support, Hopelessness and Coping in Parents of Children with Cancer

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BACKGROUND: The illness and staying in hospital of the children is very stressful event for children and other family members. Especially if it's an illness which is painful and requires long time to cure as cancer, the family members feel fear, anger, pain and hopelessness which effect the accordance of the period of cure. The study was performed in order to examine the relation between social support, hopelessness and coping in parents of children with cancer. **METHOD:** The study was performed in Clinics of Pediatric Oncology and Hematology with participating of 107 parents of children with cancer. In collecting the data, an information form, which was developed by researchers, 'Ways of coping inventory' of Folkman and Lazarus, 'Scale of the Ways to Cope With Stress' of Zimet *et al.* and 'Beck

Hopelessness Scale' of Beck *et al.* were used. The frequency distribution, arrhythmic average and standard deviation of the data was obtained. In analyzing the data, Student's *t* test, one-way ANOVA, Bonferroni and Tukey advanced level test, Pearson correlation test and Chisquare test were used. RESULTS: It's shown that the factors effected the hopelessness of the parents are; the age of children, negative relations with other healthy children and family members, the way to get the medical therapy, education level of the parents and the effect of cancer on family budget. It's found that when the income level decreases and the affection rate of family budget increases, the approaches of seeking support and helpless increases. One of the most important findings is the negative relation between hopelessness and social support perception. When the perceived social support increases the hopelessness level decreases. CONCLUSIONS: According to these results, it's evaluated that determining the hopelessness reasons of the children with cancer and their families, investigating the stress factors that comes with cancer, coping ways and social support systems provide effective health care to the children and their families. Also, health care programme will planned for eliminate the negative attitudes and social support systems will be developed. by evaluating the needs of the patients and the families. RESEARCH IMPLICATIONS: None. CLINICAL IMPLICATIONS: Research has been conducted to investigate the problems at the approach to cancer patients and their families. We aimed to meet the psychological needs of people with cancer and to improve the quality of life of the patients during active treatments and palliative care with continuous educational training of the professionals working in the field to provide psychological support to the patients and their families. ACKNOWLEDGEMENT OF FUNDING: None.

S 2.14.3

Social Support: For Whom and Which Kind

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BACKGROUND: The goal was to validate and test in cancer patients a questionnaire assessing the psychological correlates of readiness and ability to use and benefit from social support. The general assumption was that social support does not appeal to all patients and cannot equally benefit all patients. The study was done in the framework of the cognitive orientation (CO) theory which assumes that cognitive contents and processes guide behavior. METHOD: The participants were 180 patients of both genders, with different cancer diagnoses and in different disease stages. They were administered questionnaires assessing the availability and readiness to

use different kinds of social support and a CO questionnaire assessing motivational tendencies identified in pretests as relevant in regard to using social support. Both questionnaires were pretested for reliability and validity in a previous study. RESULTS: Factor analyses supported the conception underlying the social support questionnaire in regard to four kinds of support: cognitive, behavioral, emotional positive, and emotional negative. Discriminant and multiple regression analyses showed that the CO variables provided good predictions of the use of social support. The main motives orienting toward social support were openness to others, readiness to share one's weaknesses and willingness to compromise in regard to one's complete independence. CONCLUSIONS: The findings show that readiness to use and benefit from social support varies across individuals and that it is a function of specific motivational tendencies, assessed adequately by means of the CO questionnaire of social support. RESEARCH IMPLICATIONS: The study confirms the validity and reliability of two research tools that may be of importance in further studies: the CO of social support and the availability of four types of social support. It also provides further support to the CO theory that enabled prediction of the important behavioral tendency of readiness to get and use social support. CLINICAL IMPLICATIONS: Social support is an important resource for coping with cancer whose use is not open for all patients to an equal degree because it depends on preexisting specific motivational tendencies. The findings suggest means for enhancing the motivational tendencies so that this coping resource may become available also for those who may have found it inadequate or difficult to use. ACKNOWLEDGEMENT OF FUNDING: None.

S 2.15.1

Effects of Psychosocial Interventions in Patients Treated for Breast Cancer: Psycho-Neuro-Immuno-logic Processes

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This paper demonstrates how a program of research progressed from observational work to four theory-guided intervention trials, which established the validity of psychosocial intervention during treatment for breast cancer (BCa) and addressed issues such as mechanisms of action, dose and timing. Our research program identified predictors of psychosocial adaptation to the stress of breast cancer (BCa) treatment and then tailored a stress management intervention to modify psychosocial and

psychoneuroimmunologic (PNI) processes that may be relevant for quality of life and health outcomes in these women. In a longitudinal natural history study we observed that pessimism, poor coping strategies and decreased social support at the time of surgery predicts poorer psychosocial adaptation (distress, quality of life) to BCa treatment as well as greater PM serum cortisol and poorer cellular immune measures. We next developed a cognitive behavioral stress management (CBSM) intervention designed to modulate these processes in order to (a) improve psychosocial adaptation as women moved through treatment for BCa, and (b) examine whether parallel changes in PNI parameters could explain any health benefits of the intervention. The manualized 10-week CBSM intervention provided relaxation-based anxiety reduction techniques, cognitive restructuring, coping effectiveness training, and interpersonal skills in a supportive group. Two randomized controlled trials (RCTs) tested the effects of CBSM intervention in women with BCa recruited up to 8 weeks after surgery just before beginning adjuvant therapy for Stage I–III BCa. Women assigned to CBSM revealed improvements in indicators of psychosocial adaptation (positive and negative mood, quality of life, benefit finding, interpersonal disruption) and PNI parameters (PM serum cortisol, lymphocyte proliferative response, and Th1 and Th2 cytokine production) at follow-up compared to controls. CBSM-specific (relaxation skill confidence) and non-CBSM-specific (emotional expression) changes as well as the number of intervention sessions attended related to the magnitude of effects. To address intervention *mechanism* and *dose* a third ongoing RCT experimentally separates CBSM processes in abbreviated form (5-wk relaxation vs. 5-wk CBT vs 5-wk health education) and tests their differential effects on psychosocial adaptation, di-urnal cortisol regulation, and cytokine production. To address *timing* issues, a fourth RCT tested the efficacy of CBSM delivered later in medical treatment (3–12 months post-adjuvant therapy), and found effects on psychosocial adaptation, urinary cortisol output, and natural killer cell activity. We are following these cohorts of women to examine whether psychosocial and PNI processes modulated during CBSM predict quality of life and health outcomes at longer-term follow-up.

S 2.15.4

Do Mood and Cancer-related Quality of Life Predict Cytokine Levels in Patients with Colorectal Cancer Patients?

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BACKGROUND: Cytokine levels and psychosocial factors have both been shown to have independent prognostic value for survival in colorectal cancer patients. Recent interest has focused on the possible relationship between pro-inflammatory cytokines and depression. More specifically, IL-6 has recently been shown to be a sensitive and specific biomarker of depression in patients with cancer. The aim of this study, therefore, was to examine the relationships between psychological factors and cytokine levels in patients with colorectal cancer. **METHOD:** Pre- and post-operative levels of IL-1, IL-1ra, IL-6 and TNF- α were measured using standard solid phase sandwich ELISA in 104 consecutive eligible patients undergoing elective resection for colorectal cancer. Standardised psychosocial measurements (Functional Assessment for Cancer Therapy [FACT-C] Hospital Anxiety and Depression Scale [HADS]) were carried out at the same time. The relationship between preoperative psychosocial scores and pre and postoperative cytokine levels were evaluated using Spearman's product-moment correlations. Multiple linear regression (simultaneous entry of variables) was used to determine independent predictors of pre and postoperative levels of IL-1b, IL-1ra, IL-6 and TNF- α . **RESULTS:** Seventy (67.3%) were male and the mean age of the group was 67.6 years (range 39–86 years). Preoperative IL-1b and postoperative IL-6 levels were significantly higher in males compared with females. There was no correlation between age of the patient and TNM stage of the tumour with cytokine levels. Functional wellbeing (FW) and colorectal cancer concerns (CCS) were negatively correlated with preoperative and postoperative IL-1ra ($p < 0.05$). HADS depression score was positively correlated with preoperative and postoperative IL-6 level ($p < 0.05$), while CCS showed negative correlation. Multiple linear regression showed that HADS depression scores independently predicted postoperative IL-1ra levels ($b = 0.420$, $p = 0.03$). **CONCLUSIONS:** Cancer-related concerns, functional well being and depression appear to be related to pre-operative and post-operative cytokine levels in patients with colorectal cancer. These data provide support for the hypotheses that psychological factors modulate levels of cytokines and may explain prognostic differences arising due to differences in psychosocial status. **RESEARCH IMPLICATIONS:** Studies have shown that psychological factors can be modified with psychosocial therapy or pharmaceutical agents. If the relationship between psychological factors and cytokines is confirmed in other research studies, modification of psychological status of patients may have a role in future clinical management. **CLINICAL IMPLICATIONS:** This study provides some evidence for the hypothesis that depression, colorectal cancer-related concerns and

personality traits predict cytokine levels in patients with colorectal cancer. The next logical step in this line of research would be a randomized controlled trial to study the effects of interventions designed to improve quality of life on levels of these cytokines along with longer follow-up periods. ACKNOWLEDGEMENT OF FUNDING: None.

S 3.16.1

Screening for Distress, the 6th Vital Sign: A Canadian Strategy for Influencing the Agenda for Person-Centered Cancer Care: Implementation Considerations, Strategies, and Challenges

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BACKGROUND: Once the decision is made to implement Screening for Distress the next challenge is how to implement Screening for Distress programs in hospitals and cancer programs. This presentation provides an overview of the considerations and challenges when implementing a Screening for Distress program. It will focus on strategies to avoid these challenges and things to consider when assessing readiness for such a program. A framework for implementing Screening for Distress programs will be discussed. **METHOD:** Feedback, including strategies and challenges, from Screening for Distress programs across Canada will be summarized. The Tom Baker Cancer Centre will be explored as a case study for Screening for Distress programs. **RESULTS:** The implementation of a Screening for Distress program often takes longer than expected. It involves a collaborative approach that should include professionals including administrators, nurses, physicians, and allied health professionals. **CONCLUSIONS:** Screening for Distress is often conceptually supported but the path from panning routine screening to the implementation in clinical settings can be long and challenging. Engaging stakeholders and appropriate planning early on can minimize the resistance to change. **RESEARCH IMPLICATIONS:** This presentation will speak to challenges when developing and implementing a Screening for Distress program. It is vital to take these challenges into consideration when designing studies related to Screening for Distress. **CLINICAL IMPLICATIONS:** Clinicians considering Screening for Distress programs should begin by assessing the needs and gaps in care and the readiness of their centre for such a program. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer; Alberta Cancer Foundation Research Initiative Program Grant.

S 3.16.2

Screening for Distress, the 6th Vital Sign: A Canadian Strategy for Influencing the Agenda for Person-Centered Cancer Care: Current Developments in Canada

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BACKGROUND: Prevalence rates of distress has led to the endorsement of the 6th Vital Sign, with the Canadian Partnership Against Cancer deeming Screening for Distress (6th Vital Sign) a priority direction for the next 5 years. As well, Screening for Distress has become a new addition to the 2009 Canadian Accreditation Standards for Cancer programs resulting in greater uptake for Screening for Distress. This presentation will explore outcomes of recent national meetings. **METHOD:** Arguments and data will be presented to support the importance of routine detection and treatment of distress and the consensus points from recent national Screening for Distress meetings. **RESULTS:** Clinically, distress is recognized as a significant and prevalent problem for patients at all stages of the disease trajectory. A national meeting held in March 2008 built consensus around the concept that distress is about more than anxiety and depression; it arises from difficulties in physical, practical, and psychosocial domains. Additional points of consensus include: screening should occur on a routine basis and screening should use standardized measures. Additional meetings have also addressed how to define screening, what tools could be used, and when to screen. **CONCLUSIONS:** Screening for Distress should include physical, practical, and psychosocial concerns. All patients should be screened routinely, including at point of entry and at critical time points. A national Screening for Distress strategy is currently being developed and Screening for Distress programs are in the process of being implemented in various Canadian provinces. **RESEARCH IMPLICATIONS:** Further research is needed in the area of Screening for Distress and the impact on resources, outcomes, and satisfaction. **CLINICAL IMPLICATIONS:** The goal for the presentation is to raise awareness about the importance of Screening for Distress and highlight the consensus being built in Canada. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer (CPAC); Alberta Cancer Foundation Research Initiative Program Grant.

S 3.16.4

Screening for Distress, the 6th Vital Sign: A Canadian Strategy for Influencing the Agenda for Person-Centered Care: Developing a pan-Canadian Strategy

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BACKGROUND: Funding has been made available for five years to implement the Canadian Strategy on Cancer Control, through the auspices of the Canadian Partnership Against Cancer. One of the eight action groups charged with specific mandates is the Cancer Journey Action Group. Its mandate is to provide leadership to change the focus of the cancer system so that patient, survivor and family member needs are better served. **METHOD:** This presentation will highlight the overall plans for the Action Group in its move toward creating a person-centered cancer system. **RESULTS:** One of the drivers that has been identified to assist in achieving the vision of a person-centered system is Screening for Distress (6th Vital Sign). Screening for Distress can assist cancer patients in accessing the full range of support services in a more timely fashion. **CONCLUSIONS:** Ultimately, the cancer experience needs to be improved. Ideally there needs to be a better access to psychosocial services, information and support, and navigation across the system if the quality of life of those living through a cancer experience is to be improved. **RESEARCH IMPLICATIONS:** Research on the effectiveness of developing national strategies on patient care is required. **CLINICAL IMPLICATIONS:** This work presents an excellent opportunity to rebalance the focus of cancer care and access to psychosocial services. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer.

S 3.18.1

Cancer Support Group Research: An example of collaborative work in Australia

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BACKGROUND: Since the 1970s there has been an increased proliferation of cancer support groups, yet little is known about these groups, particularly non-therapeutic peer-led support groups. Consumer groups in Australia lobbied for research into support group efficacy. In response to this, since 2002 various research institutions, peak organisations, and consumer

bodies in Australia collaborated on a comprehensive research program into cancer support groups. **METHOD:** A state-wide audit of existing support groups in NSW was followed by a quantitative, prospective, longitudinal study of 416 cancer support group members and an ethnographic study of 9 support groups. A systematic literature review of leadership challenges and qualitative interviews with 27 support group leaders were then conducted, followed by an Australia-wide survey of 292 cancer support group leaders and a randomised controlled trial of three interventions with 65 cancer support group leaders. **RESULTS:** A wide variety of cancer support groups were found and the challenges faced by the groups and their leaders were identified. Group members confirmed the benefits of attending a cancer support group; however carers and those in rural groups had poorer outcomes. Leaders were identified as critical to support group success. Leaders identified a number of rewards, challenges and unmet training needs. Preferred leader-interventions included face-to-face group facilitation training, development of a DVD and manual, and a website with discussion forum. **CONCLUSIONS:** Consumers perceive strong benefits from attending cancer support groups. Leaders are critical to their success and require training and support. **RESEARCH IMPLICATIONS:** Consumer advocacy groups can alert researchers to neglected clinical areas and can genuinely contribute to the research process. Both qualitative and quantitative methodologies are valuable in generating novel findings in the area of cancer support groups. **CLINICAL IMPLICATIONS:** The current research program highlights the importance of identifying the individual support needs of patients/carers and matching these with the appropriate form of support. Support group leaders experience many challenges and have a number of unmet support/training needs. Peak organisations should be mindful of the complexities of cancer support group leadership, and provide on-going support and training where possible. **ACKNOWLEDGEMENT OF FUNDING:** Funding for the support group research and the interviews with group leaders was provided by the Cancer Council NSW, Australia and by the NHMRC Biomedical Postgraduate Research Scholarship (Dr. Laura Kirsten) and Research Fellowship (Prof. Phyllis Butow). Funding for the national survey was provided by Cancer Council, NSW. Funding for the development of leader interventions and randomised trial was provided by the ARC–Industry Linkage Grant. Industry partners were the Cancer Council, NSW and Westmead Hospital.

S 3.18.2

The Development and Piloting of Interventions to Assist Cancer Support Group Leaders

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BACKGROUND: In 2006 a national survey of Australian cancer support group leaders was conducted to investigate unmet needs and preferences for support or training. Despite considerable diversity amongst leaders in group facilitation skills, training and geographical location, participants expressed a consistent preference for three interventions: a support group leader website and discussion forum, a DVD and manual demonstrating leadership skills, and face-to-face training workshop. This paper reports on the development and piloting of these three interventions. **METHOD:** The interventions were developed on the basis of a literature review, educational learning principles and expert and consumer review. The interventions were designed to be used in conjunction with each other, yet be comprehensive enough to be used as stand-alone learning tools. Using an online survey, post-workshop evaluation questionnaires and interviews, pilot testing of the leaders' website and discussion forum ($n = 10$) and training workshop ($n = 35$) were conducted with cancer support group leaders. **RESULTS:** Participants reported a high level of satisfaction with all aspects of the website and discussion forum, with an average score of 5.5 out of 6. Participants were highly satisfied with the content, pace and structure of the workshop, with an average score of 4.3 out of 5. Qualitative data provided further evidence of benefit from attending the workshop, including increased confidence and improved leadership skills amongst participants. **CONCLUSIONS:** Pilot study data indicates that the developed interventions should be beneficial to cancer support group leaders, and provides good evidence for further evaluation using a randomised trial. **RESEARCH IMPLICATIONS:** Pilot study results for both the website and discussion forum and the 2-day training workshop provide evidence of the benefit of support and training resources for

cancer support group leaders, particularly volunteer or peer group leaders. These findings should be further investigated by randomised controlled trial. **CLINICAL IMPLICATIONS:** The developed interventions are accessible and potentially beneficial to all cancer support group leaders, regardless of pre-existing skill, education or geographic location. Peak governing organisations could assist support group leaders by making the interventions available to leaders in their networks. **ACKNOWLEDGEMENT OF FUNDING:** Funding for this project was provided by the Australian Research Council—Industry Linkage Grant Application LP0562095. Industry partners Cancer Council, New South Wales and Westmead Hospital.

S 3.18.3

Supporting the Supporters: A Randomised Trial of Interventions to Assist Cancer Support Group Leaders

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BACKGROUND: In response to the reported needs of cancer support group leaders, the following educational strategies were developed; a leader website and discussion forum, a DVD and manual, and a training workshop. Pilot study data indicated benefit to leaders of all strategies. The current study aimed to evaluate the effectiveness of a minimal intervention (access to the website and discussion forum) versus intensive intervention (access to the website and discussion forum, DVD and manual and workshop). **METHOD:** The study design was a randomised controlled trial. Leaders were stratified by gender, geographical location and type of group conducted, then randomised to receive the minimal versus intensive intervention. Pre and post intervention assessment of participants was conducted using the Group Leaders Self-efficacy Instrument (GLSI), Kessler-10 (K-10) and purpose-designed (PD) measures of challenges and reward. Interviews and focus groups were conducted upon completion of the intervention phase. **RESULTS:** Sixty-five leaders (intensive $n = 35$; minimal $n = 30$) participated in

the trial, with post-intervention data collected from 48 leaders (74%). On average, leaders reported low levels of challenge in their leadership role, and high levels of psychological wellbeing. Less than half of leaders reported accessing the website (42%) and on average accessed the website 1.6 times during the 4-month intervention phase. No significant differences were found between groups on the GLSI, K-10 and PD measures. However, in qualitative data collected in semi-structured interviews ($n = 13$) and focus groups ($n = 7$), leaders reported that training induced change in practice, increased their confidence and provided active strategies to cope with on-going leadership challenges, including dealing with difficult personalities, burnout and over-involvement. **CONCLUSIONS:** While previous research suggested a need for interventions to support and train leaders, overall there was an under utilisation of the developed resources, making assessment of their efficacy difficult. Follow-up may have been too short to allow changes to be implemented. Qualitative data suggests leaders under-report challenges on quantitative measures, making detection of change difficult. **RESEARCH IMPLICATIONS:** Support group leaders may be vulnerable to response-bias when a quantitative research methodology is used. Ideally, a mixed-method approach should be used when conducting research with cancer support group leaders. **CLINICAL IMPLICATIONS:** There is considerable variation in the levels of skill, training and motivation of support group leaders. Whilst leaders had previously indicated a strong desire for support and training interventions, there was an under utilisation of resources, particularly the website and discussion forum. A lack of time, computer illiteracy and changing leadership are barriers to the use of interventions. **ACKNOWLEDGEMENT OF FUNDING:** Funding for this project was provided by the Australian Research Council—Industry Linkage Grant Application LP0562095. Industry partners were Cancer Council, New South Wales and Westmead Hospital.

S 3.18.4

Cancer Support Groups: From Research to Service Delivery

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BACKGROUND: The demand for cost-effective psychosocial care in the form of support groups is likely to rise with increased cancer incidence, improved survival rates, and shrinking financial and human resources. Group leaders, volunteer and

professional, contribute to the provision of this care often with limited training and resources. Research evaluating interventions to assist leaders has found poor uptake of interventions, inconsistency between leader self-report and observed group facilitation skill, and poor psychological health in some leaders. **METHOD:** To manage the considerable variation in leadership skill and group type, a number of initiatives have been implemented by the CCNSW to assist leaders, including a 2-day leaders forum, provision of telephone supervision, development of a website and discussion forum, 'Keeping things on track' DVD and manual, a 1-day introduction to leading a group and 'Facing the Challenges' 2-day group facilitation training workshop. **RESULTS:** Despite consultation with group leaders, the use of support and training interventions has been inconsistent. When provided, supervision was not utilised. Leaders tend to favour interventions which are socially orientated and report a lack of time, computer illiteracy and inconsistent leadership as barriers to accessing interventions. Many leaders have commitments outside of their leadership role. Many leaders lacked training in group facilitation and had limited exposure to the culture of best practice, further impacting on the efficacy of the interventions. **CONCLUSIONS:** Peak bodies face the challenge of maintaining the quality of support groups which are often facilitated by untrained leaders who are unable/unwilling to allocate time to training and support interventions. A sub-group of leaders may be facilitating groups that are unmatched to their leadership skills, possibly contributing to leader burnout and impacting group members' wellbeing. To assist leaders and their members, minimum standards established in other forms of psychosocial care should also be considered for support groups. An accreditation program for leaders may assist in creating a minimum standard, further validate the importance of leaders, and ensure that leader skill is matched to type of support group being facilitated. **RESEARCH IMPLICATIONS:** Research points to a need for best practice standards and benchmarks pertaining to support groups. These should be defined by the whole oncology community, including both professional and consumer groups. Optimal ways of introducing and maintaining best practice standards in a largely untrained and often unpaid population requires further investigation. **CLINICAL IMPLICATIONS:** There is considerable variation in the skill level and motivations of the leader population. The challenge to peak bodies is to find methods of assisting leaders, particularly volunteers, which are acceptable, effective and financially viable. Establishing minimum standards and benchmarks for support groups may increase both clinician, patient and, most importantly, leader confidence thereby increasing referral and reducing demand on overburdened specialist

oncology services. **ACKNOWLEDGEMENT OF FUNDING:** None.

S 3.20.1

Effects of Family History of Cancer and Lifestyle Behavior Intervention on Healthy Diet

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BACKGROUND: This study is to investigate whether the effects of a program designed to help changes in lifestyle behaviors differ depending on the person's family history of cancer (FHCA). **METHOD:** The Nutrition and Physical Activity Study is a nationwide longitudinal randomized controlled trial to promote healthy lifestyle behaviors through improving self efficacy. Participants were randomized into either receiving written self-help materials (SH group) or telephone counseling in addition to SH (SH+C group) during the first 6 months of the study. A total of 869 provided valid data for the study variables. The FHCA status (52.7% FHCA+), age ($m = 45$ yrs), education (38.8% < college graduate), ethnicity (80.9% Caucasian), gender (77.6% female), and marital status (67% married) were assessed at baseline (T1); outcome variable (fruit-and-vegetable intake) was

assessed at T1, 6 months (T2), and 12 months (T3). **RESULTS:** Hierarchical regression analysis testing the intervention effects at 6 months revealed that SH+C showed greater increase in fruit-and-vegetable consumption at T2 than SH ($p < .03$), after controlling for participants' age, gender, education, ethnicity, marital status, and fruit-and-vegetable consumption at T1. This intervention effect was significant regardless of FHCA status. Furthermore, results testing whether this intervention effect at 6 months remained at 12 months, showed the significant interaction effect ($p < .02$), indicating that the positive intervention effect remained only among FHCA+ ($\beta = .06$). **CONCLUSIONS:** The findings illustrated the significant role of individuals' family history of cancer in the effectiveness of healthy lifestyle behavior intervention. Counseling designed to enhance self efficacy played an important role in maintaining significant changes in healthy diet habits. **RESEARCH IMPLICATIONS:** The psychosocial mechanisms of family history of cancer in maintenance of lifestyle behavior changes deserve further investigation. **CLINICAL IMPLICATIONS:** Educational programs should target individuals who have not experienced cancer through family members to help them maintain lifestyle behavior changes. Programs will also benefit helping individuals with low competence in changing diet habits. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the American Cancer Society National Home Office intramural research.

Individual Lectures

IL 1.1.1

Living Beyond Cancer: Balancing Between Courage and Anxiety. Women's Experiences Five Years After Treatment for Gynaecological Cancer

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BACKGROUND: Advances in treatment of cancer have improved the survival rate. This creates a need for knowledge about life experiences after cancer. Little is known about women's everyday experiences of living beyond gynaecological cancer. Some studies have been made, but few probe deeply into the topic. The purpose of the study was to gain a deeper understanding of cancer as a life-changing process. The abstract looks into one dimension, namely *Balancing between courage and anxiety*. **METHOD:** The study has a phenomenological and qualitative approach in which the women's own experiences are the basis for understanding their life-world. Data are based on 32 in-depth interviews with sixteen women, free of illness, aged 39 to 66. The women were interviewed twice; first approximately five years after the cancer treatment and second approximately one year later. Data were analysed in a process of four steps in two identical rounds. The analysis was inspired by Giorgi's phenomenological meaning condensation and Van Manen's thoughts about evocative writing. Four main themes emerged and the analysis uncovered a main structure for the experiences called *Cancer as a life changing process*. **RESULTS:** Surviving gynaecological cancer entails living with profound life-changes, demanding as well as enriching. In this study, *Cancer as a life-changing process* came out as an essential structure. *Living between life courage and life anxiety* was identified as

one of several dimensions. The women experience a deep gratitude and joy for being alive and a revitalization of some values after having been through cancer. At the same time they live with a bodily based preparedness and anxiety for recurrence or new cancer. Little is needed to spark emotional distress or anxiety for a new threat. The life-enhancing and the life-constraining life phenomena are clearly present in the women's lives and are still 'ploughed up' five to six years after treatment. **CONCLUSIONS:** Experiencing cancer can move the women deeply in their lives. This challenges health care personnel in their encounter with the women, related to integrating their own personal competence into their professional competence. If health care personnel do manage to handle such a challenge, they can meet the women in their vulnerability and enable them to make progress in their own personal processes. The life phenomena remain 'ploughed up' in the lives of the women and cannot be met by means of need-oriented nursing. They go deeper and demand a sense- and emotion-based understanding from health care personnel who must apply all their holistic and person-oriented competence in order to meet the patient's impressions and return them 'tuned'. Focusing on the matter may help professionals find a better balance within this field of caring. **RESEARCH IMPLICATIONS:** The research is a phenomenological contribution to the study of cancer patients who are declared 'long-term survivors'. There are few previous qualitative studies made in this field, while there is a growing demand for knowledge and insight into the life experience of these patients. **CLINICAL IMPLICATIONS:** This study aims to give an empirical description and understanding of these life phenomena in a health care context. By gaining insight into life phenomena, health care personnel may better understand life-changing processes that follow life-threatening illness like gynaecological cancer, enabling them to meet patients in a deeper and more holistic way. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.1.2

Disrupted Lives and Threats to Identity: The Experiences of People with Cancer Within the First Year Following Diagnosis

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BACKGROUND: The concept 'biographical disruption' was coined by Michael Bury in the early 1980s as both a descriptor of people's experiences of chronic illness and as an explanatory device to comprehend how people respond and adapt to chronic illness. A key facet of 'biographical disruption' is disruption to identity and loss of self within the context of illness. The relevance of the concept 'biographical disruption' for people living with and beyond cancer can be addressed empirically. **METHOD:** A longitudinal qualitative study to explore 66 people's experiences of cancer within the first year following diagnosis was conducted. Purposive sampling was used, designed to ensure a range of characteristics known to shape experiences of cancer. Three depth interviews over the course of the year were carried out. During analysis, we drew on biographically informed approaches of understanding chronic illness, particularly the work of Bury (1982; 2001; 1991) and Charmaz (1994; 1983; 1995; 2002) to explore the extent to which people within the first year following diagnosis experience cancer as biographically disruptive. **RESULTS:** Some people appeared to experience cancer as 'biographical disruption' because it represented a threat to their identity. However, not all individuals experienced cancer as a threat to identity. People with cancer can experience illness as a physical and emotional assault which disrupts their daily lives but without it being an assault on their identity. A number of possibly inter-related factors may have influenced why some individuals experienced cancer as disruptive but not biographically so. These include having a 'hard life' such as, previous experience of a life-threatening illness either personally or in the family. **CONCLUSIONS:** Universal application of the concept 'biographical disruption' to the experience of cancer within the first year of diagnosis is not appropriate. Unless illness threatens identity then the illness may be disruptive but not biographically so. **RESEARCH IMPLICATIONS:** Cancer has traditionally been conceptualised as an acute illness (Tritter and Calnan, 2002), however, more people are living longer with the consequences of a cancer diagnosis and treatment and thus, it is a disease which may increasingly fall within the category of a chronic condition. Hence, the concept 'biographical

disruption' may be a useful description of people's experiences of living with cancer and it may also be a useful explanatory device to comprehend these experiences. **CLINICAL IMPLICATIONS:** The findings of the study call for the development of interventions to support those people who experience cancer as an assault on their identity and to support their biographical work as they experience living with and beyond cancer. **ACKNOWLEDGEMENT OF FUNDING:** Scottish Government Health Department funded this study.

IL 1.1.3

Change in Health Behavior After a Breast Cancer Diagnosis: A Prospective Cohort Study From the Danish Diet Cancer and Health Cohort

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BACKGROUND: Studies have indicated that health behavior is important not only for cancer risk but also for cancer survival. It is thus relevant to examine to what degree cancer patients are changing their health behavior after a cancer diagnosis. This prospective study compares changes in health behavior after a breast cancer diagnosis with changes in breast cancer free women. **METHOD:** This study will use data from the Danish study Diet, Cancer and Health (DCH). We will use information on 29,875 women aged 50–64, who responded to a questionnaire in 1993–1997 and a follow-up questionnaire in 2000–2002. A total of 463 post-menopausal women were diagnosed with breast cancer between the two data collections. Information on e.g. alcohol, smoking, physical activity, diet, marital status, parity, and BMI will be used as well as clinical prognostic and treatment variables obtained from a national clinical breast cancer register (DBCGR). Changes in health behavior among women with breast cancer in DCH will be compared with changes in health behavior among the breast cancer free women in DCH. Data will be analyzed as a cohort study using multivariate logistic regression models adjusting for important confounders. **RESULTS:** Preliminary results on

changes in smoking, alcohol, physical activity and dietary supplements among women diagnosed with breast cancer and those not diagnosed with breast cancer will be presented. **CONCLUSIONS:** We hypothesize that women diagnosed with breast cancer will make significantly more health behavior changes towards the recommendations with regards to smoking, alcohol, dietary supplements and physical activity than then breast cancer free women. **RESEARCH IMPLICATIONS:** A potential bias in this type of study is that survivors who respond are more likely to practice healthy behaviors. We have addressed this issue in the current study: This is to our knowledge the first true prospective study investigating changes in health behavior among women diagnosed with breast cancer compared to breast cancer free women. **CLINICAL IMPLICATIONS:** Knowledge about changes in health behavior after the cancer diagnosis will be essential for planning health behavior interventions targeted towards cancer patients in order to improve prognosis and quality of life. **ACKNOWLEDGEMENT OF FUNDING:** This study is supported by Sygekassernes Helsefond and the Nordic Cancer Union.

IL 1.1.4

Prevalence of Posttraumatic Stress, Depression and Anxiety in Long-term Survivors After Cancer During Adolescence

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BACKGROUND: Cancer during adolescence interferes with many developmental tasks and imposes persistent psychological burden onto patients. However, so far there is still little knowledge about psychosocial adaptation of long-term survivors of adolescent cancer. Previous studies showed an increased prevalence of posttraumatic stress in pediatric cancer survivors. Regarding other mental disorders the evidence is still insufficient. The aim of this study was to estimate prevalence of posttraumatic stress, depression and anxiety in long-term survivors after adolescent cancer. **METHOD:** A psychosocial follow-up was conducted with $n = 820$ (42.6% response rate) long-time survivors of cancer during adolescence ($M = 30.4 \pm 6.0$ years; $M = 13.7 \pm 6.0$ years since diagnosis) who had been registered in the German Childhood Cancer Registry. The inclusion criteria

for the survivors was an age of 15 to 18 years at first cancer diagnosis with an onset at least five years earlier than the beginning of this study. A healthy comparison-group ($n = 1027$; $M = 31.5 \pm 6.9$ years) without a history of cancer was asked to answer the same questions. The Posttraumatic Stress Diagnostic Scale (PDS) and the Hospital Anxiety and Depression Scale (HADS-D) were used to assess the amount of psychological distress. **RESULTS:** Survivors report significantly more symptoms when compared to healthy controls: Whereas in the group of the former adolescent cancer patients 22.4% showed at least one significantly elevated concerning posttraumatic stress, anxiety and/or depression, only 14.0% of the healthy controls reported leastwise one conspicuous score. The relative risk of having a severe PDS score is three times higher for survivors (13.8%) than for controls (4.6%). On the HADS-D, the risk for a severe depression score is 1.8 times higher for survivors (5.4%) in relation to controls (3%), for anxiety it is 1.5 times more frequent in the former patients (14.7% vs. 10%). **CONCLUSIONS:** The results indicate that a substantial number of survivors of adolescent cancer exhibits clinically relevant symptoms of posttraumatic stress, anxiety and/or depression. The amount of symptoms experienced by the former patients is thereby considerable higher on all three domains than in the healthy comparison group. This discrepancy is extremely striking when the amount of posttraumatic stress symptoms is taking into account. **RESEARCH IMPLICATIONS:** Future analysis should investigate variables that may influence long-term adaptation of survivors of adolescent cancer. Therefore the role of potential risk factors such as demographic characteristics as well as disease- and treatment-related variables has to be clarified. **CLINICAL IMPLICATIONS:** Aftercare programs need to address the psychological adaptation of former adolescent cancer patients. In order to adequately identify survivors with specific needs due to mental health problems psychological screening-instruments should be administered as a matter of routine in long-term cancer follow-up. Moreover, psychosocial interventions which address the specific needs of this particular cancer population need to be developed and evaluated. **ACKNOWLEDGEMENT OF FUNDING:** Funded by the Deutsche Krebshilfe e.V.

IL 1.1.5

The Impact of Co-morbidity on Health Related Quality of Life in Long-term Cancer Survivors: A Population-Based Study

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BACKGROUND: Co-morbidity is known to be an important predictor of health related quality of life (HRQL) in cancer survivors, but its relative importance compared to cancer and its treatment is unknown. The aim of the present study was to assess the quantitative attribution of co-morbidity on HRQL in 4 groups of long-term cancer survivors. **METHOD:** The SF36 was used to assess generic HRQL in a population of 1231 long-term (5–15 years) disease free cancer survivors; 119 Hodgkin; 225 non-Hodgkin; 283 endometrial cancer; 604 prostate cancer. The EPIC questionnaire was used to assess disease specific HRQL in the latter group. Co-morbidity was evaluated with a 13-item questionnaire. Multivariate linear regression analyses assessed the partial r-square of co-morbidity after inclusion of age, gender, marital status, education, stage at diagnosis, type of treatment, years since diagnosis. **RESULTS:** 432(35%) survivors reported 1 co-morbid condition, 340(28%) reported 2 or more co-morbid conditions. Thyroid morbidity was most frequently reported by Hodgkin survivors (15%), cardiovascular disease by the other groups of survivors (25–40%). Co-morbidity explained 5–20% of variability within the SF36 physical component score, compared to 1–9% by cancer stage and treatment together. The variability within the SF36 mental component score was similarly low for co-morbidity (1–4%) and cancer stage and treatment (1–5%). Cancer stage and treatment emerged as the strongest predictors of urinary function and bowel function in prostate cancer survivors, but still just explained 5–6% of its variability. **CONCLUSIONS:** Co-morbidity has the largest impact on generic HRQL of long-term cancer survivors, much stronger than the impact of having had cancer. Cancer stage and treatment also only explained 5–6% of disease specific HRQL. Our results underscore the importance of co-morbidity for the HRQL of cancer survivors. **RESEARCH IMPLICATIONS:** A recent analyses with data from our population based cancer registry showed that about 60% of all new cancer patients older than 65 years suffered from at least one other serious disease. This current study shows that comorbidity has a great impact on generic HRQL, underscoring the importance of assessing and adjusting for the confounding effect of comorbidity when evaluating HRQL among cancer survivors. **CLINICAL IMPLICATIONS:** When assessing generic HRQL with cancer survivors in daily clinical practice, one should be aware of the large impact of comorbid diseases, which have a high prevalence in the aging cancer survivors. Our results confirm the increasing need of multidisciplinary (follow-up) care for cancer survivors, with often multiple comorbidities. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.2.1

Cancer and Aging: Narratives of Agency and Transcendence

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BACKGROUND: While cancer may strike at any time, it is primarily an illness of aging persons. Traditionally, aging has been understood as ‘decline’, forming an ‘unholy alliance’ with cancer (Lerner 1990). Lately, critical gerontologists have proposed a ‘poetics of aging’ (Randall and McKim, 2008) that demonstrates renewed self-confidence, elevated self-esteem, and increased self-understanding in aging persons’ accounts. But how would the often terrifying experience of cancer affect aging cancer patients’ accounts of life with cancer? **METHOD:** We conducted 20 comprehensive interviews with, and collected fifteen published cancer narratives (e.g., Lerner, 1990; Broyard, 1992; Price, 1994; French, 1998; Matthews, 2007; Terziani, 2008) written by, aging cancer patients. Building on a previously developed ‘therapeutic psychopoetics’ (a triple interdisciplinary methodology involving: a statistical analysis of over 300 cancer metaphors, a literary hermeneutic analysis of over 200 cancer narratives, and an analysis of the therapeutics of cancer metaphors in individual patients’ accounts; e.g., Teucher, 2000), we used interpretative hermeneutics known as IPA (‘interpretative phenomenological analysis’; Smith, 2003, 2008), to study the poetics of aging cancer patients’ narratives, focusing on metaphors. **RESULTS:** Differing from young and middle-aged cancer patients (e.g., Charmaz, 1991), aging cancer patients review life, self, and illness with a sense of life’s nearing end, evaluating achievements in terms of relations (family, children) and work (legacy). These reviews are heightened by the struggles with cancer, summed up in pertinent metaphors (e.g. ‘wrestling with the angel’, or ‘cancer labyrinth’) that indicate spiritualized perspectives of transcendence (leaving traces of one’s life after death). **CONCLUSIONS:** Aging cancer patients’ narratives and metaphors portrait agentic selves that, while immersed in illness and aware of the transiency of time and life, reevaluate life with cancer, setting up goals, values, and traces of transcendence that make one’s life meaningful for self and others. **RESEARCH IMPLICATIONS:** These findings may help to better understand how, in the form and contents of their narratives, cancer patients make sense of their experiences in age-specific ways throughout the life-span. **CLINICAL IMPLICATIONS:** The findings may help health professionals to know what to listen for in aging

cancer patients' accounts of their experiences, thereby helping clinicians to improve the quality of cancer care. **ACKNOWLEDGEMENT OF FUNDING:** Saskatchewan Health Research Foundation.

IL 1.2.2

The Importance of Religious/Spiritual Resources in Adjusting to Breast Cancer in the First Year of Illness

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BACKGROUND: Religious/Spiritual resources may serve multiple functions in long-term adjustment to cancer. However, there is very little evidence of the efficacy of religious/spiritual variables on illness adjustment outside the USA. The aim of this study was to examine the beneficial and harmful effects of religious coping on illness adjustment in UK cancer patients alongside other important psychological predictors. **METHOD:** The study was longitudinal in design assessing patients newly diagnosed with breast cancer at surgery, three and 12 months post surgery. Two-hundred and two patients were recruited of which, at twelve months, 160 remained (drop-out rate = 19%). Several aspects of religiousness/spirituality was assessed; levels of religiosity/spirituality, strength of faith, belief in God, private and public practices, spiritual involvement, perceived spiritual support, positive and negative religious coping strategies. Demographics and clinical characteristics, non-religious coping, social support and optimism were also assessed. Outcome measures included were anxiety, depression, negative affect, anger and positive affect. **RESULTS:** The use of religious coping strategies was almost as common as the use of non-religious coping strategies. In various regression models, controlling for other influential variables, the effect of religious coping on outcome were often mediated by non-religious coping (e.g. acceptance coping and denial) and optimism but not social support. Religious coping at surgery either indirectly or directly predicted anxiety, depression, negative affect, anger and positive affect at surgery. They either directly or indirectly predicted anxiety, depression and positive affect at three months and positive affect at 12 months although its longitudinal effects were modest. **CONCLUSIONS:** Religious/Spiritual resources are commonly used in the coping process in UK breast cancer patients. They also influence adjustment to cancer in the first year of illness

equal to that of non-religious psychological variables. **RESEARCH IMPLICATIONS:** Future studies attempting to understand the coping process in relation to cancer adjustment should thoroughly examine patients' religious/spiritual resources to gain a better insight into how patients adjust to their cancer diagnosis. They should also examine how religious coping may be related to outcome by exploring mediating/moderating effects. **CLINICAL IMPLICATIONS:** Assessing and addressing cancer patients' psychosocial needs has become commonplace in clinical practice. This study highlights the importance of also addressing patients' spiritual needs, not just during the palliative phase of cancer, but also early on in the cancer experience. **ACKNOWLEDGEMENT OF FUNDING:** The Research Fellow who worked on this study was funded by the Thames Valley University, London, UK.

IL 1.2.3

Cancer Incidence Among Danish Seventh Day Adventists

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BACKGROUND: Denmark is one of the most secular nations in which religion plays only a minor role in public life. We found it of interest to investigate the relation between religious belief and cancer risk in this context. By their religious belief members of the Seventh Day Adventists do not consume tobacco, alcohol and many live by a vegetarian lifestyle. In this study, we report the cancer incidence among all members of the SDA church since 1920. **METHOD:** We obtained information on all members of the Danish SDA since 1920 and linked these records with the Danish Central Civil Registration System to identify the personal identification number (PIN) of all SDA members Adventists. We identified the PIN of 6418/7475 (86%) members and by the use of this PIN, we identified all registered cancer cases since 1943 through the Danish Cancer Registry. Comparisons of cancer incidence among Adventists with the general Danish population standardized according to age and period were computed for all major cancer sites. **RESULTS:** The standardized cancer incidence among Danish Adventists compared to the Danish general population will be presented at the conference. **CONCLUSIONS:** The conclusion will be presented at the conference. **RESEARCH IMPLICATIONS:** If we observe lower cancer incidence rates among Adventists we will discuss whether this reflects positive influence

of lifestyle among Adventists compared to the Danish population or whether there may be religious factors that can be dissociated from lifestyle. **CLINICAL IMPLICATIONS:** The clinical implication is directed towards our understanding of the link between religious beliefs and lifestyle and the implications of this link for health. One may add that members of SDA for decades have followed the major public health recommendations. Our results reflect this compliance in a more societal view. **ACKNOWLEDGEMENT OF FUNDING:** Religion in the 21. Century, University of Copenhagen, Denmark and the Danish Cancer Society supported this study.

IL 1.2.4

Associations Between Religious Faith, Church Attendance, and Depression in a Nationwide Sample of Danish Women Treated for Primary Breast Cancer

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BACKGROUND: Previous studies indicate that religious faith is associated with improved general health. Social support associated with ties to religious communities has been suggested as a mediating mechanism. Relatively few studies have investigated the role of religious faith in cancer patients, in particular in secular countries like Denmark. The aim was to explore associations of religious faith and church attendance with depression, while controlling for social support, in a nationwide cohort of women treated for primary breast cancer. **METHOD:** A total of 3343 women aged 18–70 yrs. (68% response rate) treated for primary breast cancer completed a baseline questionnaire package 3 months post-surgery including measures of depression (BDI-II), social support. The women completed additional questions concerning depression, religious faith and church attendance 15–16 months post-surgery (93% response rate). The Danish Breast Cancer Cooperative Group (DBCG) and the surgical departments provided information on eligibility and clinical data. **RESULTS:** 47.4% stated firm belief and 35.8% some degree of belief in God. 46% had attended church or similar institution at least once during the last year. Univariate analyses showed that church attendance was associated with both higher levels of emotional support and fewer depressive symptoms, but the association with depression was not mediated by social support. There were no associations for faith. In contrast, in a multiple linear regression, faith was weakly, but significantly, associated with more depressive symptoms (Beta: 0.04; $p < 0.05$), while church attendance ceased to be a significant predictor,

when controlling for social support, demographic, and clinical variables. **CONCLUSIONS:** When controlling for social support and relevant demographic and clinical factors, faith appeared to be associated with higher levels of depressive symptoms. It may be speculated that faith may not only be a resource but also a burden when confronted with serious illness. **RESEARCH IMPLICATIONS:** Further studies are needed to study the complex relations between faith, social support, and quality-of-life in cancer patients, in secular as well as non-secular societies. Special attention should be paid to both positive and negative consequences of religious faith. **CLINICAL IMPLICATIONS:** Oncology staff, even in secular societies, should be aware of religious faith and its possible influence on disease-related quality-of-life among cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** The Danish Cancer Society, Sygekassernes Helsefond, Danish Research Council.

IL 1.3.1

Disease Awareness of Cancer Patients Undergoing Chemotherapy Highly Affects the Health-related Quality of Life (HRQL) of Their Family Members

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BACKGROUND: In Greece it is culturally and ethically accepted for a cancer patient not to be completely aware of his exact medical condition. It seems rational that this practice may influence the HRQL of patients' family members. Aim of this study was to explore the HRQL of family members in two different settings; whether the patient was aware of his disease or not. **METHOD:** 122 family members of cancer patients undergoing chemotherapy (45 men) of mean age 48.3 completed the validated SF-36 health survey by personal interview. The SF-36 survey contains eight scales measuring physical functioning (PF), role physical (RP), bodily pain (BP), general health perception (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH), with higher scores (0–100 range) reflecting better-perceived health. Physical Component Summary (PCS) and Mental Component Summary (MCS) describe the overall physical and mental health. Data analysis was performed with SPSS while statistical analysis was performed with Mann Whitney's U test. **RESULTS:** Table 1 summarizes the results of our study. 55% of cancer patients were not aware of their disease while in 12% this could not be assessed.

Table 1.

FamilyMembers	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Pt. Aware	91.4*	79.8	85.8	68.9	68.2	65.0	63.1	59.7	54.6	41.7
Pt. Not aware	87.5	65.6	79.6	68.9	53.2	53.5	37.5	51.3	54.9	33.8
P	0.087	0.075	0.694	0.937	0.003	0.089	0.003	0.071	0.749	0.006

*Mean score is described.

CONCLUSIONS: Disease awareness of cancer patients undergoing chemotherapy highly affects the HRQL of their family members. In particular, MCS, RE and VT were significantly lower in the relatives of not aware patients while there was a trend for lower RP, MH and SF. **RESEARCH IMPLICATIONS:** Further, larger prospective studies are necessary to explore the exact impact of patients' disease awareness on the quality of life of their relatives. **CLINICAL IMPLICATIONS:** Physicians involved in cancer care should consider this observation and provide oriented supportive care in this group of family members. Otherwise a different approach should be followed, with higher disease awareness in patients and better HRQL in family members. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.3.2

Implementation of Computer-based Quality of Life Monitoring of Brain Tumour Outpatients in Routine Clinical Practice

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BACKGROUND: Computerized assessment of Quality of Life (QOL) in patients with brain tumors can be an essential element for quality assurance with regard to evidence-based medicine in neurooncology. Aim of this project was the implementation of a computer-based QOL monitoring tool in a neurooncological outpatient unit. Furthermore, reference values for QOL-scores were derived from the collected data to improve interpretability and the impact of sociodemographic and clinical variables on QOL was analyzed. **METHOD:** Since August 2005 brain tumor patients treated at the neurooncological outpatient unit of the Innsbruck Medical University were consecutively included in the project. QOL-assessment (EORTC QLQ-C30/+BN20) was computer-based using a software tool called CHES (Computer based Health Evaluation

System). With the help of CHES the EORTC subscales can be automatically calculated and presented as easy interpretable charts. **RESULTS:** A total of 110 patients with primary brain tumors (49.9% female; mean age 47.9±12.6 years; main diagnoses: 28% Astrocytoma, 15% Glioblastoma, 12% Meningeoma) has been included in the study. On average QOL was assessed 4.74 times per patient, 521 times in total. The user-friendly software was successfully implemented and tested. The routinely QOL assessment was found to be feasible and was well accepted by both physicians and patients. **CONCLUSIONS:** The software-generated graphic QOL-profiles were found to be an important tool for screening patients for clinically relevant problems. Thus, computer-based QOL-monitoring contributes to an optimization of treatment (e.g. symptom management, psychosocial interventions) and facilitates data collection for research purposes. **RESEARCH IMPLICATIONS:** Further research is necessary to evaluate the impact of QOL-data on physician-patient-communication and treatment decision in detail. **CLINICAL IMPLICATIONS:** We expect that the use of QOL profiles in daily clinical routine has the potential of changing clinical practice and can be a basis for the initiation of medical and psychooncological interventions. **ACKNOWLEDGEMENT OF FUNDING:** Partially funded by Austrian Cancer Aid Society—Section Tyrol and the Austrian National Bank.

IL 1.3.3

Prevalence and Predictors of Post-Traumatic Stress in Women undergoing an Ovarian Cancer Investigation

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BACKGROUND: We assessed Post-Traumatic Stress Disorder (PTSD) in women being investigated for a possible ovarian cancer diagnosis to determine PTSD prevalence, and factors predicting PTSD in patients

who do, and do not receive a malignant diagnosis. **METHOD:** Participants ($N = 75$) were recruited from the Gynecologic Oncology Clinic at the Princess Margaret Hospital in Toronto, ON, after their initial clinic appointment and given a pre-diagnostic assessment that included measures of PTSD, depression, perceived stress and pain. One month later, patients received an identical assessment post-diagnostically. **RESULTS:** No cases of clinical PTSD were detected, although 13.6% of participants were identified with sub-syndromal PTSD. Descriptive analysis showed that medical professionals diagnosed with ovarian cancer reported an increase post-diagnostic PTSD symptoms than non-medical professionals and medical professionals diagnosed with benign pelvic masses. Multiple regression analyses showed that participants reporting significant pre-diagnostic depressive symptoms and those definitively diagnosed with ovarian cancer were more likely to report post-diagnostic PTSD symptoms. **CONCLUSIONS:** Supportive interventions aimed at reducing PTSD symptoms and problems, if launched prior to diagnosis, might optimally be directed at patients with pre-diagnostic depressive symptoms and medical professionals diagnosed with ovarian cancer. **RESEARCH IMPLICATIONS:** There is a need for further longitudinal measurement of PTSD in OCa patients to examine prevalence levels throughout the illness trajectory and combining psychometric measurements with neuro-imaging techniques (e.g. electroencephalography, fMRI, PET scan) may confirm psychometric results while providing objective examination of PTSD impact on brain function in women undergoing cancer investigations. Secondly, the psycho-social issues of medical professionals diagnosed with cancer are decidedly understudied and, as indicated in this study, more investigation is needed. **CLINICAL IMPLICATIONS:** This study demonstrated that investigations for ovarian cancer are distressing and may potentially cause post-diagnostic sub-syndromal PTSD in ~14% of the sample. Psychosocial interventions may help to alleviate distress during the investigative process and, by doing so, prevent post-diagnostic sub-syndromal PTSD. **ACKNOWLEDGEMENT OF FUNDING:** This study received funding from Ovarian Cancer Canada.

IL 1.3.4

Reliability and Validity of the Functional Assessment of Cancer Therapy for Stomach Cancer (FACT-Ga): a North American experience

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BACKGROUND: Quality of life (QL) in patients with gastric cancer is an important treatment

consideration and is increasingly added as an outcome measure in clinical research, despite the absence of well-validated instruments. The purpose of this study was to determine whether the FACT-Ga, a disease specific tool for the assessment of gastric cancer patients' QL, is a valid and reliable assessment tool for measuring QL changes. **METHOD:** The FACT-Ga is comprised of the FACT-G, a general questionnaire measuring four standard aspects of QL in cancer patients and a disease specific subscale for gastric adenocarcinoma. The study enrolled 81 patients with histopathologically confirmed gastric cancer. Of the total sample, 67 patients completed the follow up assessment at two weeks which allowed for the measuring the reliability of the FACT-Ga. At the two month follow up, 57 patients completed the assessment, which allows us to determine clinically important variations in questionnaire scores and establish cutoff points. **RESULTS:** Internal consistency analyses yielded a Chronbach's alpha coefficient and an interclass correlation coefficient of .941, demonstrating excellent test-retest reliability. Convergent validity was demonstrated with significant positive correlations ranging from $r = .53$ for physical well-being to $r = .84$ for social well-being with another well-validated QL measure (SF-36) and significant negative correlations with negative mood indicators (BDI-II; $r = -.74$ and STAI; $r = -.57$). Divergent validity was confirmed by assessing the absence of a relationship between the FACT-Ga total score and a measure of social desirability ($r = -.02$). Minimally important differences and cutoff points were also determined. **CONCLUSIONS:** The FACT-Ga is a valid and reliable instrument for the measure of QL in patients with gastric adenocarcinoma. **RESEARCH IMPLICATIONS:** The FACT-Ga is an appropriate measure of QL outcomes that can be used in clinical trials and psychosocial research. The difficulties in recruiting patients and validating a QOL measure in a Western regional cancer centre for a tumor location that is more prevalent in Asian and Eastern European populations will be discussed. **CLINICAL IMPLICATIONS:** The estimation of minimally important differences and cut off points allows professionals to determine what constitutes meaningful changes in patient QL. This may have implications for medical treatments and for psychosocial screening and intervention. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by a Bridge, Pilot, and Limited Term Projects grant from the Alberta Cancer Board (Canada).

IL 1.3.5

Cancer Quality of Life Instruments: Augmentation of Data Interpretation by Population Norms

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BACKGROUND: Self-administered questionnaires are commonly used to measure cancer patients' quality of life (QoL). There is now a wealth of data that has been collected using such questionnaires and in general, QoL accords with severity of disease, treatment intensity and survivorship stage. However, QoL assessments are also prone to re-conceptualisation and recalibrations as people move along the disease continuum. **METHOD:** To assess the QoL implications of cancer itself, and to rate the extent of QoL changes during and after treatment compared to normal aging population-based norms can be useful. Normative QoL data were collected within the Queensland population using a self-administered questionnaire (n=2727). Data from a cohort study of 276 breast cancer patients, a cross sectional survey of 75 brain tumour patients and 200 patients with endometrial cancer participating in a clinical trial will be presented and compared with the normative QoL data. **RESULTS:** Overall, most cancer survivors return to population-based levels of QoL by 12 months past treatment. However, subgroups of cancer survivors such as most patients with a brain tumour and younger breast cancer survivors (age at diagnosis **CONCLUSIONS:** Normative QoL data can help in interpreting cohort study findings and clinical trial outcomes. **RESEARCH IMPLICATIONS:** Intervention programs should be designed for and targeted towards those cancer survivors who remain at lower than expected levels of QoL. **CLINICAL IMPLICATIONS:** Normative data can help clinicians to place clinical trial findings into a larger population context. **ACKNOWLEDGEMENT OF FUNDING:** Monika Janda is supported by NHMRC CDA grant No. 553034, a travel grant of the Australian Psycho-oncology Cooperative Trials Group (PoCoG), and a travel grant by the Institute of Health and Biomedical Research, QUT

IL 1.4.1

Sexuality Needs and Coping Strategies for Terminally Ill Cancer Patients: A Case of Hospice Africa Uganda

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BACKGROUND: Despite being central to human life and impacting on people's quality of life (including those with life-limiting illnesses), the sexuality needs of patients suffering with cancer are largely neglected in sub-Saharan Africa, while addressing physical,

psychosocial and spiritual domains. This study investigated the sexuality needs and coping strategies for terminally ill cancer patients in Uganda. **METHOD:** Qualitative methods were used among twenty cancer patients purposively recruited from Hospice Africa Uganda who were being cared for in diverse care settings, and nineteen staff key informants (nurses and doctors) working with the Hospice, the Uganda Cancer Institute and Radiotherapy Department of Mulago National Referral Hospital. **RESULTS:** Terminally ill cancer patients have unmet sexuality needs. The need for love, acceptance and counseling from health professionals were pronounced, while abandonment, the breakup of relationships and psychological pain were most distressing problems. For most patients, sexuality needs could not be met without having sex. Coping strategies such as turning to God and focusing on other priorities of life were reported. Prioritization of medical over psychosocial issues and the inability of health professionals to address sexuality issues are major barriers to sexual expression. **CONCLUSIONS:** Sexuality continues to be an important aspect of life for many cancer patients and should be integrated into holistic care. Unmet sexuality needs result in unnecessary suffering for cancer patients. Health professionals are a barrier to sexual expression as a result of their inability to intervene appropriately. **RESEARCH IMPLICATIONS:** Sexuality among cancer patients is under-researched in sub-Saharan Africa. Further research should be initiated that quantifies the extent of the problem and a comparative study investigating cancer and HIV diagnostic groups. **CLINICAL IMPLICATIONS:** Addressing the sexuality needs of cancer patients enhances their quality of life. Sexuality should therefore be included in routine patient assessment and management. It should be incorporated in palliative care training for various service providers including health professionals, communities, patients and their spouses so that a multidisciplinary approach is used to support patients with sexuality needs. **ACKNOWLEDGEMENT OF FUNDING:** To Prof. Ian Jacobs, the Uganda Women's Health Initiative and the Arem Foundation for the financial support.

IL 1.4.3

Determinants of Sexual Problems After Early Stage Breast Cancer Treatment: Results of a French Exploratory Survey

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BACKGROUND: Enduring sexual problems are often observed in breast cancer survivors. This exploratory study aimed to assess socio-demographic, clinical, relational or psychological factors associated to the perception of sexual pleasure, dysfunction or satisfaction in French early stage breast cancer survivors aged 18 to 70 years old. **METHOD:** 850 post-treatment (6 months to 5 years) eligible patients randomly selected from a consultation list were solicited by mail. Upon agreement, they were invited to provide information on their socio-demographic background and to complete, at home, the EORTC QLQ-C30 (Aaronson, 1993) and QLQ-BR23 (Sprangers, 1996), the Body Image Scale (BIS; Hopwood, 2001), the Relation and Sexuality Scale (R&S; Berglund, 2001) and the Sexual Activity Questionnaire (SAQ; Thirlaways, 1996). Outcome variables included the SAQ pleasure and dysfunction scales and a single item from a French sexual activity survey (ACSF; Spira, 1993) addressing sexual satisfaction. **RESULTS:** Respondents (378 patients) were younger, pre-menopausal and closer to date of diagnosis. Mean (SD) age was 53 (8); 76% women were living in couple. In sexually active women (71% of respondents), lower sexual pleasure was associated to feeling the partner is afraid of sexual intercourse and to lower role functioning; higher sexual dysfunction was associated to age above 50, feeling of emotional distance in the couple relationship, presence of nausea or insomnia. In all respondents, lower sexual satisfaction was associated to the presence of co-morbidities, feeling the partner is afraid of sexual intercourse, altered body image and lower emotional functioning. **CONCLUSIONS:** Psychological factors, in particular the way the relationship with the partner is perceived, appeared prominent in the perception of sexual difficulties. Young breast cancer survivors may be more prompt to complaint about sexual problems. **RESEARCH IMPLICATIONS:** Further research should address the psychological factors underlying the perception of sexual difficulties considering a more representative sample, focusing on specific age ranges and allowing a longitudinal assessment of sexual functioning. **CLINICAL IMPLICATIONS:** The risk factors for sexual troubles or dissatisfaction identified should help establish specific recommendations for the oncological care of breast cancer survivors; these results underline the importance of psychological factors, especially the perceived relationship with partner, and further point to the need for considering the partner in taking care of breast cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** Simone Pèrèle/Socoloir group.

IL 1.5.1

Psychosocial Development of Long-term Adolescent Cancer Survivors: Familial and Occupational Late Effects

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BACKGROUND: Even years after initial diagnosis and successful medical treatment childhood cancer survivors are often found to have limitations in their psychosocial development, including occupational and social problems. Due to an interference with specific developmental tasks and physical late effects, cancer during adolescence might be associated with an impairment of psychosocial functioning persisting into adulthood. This study investigates the psychosocial status of adult survivors of adolescent cancer using a registry-based sample (German Childhood Cancer Registry; GCCR). **METHOD:** Inclusion criteria were: cancer onset between 15 and 18 years of age, and diagnosis at least 5 years before the beginning of the study. The GCCR sent out self-report questionnaires to 1922 survivors who met inclusion criteria. Data on socioeconomic status was collected using items from the German Socio-Economic Panel survey (G-SOEP), a representative sample of households in Germany. An age-matched sample from the G-SOEP served as control group. Out of the 857 (44.6%) returned and completed questionnaires, 820 (49% males) were included in the statistical analysis. **RESULTS:** Preliminary analyses show significantly lower rates of married female survivors (32%) compared to the control group (37%). Significantly fewer survivors of both genders have children, even after control for reported infertility caused by cancer or its treatment. 26% of survivors who do not report infertility have children compared to 36% of controls. In comparison with a representative sample from the general population survivors achieve a higher educational level, are significantly older at their first job (21.7 vs. 19.9 years), and more likely to be employed (81% of survivors vs. 74% of controls). **CONCLUSIONS:** Most long-term survivors of adolescent cancer perform well or even better than a representative German sample in the domains of education and occupation. However, in a subgroup of survivors there are differences in partnership and family life with lower rates of marriage and parenthood. **RESEARCH IMPLICATIONS:** Further steps of

analyses need to address the factors determining the psychosocial outcome, taking into account possible moderators or mediators. The role of fertility issues for the psychosocial development of long-term survivors has to be clarified. In future, developmental aspects during and after treatment of cancer should be investigated in a longitudinal design. **CLINICAL IMPLICATIONS:** Long-term follow-up of adolescents surviving cancer should consider risks for their social development into adulthood, including family and partnership issues. **ACKNOWLEDGEMENT OF FUNDING:** Deutsche Krebshilfe.

IL 1.5.2

Prevalence of Symptoms and Medical Conditions among Adult Non-Hodgkin's Lymphoma (NHL) Survivors, Communication with Doctors, and Impact on Health Related Quality of Life

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BACKGROUND: Cancer therapies increase the risk of adverse health outcomes that are complex, affect survivors' health, quality, and length of life, and require timely, multi-disciplinary care. Appropriate management could enhance quality and length of survival. Survivor-doctor communication might affect timely/quality care. This study: 1) Examined prevalent symptoms and medical conditions among adult NHL survivors and assessed whether symptoms were communicated to doctors; and 2) Elucidated the impact of adverse symptoms or medical conditions on physical HRQOL. **METHOD:** Using the Los Angeles SEER Registry, a population based study was conducted. Questionnaires were mailed to 744 eligible adult NHL survivors (2–5 years post-diagnosis). 408 provided complete data (Mean age = 59.8; SD = 14.9). The SF-36 was used to assess health related quality of life (HRQOL). Symptoms (past 6 months) were assessed through a 25 symptom inventory adapted from the Rotterdam Symptom Checklist. Comorbidities were assessed via a modified Charlson co-morbidity instrument. **RESULTS:** NHL survivors reported 5.9 symptoms (SD = 4.3). Of eleven symptom clusters examined, the most prevalent included neuropathy (68.1%); nervous system (60.4%); fatigue (50.5%); and cardiac (39.6%). Depending on the symptom, as high as 59% survivors reported not discussing it with doctors.

Mean number of medical conditions was 4.4 (SD = 3.3). Female gender, single status, high BMI, recurrent disease, functional limitations, and co-morbidities pre-cancer were significantly associated with increased symptomatology (generalized linear modelling). Adjusting for confounders, co-morbid conditions predating cancer, medical conditions post cancer, and symptoms (past 6 months) were significantly associated with poor HRQOL. Symptoms explained greatest amount of variance. **CONCLUSIONS:** Symptoms over the past 6 months and medical conditions were more prevalent than expected among these survivors (68.6% had one or more co-morbid condition and 90.1% had one or more symptom) that affected HRQOL). These data support the need for timely diagnosis of adverse consequences of cancer and its treatment, and multi-disciplinary care that needs to be optimally integrated and encompasses medical and psychosocial domains. Survivors tended not to discuss symptoms with their doctors reflecting the concern that poor communication with health providers could affect timeliness and quality of care. Interventions addressing adverse health consequences and survivor-physician communication are needed. **RESEARCH IMPLICATIONS:** NHL survivors report adverse symptoms and medical conditions well after acute cancer treatment. This reflects the need for continued multi-disciplinary follow up care substantively different from acute cancer care. Poor communication with doctors may preclude prevention, early detection, or timely management of adverse outcomes. These data among NHL survivors may be generalizable to other cancers but future studies should examine symptoms and medical conditions for major cancers and identify reasons for poor survivor-physician communication. **CLINICAL IMPLICATIONS:** Optimal assessment and management of survivors should include attention to adverse medical conditions and symptoms related to cancer or its treatment. Health professionals should be aware that survivors are at risk for these outcomes and that they may not be communicated to them. **ACKNOWLEDGEMENT OF FUNDING:** N01-PC-35139-USC.

IL 1.6.1

Integrating a Multi-faceted Approach into the Hispanic/Latino Community to Provide Culturally Relevant Support to Cancer Survivors

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BACKGROUND: Despite making up 13% of the U.S. population, Hispanic/Latinos account for 30.4% of the nation's uninsured, making them the largest portion of uninsured persons in the U.S.

Health risks experienced by the uninsured include a reduced access to care and poorer medical outcomes. To address these issues, a multi-faceted campaign was implemented to increase access to services and to improve the quality of life of Spanish-speaking cancer survivors. **METHOD:** The Lance Armstrong Foundation (LAF) built on its existing services to create www.livestrong.org/espanol, which helped increase access to resources for Hispanic/Latino cancer survivors. The website includes cancer specific information, Spanish-language survivor stories and access to LIVESTRONG SurvivorCare (LSSC), the LAF's free support program that is available in English and Spanish. To increase awareness of these resources, the LAF launched a three-week radio campaign on June 2, 2008. The campaign featured eight 60-second segments on cancer survivorship that aired on Spanish radio stations and five one-hour call-in shows to provide listeners the opportunity to ask cancer experts their questions. **RESULTS:** The radio segments and website were focus group tested and reviewed by a panel of experts to ensure they were culturally-relevant and effective. Using multiple radio outlets has resulted in over 10,327 unique views to www.livestrong.org/espanol and over 350 Spanish-speaking survivors have been helped by LSSC from June 2 through November 30, 2008. This help included receiving online or phone support from licensed social workers, assistance with financial, debt and insurance management as well as help matching to clinical trials. IPOS attendees will learn tools and techniques to ensure their outreach efforts are culturally-relevant and effective. **CONCLUSIONS:** The importance of expanding on existing resources goes beyond simple translation and language-specific materials. It must also be culturally relevant, meet the researched and identified needs of the community and ensure that members and health care professionals that are part of that community are involved in the development and implementation of these services. IPOS attendees will have knowledge and skill to create effective and targeted strategies to reach Hispanic/Latinos. **RESEARCH IMPLICATIONS:** Researchers can benefit from these multi-faceted outreach efforts by understanding how these approaches impacted the Hispanic/Latino communities incidences of cancer occurrence as well as their disparities related to access to care. Researchers can assess whether or not the cancer statistics in this underserved community have been impacted due to these increased efforts to provide support in a culturally relevant manner. **CLINICAL IMPLICATIONS:** Clinicians can utilize the findings as well as the multi-faceted approach and replicate these services or similar types of services in their communities where Hispanic/Latino cancer survivors live. By offering information, support and resources through culturally relevant, multi-faceted approaches, that

best serve the needs of their identified community, clinicians will find that they can make an impact on the physical, emotional and practical ways that Hispanic/Latino address and cope with their cancer diagnosis. **ACKNOWLEDGEMENT OF FUNDING:** Supported by Cooperative Agreement Number U58/CCU623066-01 from the Centers for Disease Control and Prevention (CDC).

IL 1.6.2

Ethnic Differences in the Opinion of Treatment and Care for Advanced Lung Cancer Patients

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BACKGROUND: Health disparity in cancer morbidity and mortality speaks for the urgency of improvement in cancer treatment and care for African American cancer patients. The study's goal was to examine ethnic differences in the opinion of treatment and care issues. The study findings shed light on ethnic differences in approaching cancer treatment and care. They help clinicians develop cultural competence and eliminate cancer disparity in the delivery of health care. **METHOD:** This observational study surveyed opinions of 469 white and 68 African American (AA) participants who were affected by cancer. The sample consists of 233 patients with stage III or IV lung cancer and their 304 caregivers that were recruited as a convenience sample. A telephone interview was conducted to collect information. A semi-structured questionnaire was developed from a previous focus group study and used to solicit subject opinions of treatment and care issues and, in particular, with regard to a concrete decision on cancer treatment or care. Bivariate statistics including nonparametric tests (Fisher's exact test, Chi-square test, and Mann-Whitney) and t test were performed as appropriate to compare white and AA participants on the difference of opinions of cancer treatment and care. **RESULTS:** More AA than white participants reported that the treatment goal was to cure cancer and no situation might lead to treatment withdrawal ($p \leq .01$). AA participants were less likely to consider the treatment decision a responsibility of doctors or family members and less satisfied with the decision-making process ($p \leq .05$). They reported a satisfactory relation with doctors ($p \leq .05$) but preferred to self manage treatment side effects instead of report them to doctors ($p \leq .05$). They had poorer understanding of hospice care and were less willing to receive hospice care at home ($p \leq .05$). They were less open about discussing cancer ($p \leq .01$). While seeking emotional support or having a family member in

health care helped white participants talk about cancer ($p \leq .01$), not wanting the family to know prevented AA participants from talking about it ($p \leq .05$). CONCLUSIONS: AA participants appeared to favor more aggressive treatment and traditional arrangement of care. Their opinions may be explained in part by a lack of family support and access to health care, as more AA patients were neither married, nor had health insurance. Lack of understanding of treatment process and outcome may also play a role in AA participants' opinions of cancer treatment and care. The observed ethnic difference in opinions could adversely affect treatment and care arrangement for AA patients and, consequently, their quality of life outcome. RESEARCH IMPLICATIONS: In addition to structural barriers to health care such as lack of insurance coverage and family resources, disparity in the acquisition and processing of information about treatment and its outcome also contribute to ethnic differences in the consideration of cancer treatment and care. Better communication among patients, caregivers and physicians sets a challenge to the delivery of cancer care and requires more adequate research attention. CLINICAL IMPLICATIONS: Clinicians need to make efforts to ensure adequate information and understanding of treatments on the part of minority cancer patients and family members. ACKNOWLEDGEMENT OF FUNDING: The study was supported by National Institutes of Health/National Cancer Institute (R01 CA089513).

IL 1.6.3

Oncology Consultations with Patients from Culturally and Linguistically Diverse (CALD) Backgrounds: The Interpreter Perspective

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BACKGROUND: Migration is increasing worldwide. In our research into the unmet needs of cancer patients and carers from culturally and linguistically diverse (CALD) backgrounds,

interpreter accuracy, professionalism, and continuity emerged as key concerns. Our audiotape studies show that the presence of an interpreter clearly affects information provision and consultation dynamics. However, little is known about the experiences of the interpreter in such consultations, and the way in which they perceive their role. METHOD: 30 interpreters (Greek $n = 7$, Chinese $n = 11$, and Arabic $n = 12$) were recruited through two Sydney Health Care Interpreter Services, and an organisation responsible for the provision of interpreters for major Melbourne hospitals. Participants took part in focus groups which were audio-taped, transcribed, and analysed for themes using N-Vivo software. RESULTS: Three broad themes emerged from the data: a) *interpreter perceptions of their role and responsibilities*: some saw themselves as merely a conduit of information, while others saw their role in broader terms, encompassing cultural brokerage, patient advocacy and provision of emotional support; b) *challenges experienced by interpreters*: these included difficulty balancing professional obligations with their own emotional responses, feeling caught between two conflicting value systems, and systemic difficulties; c) *need for training and support* in areas such as medical terminology, field placements, communication skills (i.e., breaking bad news), and debriefing. CONCLUSIONS: This study provides insight into communication processes in Oncology consultations from the interpreter's perspectives. The importance of the interpreter role is highlighted. Our findings document the need for training and support for interpreters. RESEARCH IMPLICATIONS: Communication about cancer is challenging because of the life-threatening nature of the disease and the complexity and quantity of information required for patients to make informed choices. This research emphasizes the importance of obtaining all perspectives when exploring complex interchanges in Oncology consultations, particularly involving CALD patients and their families. CLINICAL IMPLICATIONS: Resolving potential conflicts between information provision and advocacy is an important area of research and guideline development in cross-cultural communication. Further training and support should be provided to facilitate interpreters' efficacy in a culturally appropriate manner and enhancing their competence in managing delicate situations from a professional, cultural and psychological perspective. Ultimately, this will improve interpreters' well-being and patient care. Doctors should be trained in how to collaborate with interpreters to enable culturally competent communication. ACKNOWLEDGEMENT OF FUNDING: None.

IL 1.7.1

The Ferrara Liaison Model in Psycho-Oncology: An Integration Between the Community and the Hospital

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BACKGROUND: A burgeoning series of studies have indicated the remarkable psychosocial consequences of cancer diagnosis and treatment. The need for the implementation of psycho-oncology services within the health agencies represents a significant goal in several countries. Our experience in Ferrara, Emilia-Romagna Region, Northern Italy, is reported as far as the psycho-oncology service (POS) is concerned, with the aim of examining the changes occurred over the last 15 years and their implications. **METHOD:** The POS was originally established in 1992 within the university hospital with the aim of liaising with all the divisions/departments dealing with cancer inpatients. Across time, the establishments of two hospices in the community, the implementation of the network between the POS and the hospital and the community health services and the changes occurred within the Department of Mental Health (DMH) (within which the POS is) have determined the need for a re-definition of the general structure of the POS. We discuss the new organizational model and present a provisional analysis of the data gathered through the data-base management of the DMH. **RESULTS:** The POS has modified its structure by (i) becoming a unit with dedicated health personnel, (ii) opening 3 more services in the 3 community hospitals and liaising with the 2 hospices and primary care physicians; (iv) creating a new module in pediatric psycho-oncology, (v) liaising with advocacy movements (local/national and international) for co-joint educational programs; (vi) increasing training on communication and interpersonal skills for nurses and physicians; (ix) becoming a center for training of students within the Ferrara University School of Medicine; (x) implementing the research projects in agreement with the mission of the Integrated Activity Departments within the NHS. By monitoring the activity through the DMH data-base management an increase of the number of patients followed by the PO was shown (250 patients followed in 2008 with 1545 interventions). **CONCLUSIONS:** The evaluation of the PO unit, monitored according to the accreditation parameters, showed that the implementation and the re-modulation of the activity (clinical care, training, research) has been an important step to create a stronger network

where PO is linked to all the units of the DMH (e.g., child psychiatry, consultation-liaison psychiatry) and of other Departments (e.g., oncology, pediatrics, primary care). **RESEARCH IMPLICATIONS:** The main implications regard the role of research in health model organization in influencing policy-makers and administrators in delivering more specific services for cancer patients and their families. More studies and efforts are necessary regarding this area. **CLINICAL IMPLICATIONS:** The clinical implications regard the effectiveness and efficacy of new services, integrated within the National Health Service in cancer, where the development of the profession of the psycho-oncologist is one of the goal of the Federation of the National Psycho-Oncology Societies within IPOS. **ACKNOWLEDGEMENT OF FUNDING:** The University of Ferrara, the Local Health Agency and the Department of Mental Health in Ferrara and the Fondazione Cassa di Risparmio of Ferrara are expressly acknowledged for their support in the study.

IL 1.7.2

Psychological Assistance in Cancer Patient Care: A Joint Project Between the Italian Federation of Volunteer-based Cancer Organizations (F.A.V.O.) and the National Health System

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BACKGROUND: Even though psychological support has a tremendous impact on patient's QoL, this service is still lacking within Italy's National HCS. In 2006 F.A.V.O., the umbrella organization of 460 voluntary associations, used the money from an SMS fundraising campaign to recruit psychologists for state-funded/certified cancer centers across Italy. The competition was open to joint projects designed by psychologists and health structures. Fifteen psychologists (out of 577) received 1-year grants for a total amount of 250.000 EUR. **METHOD:** The 15 grant recipients were all female psychologists with previous experience in the oncology setting. Their qualitative and quantitative progress was monitored by ad-hoc instruments. A qualitative evaluation would assess the job setting, the type of activities carried out (clinical activity, research and training), relations with other health professionals and their attitude towards the psychologist; the patients' attitudes. An online database was set up to record number and vital statistics of the users and cancer patients helped; information on the type of psychological support provided to the cancer patient and his/her relatives. **RESULTS:** 1,412 patients were assisted

(64% females, 36% males); 15% were under 20 years (only 2 psychologists were assigned to paediatric units). In most cases the psychologists saw only the patients (76.2%), especially while they were under treatment (31%). The request for psychological assistance came by the patients or upon a relative's suggestion (32%), but mostly they were referred by a health professional (62%). The service consisted of 1–2 (35%) or 3–6 interviews (36%). When asked how they felt, the patients described themselves as anxious (35%), depressed (30%), and 16% said they had difficulties to interact with others. **CONCLUSIONS:** Our results show that if a psychological support service is available, cancer patients do 'use' it. Even oncologists are willing to work with psychologists, once mutual confidence has been built. However, the fact that psychologists often assist the oncology departments as 'single operators' in support, or upon request, of the medical staff may be a limiting factor. F.A.V.O.'s grants are meant as a challenge for recognition for the role of the psychological support service as a basic part of cancer patient care. As a result, psychological assistance is part of the National Cancer Plan under discussion by the Government. **RESEARCH IMPLICATIONS:** How the psychologist in oncology may improve the health and the wellness? **CLINICAL IMPLICATIONS:** The importance of psychological support for patient's QOL under treatments. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.7.3

Patients' Assessment of Inpatient and Outpatient Cancer Rehabilitation

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BACKGROUND: In Germany, cancer rehabilitation is mainly carried out in the inpatient setting, but recently also outpatient rehabilitation programs have been implemented. Both inpatient and outpatient cancer rehabilitation programs are carried out in specialised clinics and have to meet the same quality and treatment standards. During the three-week rehabilitation programs patients receive up to 6 treatment sessions per day. Since outpatient cancer rehabilitation programs are rare to date, they have not been systematically evaluated yet. **METHOD:** In a prospective multi-center study with five outpatient and three inpatient rehabilitation clinics, patients diagnosed with cancers of the digestive organs, the male genital organs or breast cancer were investigated at the beginning and at the end of rehabilitation and at a 12-month follow-up. For these analyses, 381 outpatient rehabilitation participants and 462 inpatient rehabilitation parti-

cipants were investigated at the end of rehabilitation with regard to patient satisfaction and with regard to their assessment of structural aspects of the respective rehabilitation setting and rehabilitation outcome. Differences between the inpatient and outpatient setting were analysed with ANOVA models. **RESULTS:** Satisfaction: Both groups are highly satisfied with the nursing and the medical and psychological treatment (all means >4, scales 1–5). Outpatients are significantly more satisfied with the amount of treatment; inpatients are more satisfied with treatment organisation. **Outcome:** Both groups consider rehabilitation most successful with regard to their physical health. The evaluation of rehabilitation outcome with regard to pain, family/partnership and psychological well-being does not differ between the groups. Inpatients report significantly better outcome with regard to 'contacts with others'. **Structural aspects:** Outpatients report significantly more therapy sessions per day, but both groups are equally satisfied with the treatment. **CONCLUSIONS:** Patients who participate in outpatient rehabilitation are highly satisfied and evaluate some aspects of their treatment even more positively than inpatient rehabilitation participants. The analyses of patients' assessment of rehabilitation process, outcome, and satisfaction indicate that inpatient and outpatient setting are comparable on all levels. Based on the positive evaluation the implementation of further outpatient rehabilitation offers for cancer patients should be considered. **RESEARCH IMPLICATIONS:** Outpatient and inpatient cancer rehabilitation seem to be equivalent with regard to patient satisfaction and patient outcome assessment. Further research should focus on different forms of outpatient rehabilitation programs and on the integration of outpatient rehabilitation programs and local health care services. **CLINICAL IMPLICATIONS:** Based on the equivalence of the settings demonstrated with these analyses, outpatient rehabilitation can be recommended to patients who are unwilling or unable to participate in an inpatient rehabilitation clinic stay (e.g. because of familial or occupational duties). Thus, outpatient rehabilitation offers might enable those patients to participate in and benefit from cancer rehabilitation nonetheless. **ACKNOWLEDGEMENT OF FUNDING:** Funded by the Arbeitsgemeinschaft für Krebsbekämpfung NW, Bochum, Germany.

IL 1.8.1

Patient-provider Discussions of Life Expectancy Moderate Relationships Among Hope, Optimism and Psychological Outcomes for Men With Advanced Cancer

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BACKGROUND: Discussions of life expectancy between men with advanced cancer and oncologists are inconsistent, partly due to concerns about potential distress. Personality traits, such as hope and optimism, have been shown to protect against the adverse effects of stress. However, relationships among hope, optimism and psychological outcomes in men with advanced cancer who report varying degrees of communication regarding life expectancy with oncologists are not well characterized. **METHOD:** We recruited 82 men with advanced cancer, who reported a full (33%), brief (41%), or no (26%) discussion of life expectancy, to complete validated measures of adjustment (anxiety, depression, post-traumatic growth), dispositional optimism and hope. Men and their oncologists rated the extent of discussions about life expectancy. Demographic and disease-related information was summarized. Moderation was assessed with regression interactions between hope/optimism and the extent of discussion (independent variables) on adjustment (dependent variable). Significant interactions were investigated using Pearson correlations estimated within-discussion-categories. **RESULTS:** Men who reported having a full discussion had significantly lower depression scores (mean = 2.8) than those who reported a brief or no discussion (mean = 4.6; $p = .018$). Greater hope-agency was associated with less depression but only among patients perceiving any (brief or full) discussion ($r = -.61$, $p = .0001$). Greater hope-pathways was associated with less depression ($r = -.65$, $p = .009$), and greater optimism marginally with greater post-traumatic 'new possibilities' ($r = .50$, $p = .07$), but only among patients perceiving full discussion. **CONCLUSIONS:** The extent of discussions about life expectancy appears to moderate some of the relationships between hope, optimism, and depression experienced by men with advanced cancer. However, only 23 men (28%) agreed with oncologists about the extent of discussion. Thus, we will present additional analysis on the impact of discordant assessment of prognostic communication on psychological outcomes. **RESEARCH IMPLICATIONS:** These results suggest prognostic communication may modulate the relationships between patient personality traits and their psychological adjustment to cancer. More research is needed to examine the mechanisms by which personality traits influence psychological outcomes. Specifically, the influence of various coping behaviors merits further investigation. For example, men with higher hope may be better able to use prognostic information to cope with their cancer and treatment, resulting in less psychological distress. **CLINICAL IMPLICATIONS:** The relationships between discussions about life expectancy and lower depression scores, as well as the interactions with personality traits of hope and optimism suggest that oncologists may engage in full prognostic discussions to the psychological

benefit of men with advanced cancer. A brief assessment of trait hope and optimism may facilitate decisions about prognostic communication. **ACKNOWLEDGEMENT OF FUNDING:** Paul Ogle Foundation, Inc. Jeffersonville, IN.

IL 1.8.2

Preferences of Cancer Patients Regarding Communication of Bad News: A Systematic Literature Review

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BACKGROUND: Most physicians regard the communication of bad news to be a difficult issue in clinical oncology practice. The optimal manner of communicating bad news to patients that would allow physicians to achieve maximal patient understanding and facilitates psychological adjustment is unknown. A systematic review of the literature was conducted to clarify available knowledge on patient preferences regarding the communication of bad news and associated factors. **METHOD:** A comprehensive computer search of databases (MEDLINE and PsychINFO) and a manual search were conducted. The searches were restricted to those papers published in English. The two reviewers excluded non-original articles and duplicates from the resulting list, and selected studies based on an eligibility checklist. The eligibility criteria were: the aims of the study included identifying cancer patients' preferences regarding communication of bad news to them by physicians, the study method adopted was an interview or questionnaire survey, and the results included data regarding the preferences of cancer patients. **RESULTS:** Twenty four articles met our selection criteria. Patients' preferences in regard to the communication of bad news by physicians were suggested to consist of four components: setting, manner of communicating bad news, what and how much information is provided, and emotional support. Younger patients, female patients, and more highly educated patients were suggested to prefer to receive as much detailed information as possible and to receive emotional support. Asian patients were shown to prefer that relatives be present when receiving bad news more than Westerners do and to prefer to discuss their life expectancy less than Westerners. **CONCLUSIONS:** Our findings suggested that patients with cancer desire physicians to make consideration for setting, manner of communicating bad news, what and how much information is provided, and emotional support when communicating bad news, and that patients' preferences are associated with demographic factors; younger patients, female patients, and more highly educated patients desired

to receive as much detailed information and emotional support as possible, and Asian patients prefer that relatives be present when receiving bad news more than Western patients do and prefer to discuss a life expectancy less than Western patients. **RESEARCH IMPLICATIONS:** The majority of selected articles were conducted in Western countries, only five were conducted in Asian countries and were used invalidated measures. The future research need to identify cross-cultural differences of patients' preferences by means of validated measures. The results of this review provide a framework concept of patients' preferences regarding communication of bad news. The future research need to examine intervention programs designed based on the framework decrease patients' distress and/or increase patients' satisfaction. **CLINICAL IMPLICATIONS:** Patients' preferred manner of communication of bad news by physicians has recently been shown to be related to a lower level of psychological distress and a higher level of patient satisfaction. This systematic review would provide guidance in regard to physicians' attitudes and behaviors that corresponds to an individual patient's preference when communicating bad news. It is hoped to devise such intervention programs to enhance physicians' communication skills. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported by a Grant-in-Aid for Cancer Research and the Third-Term Comprehensive 10-Year Strategy for Cancer Control and Research of the Japanese Ministry of Health, Labor and Welfare. Maiko Fujimori is a Research Fellowships of the Japan Society for the Promotion of Science for Young Scientists.

IL 1.8.3

Decision-making for Newly Diagnosed Prostate Cancer: Online Support Groups Help Understand Patient-to-patient Counseling

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BACKGROUND: In oncologic diseases like prostate cancer social support plays a major role. Only very little is known about communication characteristics in laymen as most of it is neither institutionalised nor publicly available for scientific investigation. Therefore, online discussion boards are a unique means for investigating patient-to-patient communication in medical decision making. Most of the work already done in the field

concentrated on formal and stylistic aspects and missed the content. **METHOD:** The basic data consists of 84 out of 501 screened threads on decision-making concerning newly diagnosed prostate cancer that were posted between 05/06 and 12/08 on the largest German online discussion board concerning this matter. Questions by proxy and deviant topics were excluded. Contents of the posts were coded for descriptive statistics, while for this abstract absolute frequencies are given referring to a preliminary analysis of 41 threads. A qualitative linguistic approach was chosen complementary. **RESULTS:** The querists account for 26.7% of the posts. 37.1% of the answers are given by the 'top ten'-posters of the board (1479 total). Emotional support is rarely asked for explicitly (14), but very frequently provided (105). Direct contact is offered via E-mail (9) and telephone (5), but not in person. Most of the answers advice to keep calm (44) while some state to hurry up in a given situation (12). A routine advice is to have a second opinion on the pathological evaluation (40) whereas two certain pathologists are named (29). Additional radiologic diagnostics are commonly suggested (21), but only 20% are medically sound. Recommendations for specialised physicians (48) aim at university hospitals in 41,7%. 69% of the querists are finally confirmed in their initial therapeutic preference. **CONCLUSIONS:** Only few persons influence the range of opinions in the board largely. While most of the queries aim at facts and recommendations, emotional support plays a major role in effect. Linguistic analysis shows that prostate cancer still is a social taboo that has to be solved. **RESEARCH IMPLICATIONS:** The comparison of language and style in prostate and breast cancer discussion boards showed differences concerning emotional content. Our analysis reveals that a lot of information seeking is answered by emotional support. Therefore, the patients' support-needs have to be re-evaluated in more detail. **CLINICAL IMPLICATIONS:** Online discussion boards are a welcome and easy to access information means for exploring the needs of our patients. At the same time problematic tendencies in support groups can be realised and therefore mentioned in patient-physician-contact. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.9.1

Piloting a Psycho-education Program for Parents of Pediatric Cancer Patients in Malaysia

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BACKGROUND: To evaluate a psycho-educational program (PeP) for parents of Malaysian pediatric cancer patients. **METHOD:** Seventy-nine parents were invited to be either in an intervention ($n=41$) or a control group ($n=38$). Baseline assessment took place upon agreement of participation. Short-term effects were measured four weeks after the intervention. Control parents received standard care. Intervention parents received, in addition to standard care, 4 × 50 minutes sessions of information on childhood cancer and coping strategies. **RESULTS:** Repeated measures of ANOVAs revealed increased knowledge about cancer ($p=0.01$) in the intervention parents compared to standard care. Intervention parents reported reduced anxiety and increased activities with children after the program; however, differences were not significant. **CONCLUSIONS:** This PeP has significantly increased levels of knowledge among parents of seriously ill children. **RESEARCH IMPLICATIONS:** This study, the first of its kind in Malaysia, has highlighted factors to be considered in conducting psychological program at the hospital setting. **CLINICAL IMPLICATIONS:** The program may point towards the potential for these services to increase coping in Malay parents of children with cancer. **ACKNOWLEDGEMENT OF FUNDING:** Universiti Sains Malaysia Short Term Grant.

IL 1.9.2

Randomized Control Trial of the Meaning-Making intervention (MMi) for People Newly Diagnosed with Advanced Ovarian Cancer: A Pilot Study

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BACKGROUND: Existential well-being is a key determinant in the QoL of cancer patients. In 2006, a Meaning-Making intervention (MMi) was standardized, manualized and then assessed for efficacy in a randomized control trial (RCT) of positive adaptation by patients recently diagnosed with mostly early-stage breast or colorectal cancer (Lee *et al.*). Our present purpose was to estimate the effect of the MMi on patients with a poor prognosis (since initial distress upon diagnosis can be more intense). **METHOD:** A pilot-study was conducted using a

RCT design, with 26 people newly diagnosed with Stage III/IV ovarian cancer. We measured the impact of the MMi on psychological, existential and social quality of life, meaning in life, anxiety, depression and self-efficacy at 1 and 3 months follow-up. Repeated measures ANCOVA were carried out for post-test scores on each outcome controlling for baseline scores. **RESULTS:** At 1 month, women in the experimental group had a better sense of meaning in life as measured by the FACIT-Sp-meaning subscale (mean:25.2; SD:6.4) than women in the control group (mean:22.8; SD:8.5; p). **CONCLUSIONS:** Advanced stage ovarian cancer patients seem to benefit from the MMi in the immediate and short term, reporting enhanced meaning in life and feeling more supported. **RESEARCH IMPLICATIONS:** Future research would include a full RCT to further investigate the efficacy of the MMi, and to identify people who would be most (or least) likely to benefit from such an approach. **CLINICAL IMPLICATIONS:** The MMi seems a promising avenue to help advanced stage cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** This research was made possible through postdoctoral fellowships to MH from the Canadian Institutes of Health Research/National Cancer Institute of Canada (NCIC) Strategic Research Training Program in Palliative Care and the Canadian Cancer Society through an award from NCIC. The study was funded by a grant from the NCIC Sociobehavioural Cancer Research Network (SCRN) with funds donated to the Canadian Cancer Society.

IL 1.9.3

Images Speak More Than Words: Integration of Drawings in the Assessment Process for Understanding the Changes of Cancer Patients after a Psychosocial Intervention

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BACKGROUND: The present study attempts to understand the experience of breast cancer patients who had participated in an Eastern based body-mind-spirit psychosocial intervention program through the images made by the patients. **METHOD:** Pre- and post-intervention drawings on the theme of 'my cancer' were collected from sixty-seven primary breast cancer patients. Two creative arts therapists compared the drawings according to the structural and formal art elements (Body), the symbols used (Mind), and the emotions and feelings presented in the drawings (Spirit). Numbers of pre- and post-intervention drawings showing the presence of each element in these three dimensions

were also counted and compared. **RESULTS:** There were several changes noted between pre- and post-intervention drawings. The use of colour, space and multiplicity increased from 12% to 17%. Images of breasts decreased from 13% to 0%. Representations of cancer decreased from 15% to 7%. There was a slight increase in symbolic representations of natural, landscapes and social support in post drawings (3%–6%). The portrayal of negative emotions was greatly reduced from 52% to 3%; while positive emotions increased from 28% to 93% in post drawings. **CONCLUSIONS:** Overall, there was a trend in changes toward a more peaceful and hopeful attitude. Through the use of realistic and symbolic images participants depicted a range of emotions which might not be able to be expressed in words. Limitations and recommendations for using art making as an assessment tool and intervention are addressed. **RESEARCH IMPLICATIONS:** The comparison of pre- and post-intervention drawings revealed changes in subject matter and accompanying emotions. This provides evidence on the feasibility of integrating the non-verbal means in evaluating the effectiveness of psychosocial intervention. However, caution should be taken in interpretation. Researchers should always refer to the participants' original ideas and meanings of making the arts. **CLINICAL IMPLICATIONS:** The process of introducing the arts in the group furthers personal understanding of the cancer experience and helps cancer patients make meaning of it. Clinical use of art as a medium of expression and therapeutic process in cancer patients warrants further development and attention. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the Hong Kong Cancer Fund and the CERG Grant of the Hong Kong Research Grants Council (RGC) (HKU7212/03H).

IL 1.10.1

Implementing Touch-Screen Technology to Enhance Recognition of Distress: An Integrated Approach to Patient Care

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BACKGROUND: The City of Hope Cancer Center is in the process of implementing a systematic approach for patients to communicate with their healthcare team in real-time regarding psychosocial problems and physical symptoms using touch-screen technology. The purpose of this presentation is to describe our experiences in developing and implementing touch-screen problem-related distress screening and automated triage for outpatients in a healthcare setting and

the integration of psychosocial screening into the Electronic Medical Record System (EMR). **METHOD:** Using past experiences in implementing touch-screen technology in a comprehensive cancer center,[i] we have developed a unique 52-item version of the screening instrument titled You, Your Family and the City of Hope are a Team. Based on our prior work, a paper-and-pencil version was developed and implemented by a multidisciplinary team in preparation for the transfer to touch-screen. Partnering with our in-house ITS team, we have developed a patient-friendly touch screen standalone software program that integrates screening, triage and data management. Phase two of this project is to fully integrate this touch screen program into the EMR system. [i] Clark KL, Bardwell WA, Arsenault T, R DeTeresa, MJ Loscalzo. Implementing Touch Screen Technology to Enhance Recognition of Distress. *Psycho-Oncology* 2008. **RESULTS:** Program content, triage criteria, design, tailored educational materials and software specifications were built with a 'go live' date scheduled in February 2009. Patient's overall evaluation of the process, time spent, clarity, readability, and navigation of the touch screen program will be presented; as well as 'lessons learned' and helpful tips for successful implementation. Insight into the responses of the primary health care team, mental health professionals and educators will also be discussed. **CONCLUSIONS:** Touch screen technology is an easy and efficient way to screen patients and triage referrals. There are specific concerns of the primary health care team and clerical staff that require ongoing attention. Data gleaned from the touch screen has potential to destigmatize psychosocial concerns, increase the ability for patients to ask for help and use a common language within the health care team. The integration of psychosocial data into the EMR system will allow more integrated care with other disciplines through better documentation, enhanced communication and automated triage. **RESEARCH IMPLICATIONS:** Future research applications of touch-screen technology include testing the psychometric properties of the touch-screen program. We are also developing touch screen technology and population specific content for head and neck cancer patients, geriatrics, and survivors. Language translation is a relatively simple undertaking with the technology and problem-based content. Integration with the EMR provides the opportunity to track large number of patients longitudinally to evaluate the effectiveness of screening and clinical interventions. **CLINICAL IMPLICATIONS:** Use of this touch-screen will help bridge the gap among unseen patient barriers to maximizing the benefits of medical care, detection of problem-related distress and referrals for assessment or treatment; creating

a proactive and integrative approach to patient care. The longitudinal data will provide information that is presently absent in planning for ongoing needs of patients. The eventual linking of biological markers with psychosocial data holds much promise for targeted biopsychosocial interventions that transcend self-report. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.10.2

(P)REHABILITATION: Planning Preventive, Proactive and Tailored non Pharmacological Interventions for Cancer Patients in a General Hospital Setting

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BACKGROUND: We present an innovative project for the supply of multidisciplinary cancer care, started in 2006 in a Belgian general hospital. 'Prehabilitation' encompasses the planning and implementation of preventive, proactive and tailored non-pharmacological interventions for cancer patients. We introduce our multidisciplinary screening tool and illustrate the difficulties of applying new theoretical insights in a hospital setting. **METHOD:** A multidisciplinary group of physicians, psychologists, social workers, physiotherapists and dieticians developed the framework and goals of the project. A 'task force' was responsible for the implementation. Commitment of the management was assured. At the time of diagnosis, patients receive a 'Health Profile', a screening tool with validated questions on psychological distress, nutrition, social and physical well-being and exercise pattern. A care counselor is responsible for the planning, coordination and follow-up of a personal care program for each patient. All information is stored in a database for evaluation and adjustment of the interventions. A compilation is imported in the patient file. **RESULTS:** We present the analyses of the 798 patients screened during the first year: patient characteristics, diagnosis and treatment, risk factors and complaints, number of persons 'at risk' per discipline, cross-discipline complaints and risk factors. We discuss the gap between evidence-based-guidelines and clinical applicability: limitations and organizational, financial, structural, practical and human barriers encountered in a hospital setting. **CONCLUSIONS:** The application of EBM-guidelines for supportive cancer care in a hospital setting requires creative and flexible solutions to balance scientific findings and practical applicability. Our experience confirms that a multidisciplinary approach is indispensable, with specialized caregivers in a cross-hospital cooperation. The population of cancer patients is heterogeneous

and presents varying needs, where even subclinical symptoms may call for interventions. **RESEARCH IMPLICATIONS:** The Prehabilitation project is based on a careful reading of the literature and made the limitations of available scientific research apparent. The structure and financing of Belgian hospitals are not appropriate and adjusted for Prehabilitation care in chronically ill patients. Scientific screening instruments often do not contain enough leads for practical clinical decisions. We call for more applied research in this matter. We welcome all suggestions for improvement of our instrument, procedures and data collection. **CLINICAL IMPLICATIONS:** Prehabilitation aims to overcome fragmentation of care by creating structures bringing together different professionals, proactively seeking for needs rather than simply responding to demands, and planning preventive interventions. **ACKNOWLEDGEMENT OF FUNDING:** The Foundation against Cancer, Belgium, supported the development of the screening tool.

IL 1.10.3

Experiences with Implementation of Psychosocial Screening in the Area of the Comprehensive Cancer Center North East (CCCNE), the Netherlands

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BACKGROUND: The National Dutch Cancer Plan mandates that psychosocial screening be implemented as a standard procedure in daily oncologic care by 2010. Regular psychosocial screening helps identify patients with high distress and a need for psycho-oncological care on time and refer them for help. The goal of the CCCNE is to implement psychosocial screening in the hospitals in its referral area. **METHOD:** Hospitals in the CCCNE area were informed and asked to participate in this project to improve quality in care. Representatives of the hospitals (working groups of oncology nurses, psychologists, social and pastoral workers, physical therapists, dieticians) met at the CCCNE to discuss the need for implementation of psychosocial screening and the consequent logistics. Hospitals were urged to form a multidisciplinary team and to appoint a team leader during implementation. The NCCN screening instrument was chosen as the instrument to be used by all hospitals. Experiences were assessed qualitatively during a focus group meeting with representatives from all participating hospitals. **RESULTS:** 15/18 hospitals approached accepted our support. The Dutch version of the Distress

Thermometer and Problem List was validated (Cancer, 2008). Implementation findings: caregivers reported that: organisation and primary caregivers considered screening part of comprehensive care; a nurse was made responsible and allotted time; most patients screened had breast cancer or were receiving chemotherapy because a specialised nurse was already involved in their care; increased attention to psychosocial issues and improved patient communication when using a screening instrument; improved interdisciplinary communication; multidisciplinary teams worked together on logistical issues and formalized these in protocols; teams developed patient leaflets: one explaining the importance of screening, one on the expertise of different psycho-oncological caregivers. **CONCLUSIONS:** The vast majority of hospitals and caregivers is willing to implement psychosocial screening. Implementation is more successful in certain groups of cancer patients, often because the person responsible for implementation is a specialised nurse. Logistical matters are well addressed by multidisciplinary teams. **RESEARCH IMPLICATIONS:** Studies should be designed, using the above information, to systematically assess the degree of implementation in a hospital and the beneficial effects of screening for both patients and the primary healthcare team. **CLINICAL IMPLICATIONS:** Caregivers of all disciplines should be aware that psychosocial screening will increase their ability to signal a patient's decreased functioning in time and to communicate with the patient on his/her problems. It will help streamline referral to professionals in psycho-oncology. However, the road to standard use of psychosocial screening for all patients is still long. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 1.10.4

A Four Tier Model of Psychological Support. Final Results From a Three Year Evaluation

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BACKGROUND: The purpose of this project was to implement and evaluate a Four-Tier model of psychological support for people with cancer and their families, recommended by the National Institute of Health and Clinical Excellence guidance for Supportive and Palliative Care (NICE, 2004). Level 1 consists of all health and social care staff, Level 2 contains staff with additional expertise, such as nurses, doctors and allied health professionals. Staff at 3 and 4 diagnose and treat psychopathology.

METHOD: The model has been implemented through the provision of a Psychological Support Team to provide assessment and treatment of psychological distress at Levels 3 and 4 of the model, consisting of a Clinical Psychologist, Counsellor, Senior Social Worker and Assistant Psychologist. A teaching programme has been developed to educate staff at Level 2 of the model, in the recommended screening and psychoeducation skills. The teaching is evaluated through the use of pre and post confidence questionnaires, with six month follow-up. The utility of the Team is evaluated through patient and staff satisfaction questionnaires and clinical audit. **RESULTS:** Results for the teaching show significant improvements in confidence in all areas of assessment, ($p < 0.01$, $N = 155$). These improvements in confidence are maintained at 6 month follow-up. Baseline audit show 17% of patients had their psychological needs assessed at diagnosis, 23% during treatment, 5% at end of treatment and only 5% of those whose disease recurred. During the second year, end of treatment rose to 28%, due to the implementation of a group for patients at the end of adjuvant treatment. Final year results will be presented. Patient and staff satisfaction with the psychological support available have both increased significantly. **CONCLUSIONS:** The teaching programme has proved to be effective in improving staff confidence and these improvements are maintained at 6 month follow-up. It was hypothesised that the implementation of the model would have the effect of increasing the numbers of people whose needs are assessed at the four recommended time points and this has been the case. It was also hypothesised that the existence of a Psychological Support Team would improve both patient and staff satisfaction with the psychological support available and again, this has been shown to be the case. **RESEARCH IMPLICATIONS:** This project has started to develop an evidence base for the model recommended by NICE. The results will be disseminated as widely as possible in order to advocate the implementation of a four tier model in other areas. **CLINICAL IMPLICATIONS:** Results will contribute to setting standards of psychological support available to patients, families and staff in cancer services. The teaching means that staff are providing improved psychological support to patients across the Central South Coast. The implementation of a dedicated Psychological Support Team for patients in Salisbury means that their psychological needs are being assessed and treated as required. **ACKNOWLEDGEMENT OF FUNDING:** This project is only possible due to the generosity of the Wessex Cancer Trust.

IL 1.10.5**Expanding Psycho-Oncology Support to Rural Areas in NSW, Australia**Catherine Adams¹, Louisa Gianacas¹, Wayne Levick²¹Newcastle Calvary Mater Hospital, Newcastle, NSW, Australia, ²Hunter New England Area Health Service, Newcastle, NSW, Australia, ³University of Newcastle, Newcastle, NSW, Australia

BACKGROUND: It is apparent that there is a stigma among psychologists about seeing cancer patients. Even experienced clinicians feel under trained to deal with this population. In this service patients are often treated in a metropolitan cancer setting then return to their rural homes. This project provided basic psycho-oncology training to experience psychologists that aimed to reduce the stigma of working with cancer patients. These trained psychologists would then be able to provide rurally based support. **METHOD:** The project aimed to: 1. Identify rurally based psychologists and assess their knowledge of, education in and training needs around psycho-oncology (KEN assessment). 2. Develop and implement a training package for these psychologists based on this assessment. 3. Develop a referral pathway linked to QUICATOUCH psychosocial screening after completion of training. To enable this, psychologists practicing within the Hunter and New England areas of NSW Australia were identified and offered training in psycho-oncology. In order increase the interest in training National Professional Development Approval was obtained. Psychologists in both public and private practice were invited to attend. Participants were asked to be part of a referral pathway for rurally based cancer patients. This pathway will be integrated with QUICATOUCH, electronic psychosocial screening. **RESULTS:** Of the 76 psychologists invited, a total of 31 psychologists attended the training workshops conducted in Armidale on 18/3/2008 and Taree on 1/4/2008. The training package was evaluated on each workshop day and then 3 and 12 months later. The greater majority of participants reported increased knowledge about psycho-oncology and willingness to see cancer patients. Psychologists wishing to commence working with cancer patients were asked to provide their details, geographical coverage and specialities to enable development of a clinician database and referral pathway. Twenty two psychologists from various locations agreed to do so. Referral trends along the newly established pathway were monitored. **CONCLUSIONS:** This project has demonstrated that timely and cost-effective training in Psycho-Oncology can be provided to existing rurally based psychologists thus increasing access to appropriate local support for cancer patients. A major outcome was the demonstration of how the

stigma associated with seeing cancer patients can be significantly reduced through an intensive one-day training program. The importance of maintaining contact with participants and encouraging their use of widely available electronic resources, such as the IPOS web casts is discussed. This project has enabled rurally based cancer patients in NSW Australia to access psychological support in their local area from experienced psychologists. **RESEARCH IMPLICATIONS:** This pathway may increase the participation of rurally based patients in Psycho-Oncology clinical trials as support will be available to them in their local area. This has traditionally been an underserved population both in Australia and internationally for participation in all types of clinical trials. **CLINICAL IMPLICATIONS:** The project has increased access to timely and appropriate psychosocial care for rurally based patients who traditionally struggle to access such care. This project has the potential for state-wide expansion through the CINSW Psychosocial Care Pathway. The package is currently being modified for presentation to General Practitioners and Social Workers. Once integrated with QUICATOUCH the referral pathway will allow seamless psychosocial screening and care of rurally based cancer patients and their carers in NSW. **ACKNOWLEDGEMENT OF FUNDING:** This project was supported by a 'Health Services Innovations Grant' from the Cancer Institute New South Wales (CINSW) and through salary and in kind support from the Newcastle Calvary Mater (NCM) and Hunter New England Area Health Service (HNEAHS).

IL 1.11.1**Socioeconomic Disparities in Receiving Radiation Following Diagnosis of a Glioblastoma Multiform**Paula Sherwood³, Cathy Bradley¹, Bassam Dahman¹, Heidi Donovan³, Arlan Mintz³, Charles Given²¹Virginia Commonwealth University, Richmond, VA, United States, ²Michigan State University, East Lansing, MI, United States, ³University of Pittsburgh, Pittsburgh, PA, United States

BACKGROUND: Considered standard care, radiation greatly improves survival following diagnosis of a Glioblastoma Multiforme (GBM). Although sociodemographic and economic disparities in cancer treatment have been documented in other populations, there is a dearth of disparity research in neuro-oncology. The purpose of this analysis was to identify whether age, ethnicity, gender, income, residence, and insurance status (Medicaid plus Medicare versus Medicare only) predicted receipt of radiation and survival in persons >65 years old receiving government-supported healthcare. **METHOD:** Medicaid and Medicare data were merged with tumor registry data in one U.S. state to extract a sample of all

patients >65 years old with a first GBM diagnosis from 1996–2000. The final sample ($n = 499$) was primarily white, male, in a metropolitan area, enrolled in Medicare only, and had an income >\$35,001/year. All claims for inpatient, outpatient, and physician services were collected. Using SAS, version 9.1, logistic regression evaluated predictors of reporting >1 radiation visit. Survival curves were constructed with Kaplan-Meier estimation methods. For analyses involving adjustments for confounding factors, Cox proportional hazards methods were used to estimate hazard ratios. **RESULTS:** African-Americans were less likely to receive radiation (OR = 0.13; CI = 0.04–0.44) than Caucasians. Persons enrolled in Medicaid and Medicare were less likely to receive radiation (OR = 0.47; CI = 0.24–0.92) versus those in Medicare only; persons >75 years (OR = 0.43; 95% CI = 0.24–0.75) and 70–74 (OR = 0.60; CI = 0.37–0.96) were less likely to receive radiation than those 65–69. Compared to patients 65–69 years, longer survival was seen in persons 70–74 (HR = 1.29; CI = 1.01–1.64) and >75 (HR = 1.38; CI = 1.09–1.75). Persons in metropolitan areas (HR = 1.47; CI = 1.16–1.88) survived longer than those in rural or urban areas. Compared to patients with incomes <\$25,000/year, persons with incomes \$25,000–\$35,000/year (HR = 0.77; CI = 0.60–0.99) and >\$35,000/year (HR = 0.71; CI = 0.55–0.93) survived longer. **CONCLUSIONS:** Mortality rates for persons with a GBM have historically been high across all patient populations. With advances in diagnosis and treatment and corresponding increases in survival, evidence of socioeconomic disparities in access to the standard of care is emerging. The analyses presented here are a first step in identifying potential disparities that may exist. **RESEARCH IMPLICATIONS:** Data suggest that ethnic, economic, and insurance-based disparities may exist in receiving standard care after a GBM diagnosis. Fewer African-American are diagnosed with a GBM than Caucasian, and small cell sizes in this analysis are a limitation. These analyses should be replicated in a national database along with additional efforts to evaluate patient, provider and system-related barriers to patients receiving optimal care for GBM. **CLINICAL IMPLICATIONS:** Evidence from other cancer populations suggests that there are patient, provider, and system contributions to health care disparities. Clinicians need to be vigilant to ensure that all patients have the opportunity to receive optimal treatment regardless of income, insurance coverage, or ethnicity. Specifically, clinicians should be aware of patients' potential distrust of the health care system and recommendations for treatment, difficulty navigating government sponsored healthcare systems, and potential lack of support for continuing treatment. **ACKNOWLEDGEMENT OF**

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IL 1.11.2

Chronically Ill Patients in Socially Disadvantaged Populations: A Systematic Review of Interventions Targeting Health Disparities in Cancer, Diabetes, and Cardiovascular Diseases

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BACKGROUND: Chronic diseases like cancer, diabetes and cardiovascular diseases account for a huge part of the global health burden. Socially disadvantaged populations, such as ethno-racial minorities and those with a low socioeconomic position, suffer disproportionately much from these diseases. Research is needed to identify effective strategies that diminish social disparities in health. This literature review identifies and synthesizes the effectiveness of interventions that target health disparities in chronic diseases. **METHOD:** Studies that were included targeted primary, secondary or tertiary prevention of cancer, diabetes or cardiovascular diseases; tested a psychosocial or behavioural intervention, focused on adults, were conducted in industrialized countries, were randomized controlled trials or controlled trials, had at least 100 participants in both the intervention and the control group and were published in English, French or German. MEDLINE, EMBASE, CINAHL and PSYCINFO were searched for studies published between 1990 and 2008. To identify search terms that covered the whole spectrum of health disparities, the domains of social inequality of the cancer disparities analytic grid by Krieger (2004) were used. **RESULTS:** The search identified a total of 4432 citations. Titles were scanned, and the complete abstracts of 927 citations are currently under review. Citations identified as potentially meeting the inclusion criteria will then be reviewed. The specific features of the interventions will be analysed and their effectiveness will be evaluated. The results of this review will be presented. Previous and less comprehensive reviews on socially disadvantaged groups indicate that access-enhancing and individual-directed strategies may enhance participation in mammography screening. Cultural tailoring, community educators, community settings, individualized assessment, behaviour-related tasks, long duration, and high intensity seem to be key-elements in diabetes care. **CONCLUSIONS:** This comprehensive and systematic review will provide evidence for to which extent interventions for socially disadvantaged populations can be effective

and have the potential to reduce health disparities. **RESEARCH IMPLICATIONS:** Because of the rigorous inclusion criteria the results will provide a reliable basis for conclusions on the effectiveness of intervention strategies that target health disparities in chronic diseases. By including three different types of chronic diseases a broad area of research can be covered. The review will draw the attention to research gaps and needs for future research. **CLINICAL IMPLICATIONS:** The results will have important implications for the development and implementation of new interventions. Clinicians may use them to successfully reach and to ultimately positively affect the lives of underserved people with cancer and other chronic diseases. **ACKNOWLEDGEMENT OF FUNDING:** Municipality of Copenhagen; Danish Cancer Society.

IL 1.11.3

Quality of Life of Latina and Euro-American Women with DCIS

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BACKGROUND: As a consequence of increased use of mammography in high resource countries, more women are being diagnosed with ductal carcinoma in situ (DCIS). Although DCIS is a non-invasive form of cancer, its treatment is consistent with that of other cancer. The quality of life (QoL) of Latina cancer survivors compared to that of Euro-American women has been understudied and is the focus of the current study. **METHOD:** A sample of 745 women were recruited through the California Cancer Registry and interviewed by telephone an average of two years after diagnosis with DCIS. Euro-Americans interviewed in English (EA, $n = 396$), Latinas interviewed in English (EL, $n = 156$), and Latinas interviewed in Spanish (SL, $n = 193$) were compared with respect to QoL (SF-8 physical and mental components), social support [MOS emotional/informational (EI) and tangible (T) support subscales], and spirituality [FACIT faith and meaning/peace (M/P) subscales]. To explain differences in QoL among the three groups, multiple regression analysis was used to model the association between QoL and socio-demographic factors, breast cancer treatment, social support, and spirituality. **RESULTS:** SL women reported lower physical and mental QoL than EA women, and less EI and T support than EL or EA women. SL and EL women reported greater faith than EA women, but similar levels of M/P. Differences in QoL among the groups lost significance when socio-demographic factors and treatment were added. Physical QoL was associated with younger age, higher income, and treatment (lumpectomy/radiation). Mental QoL

was associated with older age, higher income, higher education, and being employed. EI support and M/P were positively associated with both physical and mental well-being, and T support was positively associated with mental QoL. **CONCLUSIONS:** Spanish speaking Latinas with DCIS are at increased risk of lower quality of life due to the adverse effects of poverty and lack of social support. **RESEARCH IMPLICATIONS:** Research on the reasons for the lack of social support and potential interventions are the next steps. **CLINICAL IMPLICATIONS:** The provision of information and resources is especially important for these women who are linguistically isolated. **ACKNOWLEDGEMENT OF FUNDING:** Funded by California Breast Cancer Research Program.

IL 1.11.4

The Effects of Relaxation and Guided Imagery, Alone and in Combination, on Mood and Quality of Life in Men and Women With Colorectal Cancer: A Randomised Controlled Trial

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BACKGROUND: Relaxation (R) and guided imagery (GI) are widely used in cancer support services around the world. Several, but not all, studies evaluating these interventions have demonstrated significant benefits to a range of patients in terms of quality of life. However, the relative effects of R and GI alone, and in combination, have not been evaluated within the context of a large scale prospective randomised control trial. **METHOD:** Patients with newly diagnosed Duke's stage B, stage C or stage D colorectal cancer were recruited. Prior to the commencement of chemotherapy, they were randomised to self-initiated support (SIS) alone, SIS plus R, SIS plus GI, or SIS plus R and GI. The primary outcome measure was the TOI of the Functional Assessment of Cancer Therapy-Colorectal Cancer (FACT-C); secondary outcomes included the Mood Rating Scale (MRS), the

Hospital Anxiety and Depression Scale (HADS), and psychiatric morbidity (DSM^{TR} IV). Patients were assessed before randomisation (week 0) and at weeks 8, 16, 24 and 36. The primary endpoint was week 24. **RESULTS:** 151 patients were randomised, and the four groups were comparable in terms of socio-demographic, clinical or quality of life variables. Analysis of covariance at the primary and secondary endpoints did not show any statistically significant between-group differences for the TOI or any subscales of FACT-C. Similarly, the groups did not differ in terms of the subscales, or total scores, of the MRS or HADS or the proportion receiving a positive SCID diagnosis. However, the prevalence of psychiatric morbidity was very low in all groups: e.g., at week 24, only 3.1% of the patients scored eleven or more on HADS anxiety. **CONCLUSIONS:** No statistically significant effects on mood or quality of life were found for R and GI, alone and in combination, in the present study. However, in interpreting the results, the very low incidence of psychological and psychiatric morbidity in all groups, including the control group, should be taken into account. Also, in this study, training was carried out exclusively using recorded instructions which may have been sub-optimal. **RESEARCH IMPLICATIONS:** There is a need to investigate whether the addition of live training sessions enhances the effects of RT and GI, alone and in combination, and we are currently carrying out a study to compare audio-recorded training alone with audio-recorded training plus live relaxation in patients with lung cancer, prostate cancer, gynaecological cancer and colorectal cancer. **CLINICAL IMPLICATIONS:** The most striking finding from this study is the low rate of psychiatric and psychological morbidity in the 'control group' (SIS). This again demonstrates that a fully integrated Oncology Health Service, staffed by specially trained nurses, can prevent considerable psychological and psychiatric morbidity. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK.

IL 2.12.1

A Relational Approach to Cancer Care: An Empirical Study of People's Experiences in the First Year Following Diagnosis

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BACKGROUND: This paper describes people's experiences of cancer in the first year following diagnosis. People affected by cancer do not perceive it as an individual's disease, but one that affects whole families and networks. This leads us to present a re-conceptualisation of cancer as relational. We conclude by reflecting on the

implications for shifting practice, policy and research to move away from focusing on individuals, and toward cancer's impact and influence across relational contexts. **METHOD:** The paper draws on data drawn from a prospective interview study of 66 people newly diagnosed with cancer and their partners. Interviews were conducted at three time-points: within 6 weeks of diagnosis, during treatment and during follow-up. Data analysis was theoretically informed by ideas stemming from systems theory, as applied within family therapy, which prioritises the consideration of relationships and context in mediating experience. **RESULTS:** Relationships were a critical component of the cancer experience; this paper focuses on family relationships and their salience in the first year post-diagnosis. Families and relationships were central to the cancer experience, stemming from presenting for initial symptom investigation which was often the result of ongoing interaction and debate between partners. We use the idea of the 'joint ownership of cancer' to elucidate the role of relationships in experiencing and understanding the disease's impact. **CONCLUSIONS:** To date, cancer has been understood and treated as a disease that affects individuals. This study has clearly identified that although the disease resides in individuals, the effects of it are felt across far-reaching contexts and multiple relationships. Fundamentally, there is a need to understand the entire context in which people experience and make sense of their illness. In the case of cancer, this means broadening out from a disease or patient-centred approach to embracing the wider context in which the illness is experienced, including the relational aspects and impacts of cancer and cancer care. **RESEARCH IMPLICATIONS:** We suggest that research could helpfully move toward a relational conceptualization of cancer, with emphasis on how cancer is experienced in the family context. This means grappling with the dominant discourse of 'informal carer' and other parallel positionings of family members. **CLINICAL IMPLICATIONS:** Adopting a relational approach to cancer and cancer care necessitates a shift in clinical focus. In essence, we call for a move from somatic foci that reduce complex relational issues to individualised, physical components toward a position of relationship-informed policy and practice. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the Scottish Government.

IL 2.12.3

A Systematic Review of Information Needs of Family Members of Cancer Patients: A Critical Reflection

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BACKGROUND: The provision of high quality information to cancer patients has been shown to empower them, reduce anxiety, and help them make informed treatment decisions. As cancer impacts on the whole family, understanding the needs of family members of cancer patients is also an essential part of providing quality care. Different family networks and different cancer diagnoses are likely to lead to a variety of information needs which need to be addressed by individually tailored information. **METHOD:** We conducted a systematic search of 4 databases to determine what is known about the information needs of family members of adult cancer patients, and to critically review how well information needs of different subgroups of family members with different cancer diagnoses are currently met. Following a stringent systematic review procedure, initially, 3259 articles published between 1998 and 2008 were identified as potentially relevant. Further examination reduced the selection to 32 papers which met our inclusion criteria. **RESULTS:** Firstly, most papers focus on the partners and spouses of cancer patients. It remains unclear whether other family members have different needs specific to their relationships. Secondly, the majority of papers focus on either breast or prostate cancer, leaving a gap in our knowledge of information needs in relation to other cancers. Thirdly, although it has been argued that information needs change over the cancer trajectory, most papers focus only on the initial diagnosis and treatment phase, and very few address the needs of longer term cancer survivors. Lastly, the concept of 'information need' is generally poorly developed and theorised. **CONCLUSIONS:** Our review concludes that the information needs of family members of cancer patients is an important, but as yet neglected, area of research. It indicates that information on non-medical topics such as coping with cancer, or the impact of cancer on relationships, is more likely to be lacking in family members than medically-oriented information. Further research is needed which distinguishes between met and unmet information needs, and which focuses on cancer sites other than breast and prostate cancer, on the needs of patients' children, other family members (siblings, adult children of older patients), and the family as a whole. **RESEARCH IMPLICATIONS:** Future research would benefit from being more methodologically robust, e.g. with studies using validated measures, and longitudinal, mixed-method research designs. Increased use of theoretical frameworks to inform research design, development of measures and interpretation of findings might facilitate interventions which more clearly meet family members' information needs. Greater conceptual clarity is needed in future empirical work to distinguish those needs

defined by individuals in relation to their own circumstances and those needs defined more generically. **CLINICAL IMPLICATIONS:** Family members have varied information needs. It is important that practitioners recognise these needs alongside those of patients. Systems which permit the identification of information needs throughout the cancer journey are required. Strategies are needed which ensure best use is made of available resources, e.g. signposting by health care professionals to good quality information. The current implementation of information pathways by the National Cancer Action Team in the UK is one step in this direction. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.12.4

Cancer Patients' Primary Caregivers' Desire for Psychological Support: Prevalence and Implications for Screening Caregivers' Psychological Needs

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BACKGROUND: The aim of this study was to investigate cancer patients primary caregivers' desire for psychological support and to identify patients' disease-related and both patients' and caregivers' sociodemographic, and psychological factors associated with this desire. **METHOD:** The study is part of a multicenter, cross-sectional study assessing consecutive cancer patients' and their primary caregivers' desire for psychological and/or psychiatric support. Patients and caregivers completed the Hospital Anxiety and Depression Scale, the Ways of Coping Checklist, the Cancer Rehabilitation Evaluation System (a revised and adapted version for the caregiver) and patients' primary caregivers reported their desire for psychological support. **RESULTS:** A sample of 202 patient-caregiver dyads was included. Among them, 20 % of caregivers reported desiring psychological support. Regression analysis showed that caregivers' desire for psychological support was associated with being younger ($\text{Exp}(B) = .943$; $P = 0.001$), more distressed ($\text{Exp}(B) = 1.083$; $P = 0.002$) and using a support-seeking coping ($\text{Exp}(B) = 1.070$; $P = 0.083$). A shorter duration of the patient-caregiver relationship was also associated with caregivers' desire ($\text{Exp}(B) = .997$; $P = .038$). Surprisingly, no patients' characteristics were associated with caregivers' desire for psychological support. **CONCLUSIONS:** This study shows that one caregiver out of five desire psychological support. The fact that desire for psychological support is associated with caregivers'

distress emphasizes the importance of screening systematically primary caregivers' psychological needs. **RESEARCH IMPLICATIONS:** Further studies should investigate the feasibility and efficacy of a systematic screening. **CLINICAL IMPLICATIONS:** Psychological interventions specifically designed to respond to cancer patients caregivers' needs and desire should therefore be available in all cancer care settings. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the 'Service Public Fédéral Santé Publique, Sécurité de la Chaîne alimentaire' of Belgium under the 'Appel d'offre-2002-16' and by the C.A.M. (Training and Research Group) of Belgium.

IL 2.13.1

Which Variables are Related to Residents' Ability to Detect Patients' Distress?

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BACKGROUND: Although detection of distress has been considered as a core clinical skill for residents, there are not enough empirical evidence currently available about variables which may be related to residents' ability to detect patients' distress accurately. The objective of this study is to test the value of a model designed to determine variables related to residents' ability to detect patients' distress. **METHOD:** Potential variables included in the model—assessed during a highly emotional simulated patient interview—are the following: residents' sociodemographic, professional and psychological characteristics (assessed by questionnaires); residents' communication skills (assessed by a utterance by utterance analysis); residents' psychological arousal (assessed by the STAD); and physiological arousal (assessed by monitoring heart rate and blood pressure). A mean detection accuracy score was calculated for each physician by comparing residents' rating of patients' distress (assessed on a 10-point VAS) with patients' distress (assessed with the HADS) during a half-day clinical round. **RESULTS:** Ninety-four residents and 442 inpatients were included in the study. Thirty percent of the variance in residents'

detection of patients' distress was explained by the following residents' variables of the model: self-reported anxiety level before the interview ($r = -.21$; $p = .040$), mean arterial blood pressure level before the interview ($r = -.26$; $p = .019$), use of empathy during the interview ($r = .23$; $p = .027$) and the evolution in mean arterial blood pressure between the pre-interview rest and the post-interview period ($r = -.27$; $p = .012$). **CONCLUSIONS:** This study shows that several variables are partly related to residents' ability to detect patients' distress. **RESEARCH IMPLICATIONS:** Residents' psychological and physiological arousal before and during a highly simulated interview are key variables—beside their empathic skills—which must be considered in models designed to determine their ability to detect patients' distress. **CLINICAL IMPLICATIONS:** Future interventions designed to improve residents' detection should therefore focus on these variables. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the 'Fonds National de la Recherche Scientifique—Section Télévie' of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

IL 2.13.2

The Role of the Medical Report for Psychosocial Support of Cancer Patients After Discharge From the Hospital

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BACKGROUND: Treatment of cancer involves different sectors within the health care system. An important role for communication between the sectors plays the medical report after discharge from the hospital. However, medical reports rarely contain information on psychosocial distress of patients making continuous psychosocial support difficult. The aim of this ongoing project is therefore to investigate whether the inclusion of a psychooncological statement within the medical report improves quality of treatment from the patient's and doctor's perspective. **METHOD:** Patients with urological cancer are randomly assigned to an intervention or control group. Shortly before discharge, patients in the intervention group are assessed for their psychosocial distress (t1). Results of the short interview appear as a standardized psychooncological statement in the medical report. Few weeks after discharge (t2), the general practitioner/urologist receives questions on whether the statement was helpful for communication and further treatment. Patients are

assessed for satisfaction with treatment and quality of life. The control group receives the medical report as usual. At t2, patients and general practitioners/urologists are assessed with the same questionnaires as the intervention group. **RESULTS:** Preliminary results concerning psychosocial distress of patients and their satisfaction with treatment and quality of life will be presented, as well as the doctor's responses. **CONCLUSIONS:** New aspects of this study are first, the systematic inclusion of a psychooncological statement in the medical report based on a standardized and psychometrically evaluated short interview and second, the assessment of the reader's response to this statement. **RESEARCH IMPLICATIONS:** The feasibility of including a psychooncological statement in a medical report it is relevant for future research and also, whether the findings from this study can be generalized to other patient groups and settings. **CLINICAL IMPLICATIONS:** As part of the study, clinicians received training in conducting the short psychosocial interview before discharge. Furthermore, results of the readers' responses to the psychooncological statement will provide information on whether this statement is useful and whether there is any need for physicians in outpatient settings in learning how to deal with emotional reactions of their patients. **ACKNOWLEDGEMENT OF FUNDING:** The study is supported by the Deutsche Krebshilfe e.V. (107448).

IL 2.13.3

How Accurate are Cancer Professionals' Assessments of depression and distress: A Meta-analysis of Diagnoses by Oncologists and Clinical Nurse Specialists

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BACKGROUND: Many studies have investigated the ability of general practitioners to detect depression in primary care but relatively few have examined the abilities of hospital specialists. Slevin *et al.* (1988) found that concordance between patient and staff evaluations of psychological distress was poor (0.21) [Cancer 1988; 57: 109–112] and Lampic found agreement on kappa was 0.07 for depression and 0.23 for anxiety [Cancer Nurse 1996; 19: 419–428.]. We aimed to study sensitivity (SE) and specificity (SP). **METHOD:** A search identified 12 studies reported in 7 publications. We excluded studies that did not report either sensitivity [SE] or specificity [SP]. We excluded Trask *et al.* [Bone Marrow Transplantation 2002; 29(11): 917–925] as this study examined the accuracy against the Distress Thermometer alone. Two studies examined detection of anxiety, 8 broadly defined

depression (includes HADS-T), 3 strictly defined depression and 7 broadly defined distress. 9 studies involved medical staff and 2 studies nursing staff. Gold standard tools including GHQ60, GHQ12 HADS-T, HADS-D, Zung and SCID. The total sample size was 4786 (median 171). We calculated pooled sensitivity, specificity, PPV, NPV, and fraction correction (TP+TN /all cases). **RESULTS:** Across all studies the prevalence of depression was 31.5%, anxiety 14.5% and distress 34.3%. Due to variations in the gold standards these rates should not be considered representative. Pooling the results for all cancer professionals showed a mean SE of 39.5% and SP 77.3%. Oncologists had a SE of 38.1% and SP of 78.6%; a fraction correct of 65.4%. By comparison nurses had a SE of 73% and SP of 55.4%; a fraction correct of 60.0%. When attempting to detect strictly defined depression, oncologists managed a SE of 42.4%, SP 82.4, FC = 70%. When attempting to detect anxiety, oncologists managed a SE of 35.7%, SP 89.0%, FC 81.3%. **CONCLUSIONS:** Cancer professionals have considerable difficulty detecting distress, depression and anxiety. Nursing staff tend to have higher sensitivity (and rule-out more efficiently) whereas oncologists have higher specificity (and rule-in more efficiently). Oncologists appear to be better able to detect anxiety than depression. **RESEARCH IMPLICATIONS:** There are very few large scale studies on the routine diagnoses of cancer professionals, particularly in relation to depression and anxiety. Further studies against severity scales and psychiatric interviews are urgently needed. Additionally, methods to improve detection have been relatively under-studies in cancer settings. **CLINICAL IMPLICATIONS:** The difficulties non-mental health specialists have in detecting emotional disorders must be acknowledged. Clinicians make more false positive errors than false negatives. Predictors of low sensitivity or specificity need more attention. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.13.5

Individualised Communication Skills Training for Randomized Clinical Trials and Therapy Options in Oncology. Training Concept and Results of a RCT

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BACKGROUND: Randomized clinical trials (RCT) are essential in research process, however, it is a difficult task for oncologists to recruit patients. Eligible patients have to be informed about RCT according to ethical, legal and

patient-orientated standards, but physicians lack adequate training. Only few Communication Skills Trainings (CST) about this topic have been developed. Results show need for further improvement: tailoring to individual needs of participants, focus on specific working environment and evaluation in a randomized design. **METHOD:** Therefore, we developed an individualized CST on conveying key information about clinical trials and therapy options. The training was based on individual learning goals derived from video assessment of consultations with actor-patients. A coaching followed on each participant's working unit in order to transfer communication techniques into practice. For evaluation of our CST 40 physicians were randomly assigned to a training or a waiting control group. We assessed acceptance of our training (1), physicians' feeling of competence (2) and the satisfaction of actor-patients (3). Most importantly, training success was evaluated with a checklist by blind raters comparing video-recorded consultations (4). **RESULTS:** The acceptance of the participants was very satisfying in regards to personal benefit and constructive learning environment (1). Physicians from the training group felt more competent in providing complex information (2). Actor patients evaluated the physicians from the training group to be better than the control group in explaining randomisation (3). We will also report data on the evaluation of the rated video recorded consultations and on items derived from the learning goals (4). **CONCLUSIONS:** Oncologists need good communication skills to inform patients adequately in this highly complex and difficult topic. We can show that our individualised CST is well-accepted and can improve the communication skills of physicians. We can demonstrate different ways of individualised teaching methods, like video assessment, deriving learning goals and individual coaching. **RESEARCH IMPLICATIONS:** Researchers may be interested in how to (a) adapt CSTs into specific working environments of participating physicians, (b) improve future CSTs by using individualised teaching techniques and (c) evaluate CSTs in a randomised design. We will also present our evaluation checklist, which can be adapted to other CSTs. **CLINICAL IMPLICATIONS:** Suppliers of CSTs can profit from our individualised teaching methods. Oncologists in the role of medical investigators can acquire communication techniques and learn to improve procedures for an adequate informed consent in clinical trials. Our training bridges the gap between ethical standards, patient-orientation and the need to improve communication skills of oncologists. **ACKNOWLEDGEMENT OF FUNDING:** We thank the Deutsche Krebshilfe e.V. (German Cancer Aid) for funding. Grant Number: 107463.

IL 2.14.1

Meeting the Psychological and Information Needs and Improving the Quality of Life of Patients with Inoperable Lung Cancer Through an Innovative Supportive Care Intervention

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BACKGROUND: Lung cancer is the leading cause of cancer death. It is associated with a high level of morbidity, particularly fatigue, pain, breathlessness and coughing. These symptoms can have a substantial impact on quality of life. Given the poor prognosis and high symptom burden, it is not surprising that theythe most psychologically distressed group of all cancer types. This study investigated the impact of a multidisciplinary, supportive care intervention on unmet needs, psychological distress and quality of life. **METHOD:** A randomised controlled trial design adhering to CONSORT criteria was used. Patients were recruited prior to or at treatment commencement, and randomised to receiving the intervention or usual care post-baseline. Measures included Needs Assessment for Advanced Cancer Patients (NA-ACP), Hospital Anxiety and Depression Scale, Distress Thermometer, and EORTC Quality of Life C30. Data was collected at baseline, and at 8 and 12 week follow-up. The intervention consisted of two sessions of less than an hour with a psychologist at treatment commencement and completion. The sessions involved assessing patient needs, active listening, self-care education and reporting of unmet needs to the multidisciplinary team for action. **RESULTS:** 108 patients participated in the study (consent rate of 59%).controlling for baseline levels, significant differences were detected in NA-ACP Symptom subscale ($p < 0.05$) and EORTC QLQC30 Appetite Loss sub-scale ($p < 0.05$) at 8 week follow-up in the expected direction. No other significant results were found. **CONCLUSIONS:** The intervention was effective in reducing unmet symptom needs and improving appetite loss at 8 weeks post baseline. These findings demonstrates the importance of needs assessment and communicating patient unmet needs to the multidisciplinary team for action. **RESEARCH IMPLICATIONS:** Further interventions can be targeted to assist people with lung cancer at other times of their treatment trajectory. Interventions and study commitments need to be kept to a minimum in order to minimise burden. **CLINICAL IMPLICATIONS:** This intervention was feasible and clinically acceptable. The results of this study will assist in development of future clinical services for people with lung cancer. **ACKNOWLEDGEMENT**

OF FUNDING: This project has been funded by a Palliative Care Research Grant from the National Health and Medical Research Council.

IL 2.14.2

Mechanisms and Outcomes of Telephone-based Peer Support for Women with Gynaecological Cancers: A Qualitative Study

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BACKGROUND: Cancer patients value peer-support from former patients with similar conditions, which provides a low-cost complement to professional input. Although increasingly popular, little research has examined mechanisms and what is required to achieve maximum benefit. This paper describes telephone-based peer-support for women with gynaecological cancers, within a multidisciplinary cancer centre. It examines what peer-support can provide that other relationships cannot, mechanisms of effective delivery, and circumstances in which it may not be perceived as helpful. **METHOD:** The study used a qualitative design. In-depth interviews were conducted with 25 patient—peer supporter pairs (total of 50 interviews) following 4 months of peer support. Interviews were analysed using Framework Analysis to systematically identify processes and outcomes of support from the dual perspectives of patient and peer supporter. **RESULTS:** Themes from the analysis indicated several central features of peer support, including empathy, acceptance, mutuality and humour, that distinguished it from patients' interactions with friends, family and health professionals. There was substantial convergence in the views of patients and peer supporters, but peer supporters' accounts also indicated several challenges in establishing and maintaining an effective supportive relationship. Mismatches in support provision were examined in a small number of instances where the peer support relationship was discontinued prematurely. Participants emphasised the importance of the peer support service operating within the cancer centre, which created a sense of safety. **CONCLUSIONS:** Peer support delivered by telephone can provide patients with a unique forum for the open expression and management of distress associated with diagnosis and treatment. However, constraints to its effectiveness result from mismatches between patient need and what peer support can provide. **RESEARCH IMPLICATIONS:** The findings are consistent with theoretical explanations of psychological support and add to the

small body of research on one-to-one peer support for cancer patients. Future research examining audio recordings of peer support interactions would further our understanding of what constitutes effective or ineffective support. **CLINICAL IMPLICATIONS:** The multidisciplinary team can optimise the effective delivery of peer support through the selection and supervision of peer supporters and careful matching of patient-peer supporter pairs. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK; UCL Elizabeth Garrett Anderson Institute for Women's Health, part of the UCL Comprehensive Biomedical Centre.

IL 2.14.3

Effect of Internet Support Groups on Psychosocial Adjustment to Cancer. A Randomized Study

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BACKGROUND: Previous, smaller randomized studies suggested that cancer support interventions on the Internet had a positive psychosocial effect. We conducted a large randomized study to investigate whether offering a self-guided Internet support group to cancer patients positively affected distress and adjustment to cancer. This is the largest randomized study to date on use of Internet cancer support groups, with the longest follow-up reported so far. **METHOD:** We recruited 939 survivors of various cancers from a national rehabilitation center in Denmark and assigned them randomly to a control or an intervention group by cluster randomization. Participants in the intervention group were given a lecture on use of the Internet for support and information and offered participation in an Internet support group. They were assessed on self-rated health, mood disturbance and adjustment to cancer at baseline and 1 month, 6 months and 12 months after the intervention. The main outcomes were analysed by linear regression and the Wald test of linear hypotheses. **RESULTS:** The effect of the intervention on mood disturbance and adjustment to cancer was limited to a transient difference at the 6-month follow-up, where the intervention group reported less reduction in anxious preoccupation, helplessness, confusion and depression than the control group. We found no effect of the intervention on self-rated health at any follow-up time. Active participants in the Internet support groups, however, reported an increase in MAC fighting spirit and the non-active participants reported a decrease ($p = 0.04$) at the 12-month follow-up. **CONCLUSIONS:** So far, evidence for a positive

effect of Internet-based self-help support groups on quality of life is lacking, as illustrated by the results of this randomized trial. This puts into question the wide held assumption reflected in recent social health policies that Internet-based self-help will meet the needs of consumer-oriented health-care users and provide effective health care without professional involvement. No evidence was found of a relation between health outcome, self-selection of users and type of Internet intervention. **RESEARCH IMPLICATIONS:** More research is needed to assess the influence of Internet based support interventions on the psycho-social well-being of cancer patients. Further, the lack of effect in our study in comparison to previous explorative and qualitative studies finding Internet-based support groups to be helpful and empowering, call for reflections on the outcome measures that may not capture the social and relational issues at stake to participants of Internet-based self-support groups. **CLINICAL IMPLICATIONS:** Internet-based self-help support groups hold promise for future clinical practice, but evidence of a positive effect on quality of life is lacking, as illustrated by the results of this randomized trial. Health professionals and policy-makers should reflect on ways of using this new technology in cancer care. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the IMK Foundation (Grant number: 30206-147), the TrygFoundation (Grant number: K08-05) and the Danish Cancer Society (Grant number: PP 07024).

IL 2.14.4

Coping with Illness and Attitudes Towards Online Health Care—An Internet-based Study in Cancer Patients

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BACKGROUND: In recent years, a multitude of cancer-specific information sites and Internet platforms have developed offering a range of informational and emotional support. The main purpose of this Internet-based study was to evaluate coping with illness in an online sample of cancer patients and to compare the findings with data of an offline study conducted by Zaun (2002). Additionally, the patients were asked to point out their attitudes towards online health care. **METHOD:** The online survey included the Freiburger Questionnaire on Coping with Illness (FKV-LIS) measuring different coping strategies (e.g., depressive or problem-oriented coping), and the questionnaire Attitudes towards online Health Care (ATOHC) for the evaluation of attitudes towards health-related Internet use. The sample was recruited in German-speaking web-based cancer bulletin boards. The online questionnaire was also promoted through

links on medical and health information sites. In this online study the data of 292 patients with various types of cancer (e.g., breast cancer, Hodgkin's disease, prostate cancer) was analysed. The participants mainly were female (67%) and had a higher education (43%). **RESULTS:** Compared with patients of the offline study conducted by Zaun (2002), the online sample particularly showed less depressive coping as well as trivializing and wishful thinking. Furthermore, they used significantly more active, problem-oriented coping, distraction and self-encouragement. The sample's attitude towards the online community and web-based news was neither positive nor negative, their self-efficacy in evaluating information on the Internet was moderate. However, trust in web-based information and advice as well as disclosure were relatively low. The patients perceived their psychological and physical health as being moderately influenced by their health-related Internet use. **CONCLUSIONS:** In comparison to an offline sample, the online recruited cancer patients' less depressive and more active coping, their higher distraction and self-encouragement indicate a more positive illness processing and a stronger self-efficacy of Internet users participating in cancer bulletin boards or searching for online health information. Thus, the web-based activities, in combination with a kind of healthy distrust of online information and advice, might be an additional expression of active, problem-oriented and reflective coping with illness. **RESEARCH IMPLICATIONS:** Among the increasing Internet population various patients groups seeking for health or illness information and support play an important role. Further research should consider that online recruited patients possibly show specific psychological characteristics compared to participants of offline studies. **CLINICAL IMPLICATIONS:** Web-based activities of cancer patients can, on the one hand, be seen as way of coping positively with illness. On the other hand, the access to online information without having professional advice can also be risky. Hence, quality assurance of information provided by medical and health websites or Internet platforms is relevant for psychosocial practice. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.14.5

Problem Focussed Interactive Telephone Therapy—ProFITT[®]: Results of a Phase 2 Trial

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BACKGROUND: Participation rates in face-to-face psychological therapy are variable and where attendance is required beyond routine hospital appointments these can be low (15%–82% median 35%). Outreach tele-therapy may improve these rates and evidence suggests it has the potential to deliver care to under-served patients. The manualised therapy developed for the ProFITT-Trial draws on our previous experience in adapting Cognitive Behavioural/Problem-focussed therapies and targets difficulties and challenges commonly encountered by cancer patients. **METHOD:** The following hypotheses were tested: (a) ProFITT will reduce anxiety and depression [primary endpoint] and (b) improve QoL cost-benefits [secondary endpoint]. A non-randomised with-in groups [Phase 2] pre-post therapy prospective design was used. A consecutive series of participants defined as ‘cases’ through screening or at referral to Psycho-oncology Services at three UK centres [Royal Marsden Hospital—London and Sutton; Christie Hospital—Manchester] were included. Patients were assessed at baseline, after 4 core therapy sessions and at end of therapy on pre-validated questionnaires as well as an exit interview at end of therapy and therapy contact details were collected. Specific health resources usage data were collected as part of a health economics cost-benefits analysis. **RESULTS:** $N = 54$ participated. Follow-up was obtained for 42/54 patients. Missing follow up for 12 patients; 4 died, 4 withdrawn as distress not cancer related (ineligible), 2 with suicide risk withdrawn (ineligible), 1 patient too ill, 1 receiving formal psychological therapy elsewhere (ineligible). Therapy outcomes were assessed pre- and post intervention using HADS, MAC [H/H subscale only], Cancer Concerns Checklist, Cancer Coping Questionnaire and the EQ-5D. Information was collected on satisfaction with the therapy programme using study specific measures and an Exit Interview. $N = 30$ [71%] patients had 4 therapy sessions and $N = 12$ [29%] had 8 sessions. Results showed a significant pre-post therapy reduction in: HADS anxiety [$p = 0.003$], HADS depression [$p = 0.004$], MAC Helpless/hopeless scores [$p = 0.001$], EQ-5D: anxiety/depression item [$p = 0.007$], EQ-5D: Health today item [$p = 0.02$], Cancer Concerns Checklist [$p = 0.003$]. **CONCLUSIONS:** The data show a significant benefit of telephone-based short term structured psychological therapy in terms of psychological functioning and quality of life. Exit interview data confirmed the acceptability of telephone-delivered structured psychological therapy. There is currently a shortage of therapy programmes being offered for hard to reach patients including; those too ill to attend hospital, those who live distant from their cancer treatment centre, those with poor mobility or those who prefer the anonymity of non face-to-face consultations. The ProFITT[©] programme represents a

pragmatic approach which allows highly trained mental health professionals to deliver therapy regardless of patient’s location. For the many centres with limited psychological care resources this may provide a solution to future development of cost-effective and accessible psychological interventions. **RESEARCH IMPLICATIONS:** Future work involves an RCT comparing telephone and face to face therapy and a large multi-centre randomised trial of telephone therapy versus routine care. Innovations in delivery of care to optimise access in an equitable fashion need to be developed. The need for health economics data are discussed. **CLINICAL IMPLICATIONS:** The data justify further development of the therapy to ensure patients have equity of access to psychological care. There will be some discussion of therapy approaches that are amenable to telephone delivery. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by Cancer Research UK [1226].

IL 2.15.1

Children’s Psychosocial Functioning When a Parent has Breast Cancer

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BACKGROUND: To identify factors associated with psychosocial functioning in school age [6–17 years] children of women with breast cancer. **METHOD:** Psychosocial functioning was assessed by patient mothers, healthy partners, the child’s teacher and adolescents themselves using, where appropriate, the Child Behaviour Checklist, Mental Health subscale of the Child Health Questionnaire and Child Impact of Events Scale [CIES]. Parents reported on their own level of depression. Family functioning was assessed using the Family Assessment Device (FAD) and Family Environment Scale (cohesion only). Using a cross-sectional within groups design, assessments were obtained for $N = 107$ families of women with early stage breast cancer. **RESULTS:** 170/423 [41%] patients had children in target age and 107/170 families [63%] returned study questionnaires. Problems in children were linked to low levels of family cohesion. Maternal depression was related to child internalising problems, particularly in girls. Mothers’ current treatment status was not associated with child problems. Teachers reported high problem rates in girls. High rates of stress on the CIES were reported by adolescents; 33% males and 45% females. 30% of adolescents reported

psychological problems (YSR) (28% males and 32% females) compared to published norms. Poor family functioning was linked with internalising and externalising problems in the children. **CONCLUSIONS:** Children of mothers with breast cancer have more emotional and behavioural problems than the general population. Their school age children have psychological, and stress related problems linked with poor family functioning and maternal depression. **RESEARCH IMPLICATIONS:** Not applicable. **CLINICAL IMPLICATIONS:** Cancer services tend to neglect the needs of patients' dependent children. These results argue in favour of a family-oriented approach to psychological support of cancer patients. Some ideas for the development of services will be discussed. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by a grant from the European Union in its 5th Framework program '@Quality of Life' [QLGT-2001-02378].

IL 2.15.2

Behavioural Problems of Children of Mothers with Cancer—Empirical Results From Oncological Mother-child-rehabilitation

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BACKGROUND: The main aim of the study was to assess behavioural problems in children of mothers with cancer, who participated in an oncological mother-child-rehabilitation. **METHOD:** 159 mothers with cancer (68% breast cancer) reported their child's behavioural problems by a follow-up questionnaire. Furthermore, mothers' quality of life (SF-12) and psychopathological symptoms (BSI) as well as sociodemographic parameters were assessed. **RESULTS:** Mothers reported on 234 children (average age 6 years, range 1–16). Children's behavioural problems were foremost reported as 'high affectionate behaviour' (46% with marked ratings), followed by 'separation anxiety' (45%) and 'anxiety, that their mother could die' (36%). Differences in mother's reports on behavioural problems did not depend on the child's sex but appeared to be stronger with higher age of the child. Mothers' quality of life as well as their clinical scores on depression, anxiety and somatization were correlated significantly with the perceived behavioural problems of their children. **CONCLUSIONS:** Mothers with cancer frequently experience behavioural problems in their children and need support in communicating the disease and its impacts with the children. **RESEARCH IMPLICATIONS:** The assessment of psychosocial strains and problems of children of parents with cancer is of great importance. **CLINICAL IMPLICATIONS:** Therefore, a routine diagnostic process and psychosocial

care should be integrated in oncological mother-child-rehabilitation. The patient education of the mothers should include training for communication of cancer-related aspects with the children. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.15.3

Physical, Psychological and Social Difficulties Experienced by Cancer Patients: Perception by Their Primary Caregivers

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BACKGROUND: Involving family caregivers is essential for cancer care to ensure treatment compliance, continuity of care, and social support. This implies that caregivers should perceive the difficulties experienced by their relative. The aim of this study is to assess primary caregivers' abilities to perceive physical, psychological and social difficulties experienced by their relative suffering from cancer. The aim of this study is also to assess factors associated with this perception. **METHOD:** Consecutive inpatients and outpatients from ten hospitals and their primary caregivers completed a French adaptation of the Cancer Rehabilitation Evaluation System (CARES) assessing 7 categories of physical difficulties, 7 categories of psychological difficulties and 3 categories of social difficulties; the Hospital Anxiety and Depression Scale and the Ways of Coping Checklist. Caregivers completed also the CARES questionnaire as regards difficulties that they perceive in their relative included in the study. Primary caregivers' abilities to accurately perceive patients' difficulties was estimated as the percentage of physical, psychological and social difficulties experienced by patients and perceived by their primary caregivers. **RESULTS:** Two hundred and eighteen patients/caregivers dyads were included. On average, caregivers accurately perceived 67% of physical difficulties (SD = 29), 69% of psychological difficulties (SD = 31) and 40% of social difficulties (SD = 38) experienced by their relative included in the study. Variables collected in this study are only partly associated with these caregivers' levels of perception (about 20% of explained variance). The main variables associated with these levels are the phase of the disease, the patients' number of psychological difficulties and the number of the caregivers' own psychological difficulties. **CONCLUSIONS:** Primary caregivers accurately perceive nearly 70% of physical and psychological difficulties experienced by their relative suffering from cancer but only 40% of their social difficulties. **RESEARCH IMPLICATIONS:** Future research

should focus on how caregivers' perception of social difficulties is affecting the patient and the support provided by the caregivers. **CLINICAL IMPLICATIONS:** Clinicians should be aware that caregivers perceive correctly physical and psychological difficulties experienced by cancer patients but that they minimize their social difficulties. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the 'Appel d'offre 2002-16' of the Service Public Fédéral Santé Publique, Sécurité de la Chaîne Alimentaire of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

IL 2.16.1

The Help Expectations of Adolescent and Young Adult Cancer Patients and Their Carers

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BACKGROUND: With the realisation that cancer affects patients not just physically but also psychologically, addressing the unmet needs of adolescent and young adults is becoming an increasingly important topic of research. In order to design the best psychosocial care, it appears necessary not only to describe unmet needs but also to understand expectations and requests. For adolescent and young adults (AYA) cancer patients, this field is under-explored, and quantitative studies are required. **METHOD:** The objectives of this longitudinal bicentric study are: (1) to describe psychosocial needs of an AYA cancer patient population; (2) to evaluate the help they expect and receive; (3) to evaluate main carers' perception of patients' needs, and the help expected and received by the carers. The evaluation of psychosocial needs is performed by means of auto-questionnaires, using a French adaptation of the CARES-SF, which has been modified to include two questions about the help expected and/or received. Emotional distress is evaluated with the HADS. Socio-demographic and medical data is also recorded. **RESULTS:** 85% eligible patients agreed to participate in the study. In the period 2006–2008, 171 hospitalized AYA patients and 134 carers (most of the time mothers) completed the study. 68% of patients have very low distress levels, whereas 41% of carers have high level of distress (HADS-T > 19). Patients expect help at least as frequently from parents, mothers among all, as from doctors or nurses. For the types of problems experienced by patients that were evaluated in our study, more than 75% of mothers expect help in order to cope. Potential predictive factors are explored. **CONCLUSIONS:** (1) Patient

distress is low and patients' help expectations are generally met. (2) Even when confronted with severe and multiple problems, a significant fraction of patients do not ask for help. (3) The distress experienced by mothers is high, and the care of their child is a heavy burden. **RESEARCH IMPLICATIONS:** Further research is needed to understand why some patients experience difficulties but do not ask for help. **CLINICAL IMPLICATIONS:** In the light of these results, organization of care has to be amended: evaluation and/or follow up has to be offered to mothers and AYA patients as well. **ACKNOWLEDGEMENT OF FUNDING:** French National Cancer Ligue.

IL 2.16.2

Symptoms of Depression and Anxiety, Coping and Quality of Life of Mothers and Fathers Prior to Pediatric Stem Cell Transplantation

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BACKGROUND: Parents of children who undergo SCT are faced with severe stressors such as confronting their child's mortality and family separation. We examined differences in symptoms of depression and anxiety, coping and quality of life between mothers and fathers prior to pediatric SCT and compared their outcomes to a historical cohort of mothers of children newly diagnosed with cancer (HCC) and normative values. **METHOD:** 103 mothers and 70 fathers of patients diagnosed mainly with leukemia completed standardized questionnaires of depression (Beck Depression Inventory, BDI), anxiety (State-Trait Anxiety Inventory, STAI), coping (emotion-focused, problem solving, Ways of Coping), and quality of life (Short-form 36, physical and mental summary scores, QOL) within 2 weeks prior to child's SCT. The mean scores for mothers' and fathers' BDI, STAI and WOC were compared to the means of 69 HCC mothers. The means for QOL were compared to population norms. Mothers were the primary caregiver. **RESULTS:** Mothers' BDI were significantly higher than fathers' ($p = .005$), but were not different from HCC. Fathers' BDI were significantly lower than HCC ($p = .010$). Mothers and fathers did not differ in STAI or QOL but both reported significantly higher STAI than HCC (61.4 and 59.2 vs 56.5, $p < .0001$ and $.05$) and than the norm (35.72, $p < .000$, for both). Also mothers and fathers reported significantly (or borderline) better physical QOL (52.7, 52.3 vs 50, $p = .03$, $p = .09$) but worse mental QOL than normative value (40.17, 43.40 vs 50, $p = .0001$, $p = .0002$). Finally, mothers reported significantly more problem solving coping than fathers (22.19 vs. 19.46, $p < .0001$) but they did not differ in emotion focused coping (34.86 vs

32.10). **CONCLUSIONS:** Mothers present with more depression symptoms and engaged in more problem solving strategies than fathers. This finding is likely related to the burden of being the primary caregiver dealing with the daily demands of the illness and treatment. Having a child who will undergo SCT, however, may similarly affect mothers and fathers in terms of anxiety symptoms and QOL. **RESEARCH IMPLICATIONS:** Additional research examining what personal characteristics and familial factors may be associated with parental psychological adjustment, coping and quality of life is needed to better understand the impact of life threatening illness and aggressive pediatric treatment such as SCT on the entire family. **CLINICAL IMPLICATIONS:** These findings suggest that family focused psychosocial intervention prior to the SCT procedure may be beneficial for both the patient, parents, and indeed the entire family. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by the National Cancer Institute of Canada to Maru Barrera.

IL 2.16.3

Psychological Resilience and Illness-Related Distress in Swedish and Icelandic Parents' Adjustment to a Child's Cancer

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BACKGROUND: Research on parental reactions to a child's malignant illness has traditionally addressed symptoms of distress and investigated parental reactions in terms of diagnostic terminology of psychiatric pathology. How individual risk- and protective factors boost parents' resilience against distress has rarely been empirically investigated. In a bi-national Nordic sample, we studied the significance of individual strength factors for parent's resilience to distress caused by their child's cancer. **METHOD:** The study involved 398 parents, 190 Swedish and Icelandic who had experienced a child's cancer, and 208 parents assessed for reference. We studied the individual strength factor Sense of Coherence (SOC), and resilience was evaluated by assessments of severity of parental distress reactions. To examine the distress-buffering significance of individual strength characteristics, study parents were assessed with the 13-item SOC questionnaire. Distress reactions were evaluated using two measures; a primarily illness-specific 11-dimensional questionnaire for parents of childhood cancer patients (PPD-C), and the General Health Questionnaire. **RESULTS:** Swedish and Icelandic

parents had similar SOC. Lower SOC was associated with more severe distress symptoms in all assessed dimensions. Strongest indicated mediating effect of SOC was seen for the GHQ outcome, and on the PPD-C symptom dimensions Physical and Psychological Distress, Depression, Loneliness, and Loneliness (Pearson's $r = -.74$ to $-.60$; $p < .01$). Lowest mediating effect of SOC was indicated for Uncertainty ($r = -.17$; $p < .05$). Analyses of background variables—treatment nation (Sweden, Iceland), parent sex, education, use of psychological support, and immigrant status—showed an effect only of sex and education on the relationship between SOC and single outcomes. **CONCLUSIONS:** Sense of coherence mediates the experience of parental distress by facilitating long-term adjustment after a child's cancer. Findings indicate ways to identify parents at risk and in potential need for supportive interventions, and demonstrate the feasibility of addressing psychological protective characteristics in clinical practice. The salutogenic resilience approach is useful for understanding individual differences in parental adaptation to stress after a child's cancer. **RESEARCH IMPLICATIONS:** These results are relevant to researchers by showing the value of addressing strengths and resilience-boosting characteristics in research concerning reactions and support needs of parents of children treated for cancer. This information shows that such a shift in focus can complement the pathogenic basis that characterises most existing research so far. Researchers are also stimulated to explore and address other resilience-boosting factors than SOC. **CLINICAL IMPLICATIONS:** The SOC-scale can be used for screening to predict stress-reactions—and indicate needs for extraordinary support in parents of children treated for cancer. A resource-oriented approach in parent care provides tools useful in psychological intervention to strengthen coping resources. Measures that enhance information, participation in care, and sense of control—all boosters of SOC—can expectedly reduce distress, enhance meaningfulness, and help parents to structure their lives and manage heightened parental demands. **ACKNOWLEDGEMENT OF FUNDING:** Funding was received from The Swedish Childhood Cancer Foundation, The Cancer and Traffic Injury Fund in Sweden, The Icelandic Childhood Cancer Parent Organisation, and The Kristin Fund in Iceland.

IL 2.17.1

Psychological Adjustment to Breast Cancer Diagnosis and Survival: The Role of Appearance Schemas

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BACKGROUND: For most women the threats, fears and losses associated with BC not only concern their health and survival, but their body image. An important facet of this variable is the appearance investment or appearance-related self-schemas, which reflect one's core, affect-laden assumptions about the importance and influence of one's appearance in life. Several authors suggested that patients adjust more poorly to BC if they are heavily invested in body image as a source of their self-worth. **METHOD:** This study, exploratory and cross-sectional, involved the selection of a convenience sample, comprised of 70 women recently diagnosed with BC, recruited in the University Hospitals of Coimbra (Gynaecology Department), in the day preceding the breast surgery; 70 BC survivors, recruited both in the same hospital department, in the day preceding the reconstructive surgery, and in Reach to Recover association; and 70 women of the general population, with no history of cancer disease. The assessment instruments used were: Appearance Schemas Inventory-Revised (ASI-R); Body Image Scale (BIS); World Health Organization Quality of Life-Bref (WHOQOL-bref); Hospital Anxiety and Depression Scale (HADS). **RESULTS:** BC survivors are more invested in their body image than the other two groups. BC survivors who are more worried with their body image presents poorer QOL and higher levels of depression and anxiety; those who consider more important to their self-worth their own appearance (self-evaluative salience) tends to exhibit more body image concerns; the two facets of body image investment are good predictors of body image concerns; motivational salience of appearance predicts psychological adjustment—the higher the motivation that a person has to maintain or improve the appearance the lesser the levels of depression and anxiety. **CONCLUSIONS:** BC survivors invest more in their appearance and are more motivated to manage their image and physical attractiveness. Concerns about physical appearance are associated with poorer quality of life. In fact, when confronted with body image negative changes (e.g. mastectomy, hair loss) women who are more invested in appearance and infer their self-worth from their body image, are more vulnerable to poorer adjustment. However, those who are more invested in managing their appearance and physical attractiveness tend to exhibit less depression and anxiety, indicating that the motivational salience of investment can be an adaptive strategy that promotes psychological adjustment. **RESEARCH IMPLICATIONS:** This study makes an important contribution by showing the relation of appearance schemas (self-evaluative or motivational investment) with psychosocial adaptation (quality of life and emotional adjustment) after diagnosis and treatment of BC. Also, the findings question the role of motivational salience of

investment, which seems to be a resilience factor and not a vulnerability one. Future investigations should analyse this variables longitudinally in order to deeper understand this relations along the course of the disease. **CLINICAL IMPLICATIONS:** The relationship between body image investment or schematicity and poor adjustment supports the position that body image distress plays an important role in BC adaptation. In this way, it seems fundamental to consider body image variables in treatment decision making (mastectomy vs. lumpectomy); it should be offered to BC survivors the possibility of breast reconstruction; and cancer centers should ensure equitable access to specialists in psychological assessment and intervention for body image problems. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.17.2

Radiation Therapy, Endocrine Changes and Persistent Fatigue in Women Managed for Breast Cancer

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BACKGROUND: Approximately 24% of women experience persistent fatigue after Radiation Therapy (RT) for breast cancer, but its development is poorly understood. While various demographic, psychosocial, endocrine and treatment factors may be involved, it is not clear how these factors are inter-related nor how they change over time. The purpose of this research was to study the relationships between RT and fatigue, quality of life, thyroid hormones and diurnal cortisol rhythm. **METHOD:** Women were eligible to participate in this prospective repeated-measures study if they were diagnosed with non-metastatic breast cancer, were due to receive or had received adjuvant RT and had satisfied pre-determined inclusion criteria. After consent, participants attended a fatigue assessment session with an identical follow-up session 6 months later. Each session consisted of a demographics questionnaire, four self-report fatigue and quality of life questionnaires, a blood test measuring thyroid function (TSH, fT3 and fT4) and three day saliva collection to assess diurnal cortisol rhythm. **RESULTS:** Sixty-six women of median age 57.5 years were recruited, with 69% post-menopausal. The mean body mass index was 27.3 and mean waist to hip ratio was 0.88. The most common diagnosis was infiltrating ductal carcinoma ($n = 43$, 66%). Data collection will be completed in March 2009 and the main findings will be presented at the conference. **CONCLUSIONS:** The strength of this study is its

prospective design which will enable us to identify and study a subgroup of women who suffer from persistent fatigue long after completing RT. This is important because persistent fatigue after RT can be a debilitating experience for cancer survivors. **RESEARCH IMPLICATIONS:** While our findings will relate directly to women, the results may inform research into RT and persistent fatigue in male patients or patients with other malignancies. **CLINICAL IMPLICATIONS:** Gaining insight into the behavioral and biological factors related to fatigue in oncology patients is important, particularly as feelings of fatigue are closely linked to depression and reduced quality of life. This study may identify a factor that can be screened for prior to treatment, with appropriate intervention or monitoring if required. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the Cancer Institute New South Wales and conducted in collaboration with Associate Professor Michael Back, Associate Professor Graeme Morgan and Dr Gillian Lamoury from the Northern Sydney Cancer Centre, Royal North Shore Hospital, Sydney.

IL 2.17.3

Regret Mediates the Relationship Between Decisional Conflict and Psychological Distress Among Women Choosing Breast Cancer Surgery

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BACKGROUND: This study examined the mediating effect of decision regret on the relationship between decisional conflict and psychological distress among women choosing breast cancer surgery. **METHOD:** A prospective study examined treatment decision making and psychological distress in a convenience sample of Chinese women recently diagnosed with early-stage breast cancer (BC). Totally 195 (93% response rate) women with BC recruited from a major Hong Kong breast centre were assessed at 3 days after the initial diagnostic consultation (Baseline) and at 1-month following BC surgery (Follow-up). Decisional Conflict was assessed at Baseline, whereas Decision Regret, Psychological Distress, Physical Symptom Distress, and Optimism were assessed at Follow-up. Forced-entry multiple regression analyses tested the mediating effect of decision regret on the relationship between decisional conflict and distress. **RESULTS:** The average age of the women was 53 years old. Half of the women had mastectomy and 31% had breast conserving surgery. Higher decisional conflict ($b = .20$, $p = .008$) resulted in higher regret ($F(1,184) = 7.24$, $p = .008$). Higher decisional conflict ($b = .142$, $p = .014$) also resulted in greater distress at 1-month post-surgery ($F(3,142) = 37.05$, $p < .001$). After adjusting for the

effects of physical symptom distress, age, and optimism, decisional conflict ($b = .120$, $p = .037$) and regret ($b = .151$, $p = .008$), explained 45% of the variance in distress ($F(5,179) = 31.01$, $p < .001$). The Sobel test indicated that regret was a mediator of the effect of decisional conflict on distress ($z = 2.74$, $p = .003$). **CONCLUSIONS:** The effect of decisional conflict in choosing BC surgery on subsequent psychological distress was partially mediated by decision regret. **RESEARCH IMPLICATIONS:** Future studies need to investigate consultation and other factors, contributing to decision conflict and regret. **CLINICAL IMPLICATIONS:** Optimizing TDM support aiming to reduce decision uncertainty and regret is potentially important preventive strategy to minimize psychological distress following breast cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.18.1

Effects of Assisting Cancer Patients with Symptom Management on Family Members Reports of Burden and Depression

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BACKGROUND: This research seeks to specify, through results of a randomized trial, the success of an intervention designed to engage family members in symptom management and to describe the psychological burdens that arise among those family members who assist their patients undergoing treatment to manage symptoms. This is among the first work to specify both the impact of an intervention directed to caregivers towards symptom management and to document the consequences of these activities. **METHOD:** Cancer patients undergoing chemotherapy and family caregivers ($N = 225$) were recruited from 9 oncology centers. Dyads received baseline interviews and randomized to either a nurse delivered cognitive behavior intervention (CBI) or to a social worker delivered information and education intervention. Strategies specific to symptoms experienced by patients were delivered to caregivers at intake and weeks five and eight. Caregiver burden, mastery, depression, severity of patients' symptoms, and caregiver provision of assistance with each symptom were assessed at intake, 10 and 16 weeks. All patient and caregiver variables were balanced at intake and symptoms experienced and assisted with were time varying covariates. **RESULTS:** A GEE model indicated that, after adjusting for baseline patient variables and trial arm, aggregated numbers of assistance across symptoms within caregivers revealed a positive association at 10 weeks between delivery of strategies designed to engaged caregivers and their reported levels of assistance. Second, analyses of

caregiver outcomes at 10 and 16 weeks indicated that after adjustment for caregiver variables at intake and trial arm, the numbers of symptoms where caregivers assisted resulted in significantly higher depression, lower mastery, and greater impact on caregivers' daily schedules. **CONCLUSIONS:** Several important conclusions are made. First, a three contact intervention directed towards family caregivers engages them to assist their patients to manage symptoms. Second, a nurse or social worker directed intervention appears equally effective in engaging caregivers. However, engagement does have consequences for caregivers; greater depression, lower mastery, and higher burden on daily schedules. Third, these consequences extended at least 6 weeks beyond the end of the intervention. **RESEARCH IMPLICATIONS:** While the impact of assistance is statistically significant, questions remain as to its persistence following conclusion of treatment, reduction of patients' symptoms and transition to survivorship. Second, future work needs to pursue the 'value added' component of family assistance over and above self care strategies implemented by patients and providers use of supportive agents. Third, what impacts, positive and negative accrue from engaging family members to directly and indirectly assist patients during this stressful period? **CLINICAL IMPLICATIONS:** Managing symptoms during treatment is difficult and, in terms of treatment course may prove not to be worth the investment required to engage patients and families in self care approaches that produce significant clinical and quality of life outcomes. From this work, it appears that modest levels of professional attention produce significant increases in family assistance, at some cost to caregivers, but the question remains to determine treatment and quality of life improvement for patients. **ACKNOWLEDGEMENT OF FUNDING:** National Cancer Institute R01 CA 79280 Family Home Care for Patients: A Community Model, Barbara Given P.I.

IL 2.18.2

Comparing Cognitive Behavioral and Educational Strategies; Does Age Moderate the Impact of Interventions on Symptom Severity Among Cancer Patients

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BACKGROUND: Cancer patients were accrued to two symptom management trials. In one trial a nurse directed cognitive behavioral intervention (CBI) was contrasted with an educational information intervention. In the second the nurse CBI was compared with an educational information

intervention delivered by an automated voice response system. Two questions are addressed. First, are CBI's more effective in engaging patients to manage symptoms? Second, does age, education, or depression modify the relationship between trial arm and severity. **METHOD:** Solid tumor cancer patients undergoing chemotherapy were accrued from oncology centers with 234 entered into the CBI vs. Social worker administered arms (study 1) and 471 into Study 2 where the CBI was compared to the Automated Voice Response (AVR). Following baseline interviews patients in each trial were randomized separately to their respective arms. Age, education, and depression were measured at intake. Severity of 16 symptoms assessed (10 point scale) at intake, 10 and 16 weeks. A GLM was used to test interventions. Interactions of age, education, and depression with trial arm assessed modifying effects. **RESULTS:** Baseline equivalence was achieved with no differences in attrition between arms by age education or depression. After adjusting for baseline the CBI arms proved no better than the coach or AVR arms in reducing severity at 10 weeks. All arms produced significant reductions over baseline with no main effects for age, education, or depression. However, age by arm interactions approached significance in study 1 and were significant in study 2. In both trials patients 45 and younger reported lower severity using the coach or AVR. Among those 75 and older, nurses had a far greater impact on lowering symptom severity. **CONCLUSIONS:** Few behavioral trials replicate analyses of key findings. Using virtually identical designs, and dosing with only differences in delivery mechanisms, two trials found that younger patients did not respond well to nurse directed CBI's. In contrast, older patients did not respond well to AVR or to telephone based strategies delivered by social workers. Thus, we conclude that age is an important moderator of response based on the manner in which symptom management interventions are delivered and not on how they are delivered; shorter more targeted approaches are preferred by younger patients, tailored approaches by nurses are preferred by older patients. **RESEARCH IMPLICATIONS:** For most patients mode of delivery of symptom management interventions is not an issue. However, for younger and older patients (education, depression were not factors) mode of delivery is an important replicated factor moderating responses. The consistency and strengths of the differences across independent trials with similar patients makes this conclusion particularly strong. Important questions not addressed are whether it is mode of delivery or only that one required less time than the nurse CBI. **CLINICAL IMPLICATIONS:** Based on these findings it appears that providers can offer information to younger patients with some evidence that it will be processed and directed

toward managing symptoms. For patients 75 or older the CBI with tailoring of strategies to the specific needs of each patient appear to be necessary to engage them to implement self care strategies to manage their symptoms. **ACKNOWLEDGEMENT OF FUNDING:** National Cancer Institute R01 CA 79280 Family Home Care for Patients: A Community Based Model, Barbara Given PI and R01 CA 30724 Automated Telephone Intervention For Symptom Management, Charles Given PI.

IL 2.18.3

The Impact of Pain on Depression and Anxiety in Cancer Survivors with Specific Consideration of Social Status

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BACKGROUND: Pain is observed to be an illness-related burden in cancer survivors among all diagnosis groups. Nevertheless, only a small body of research evaluates the impact of pain on psychological distress during the course of the illness. **METHOD:** This prospective multicenter-study examines the course and impact of pain on depression and anxiety in cancer survivors with specific consideration of social status. 1193 cancer patients (85% females) from mixed diagnosis groups (58% breast cancer), not older than 60 years and not retired, were assessed at beginning (t0), end (t1) and one year post (t2) cancer rehabilitation. 78% ($n = 883$) of patients completed the applied validated self-rating questionnaires at all assessment points. Average time since current diagnosis was $M = 11$ months at t0 ($SD = 9, 1-46$). 37% of patients were classified as belonging to lower, 53% to middle and 10% to upper social class. **RESULTS:** At t0 a total of $n = 948$ (80%) patients suffered from pain, 25% from severe pain. At t1 a total of 75% suffered from pain, 19.5% from severe pain, at t2 a total of 62% suffered from pain and 23% from severe pain. Patients reporting pain at t0 showed improvements between t0 and t1 ($p = 0.001$, $\eta^2 = 0.05$), but increasing pain levels between t0 and t2 ($p = 0.03$, $\eta^2 = 0.008$). Low social status was associated with higher levels of pain ($p = 0.01$), but not with higher levels of anxiety or depression. At t2 11% of patients were classified as having high levels of depression and 24% as having high levels of anxiety. Severe pain, skin cancer and disease phase were identified to be significant predictors for depression at t2 ($r^2 = 0.15$). Severe pain revealed as single predictor for anxiety ($r^2 = 0.09$). **CONCLUSIONS:** Findings demonstrate high prevalence of pain and severe pain in the course of cancer and underline the impact of pain on psychological distress,

particularly in the incidence of depression. Furthermore, findings emphasize the importance of improved pain control in cancer rehabilitation and aftercare. **RESEARCH IMPLICATIONS:** Results indicate the need to further investigate specific factors responsible for the high amount of cancer survivors suffering from severe pain over time. Such factors could include use of pain medication and prescription, medical as well as psychosocial and behavioral factors such as chemical coping strategies. **CLINICAL IMPLICATIONS:** Findings show the high amount of patients suffering from pain which underlines the urgent need for better patient education about pain and pain medication as well as better pain management procedures during outpatient cancer care. **ACKNOWLEDGEMENT OF FUNDING:** Arbeitsgemeinschaft für Krebsbekämpfung Nordrhein-Westfalen (ARGE), Paracelsus-Kliniken Deutschland GmbH.

IL 2.19.1

Cognitive Behavioral Therapy (CBT) and Physical Exercise for Climacteric Symptoms in Breast Cancer Patients Experiencing Treatment-induced Menopause

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BACKGROUND: Endocrine symptoms are common among women experiencing premature menopause as a result of adjuvant chemotherapy for breast cancer. The purpose of this clinical trial is to evaluate the efficacy of cognitive behavioural therapy (A), physical exercise (B), or the combination of these interventions (AB) in alleviating such symptoms, improving sexual functioning and enhancing quality of life. **METHOD:** In this multicenter study, 325 eligible women are being randomised to group A, B, AB or a 'waiting list' control group. For group A, the intervention consists of 6 weekly group CBT sessions of 1.5 hours and a booster session at 3 months. For group B, the intervention is an individually tailored, 12 week home-based physical exercise program of 2.5-3 hours per week. Group AB receives both the CBT and exercise program. Questionnaires assessing menopausal symptoms, sexuality, body- and self-image, psychological distress and quality of life are being completed at baseline, at 12 weeks and at 6 months follow-up. **RESULTS:** As of January 2009, 1880 women have been identified as being potentially eligible for study participation, of whom 1542 responded to a screening questionnaire ($n = 1075$) or a postcard indicating they had no interest in the study ($n = 467$). 427 of the screened women met eligibility criteria and received an extensive baseline questionnaire. To date, 297 women have returned this questionnaire and have been randomly allocated to

the CBT group, ($n = 77$), the physical exercise group ($n = 72$), the combined intervention group ($n = 75$), or the control group ($n = 73$). Patient recruitment, intervention, and data collection will continue until mid-2010. **CONCLUSIONS:** In this presentation, the rationale for evaluating cognitive behavioral therapy and physical exercise, as well as the combination of both interventions, will be discussed. The content of both interventions, flow of participants throughout the trial so far, experiences of patients and therapists, reasons for (not) participating or withdrawal, and compliance will be described. **RESEARCH IMPLICATIONS:** Menopausal symptoms may be particularly severe in younger women with breast cancer who undergo treatment-induced menopause. This study will contribute to obtaining knowledge on effective and safe treatment options for these symptoms in breast cancer patients. **CLINICAL IMPLICATIONS:** If demonstrated to be effective, the availability of a structured supportive intervention program (A, B or AB) will be a welcome addition to regular medical care offered to breast cancer patients with treatment-induced menopause. It is anticipated that such a program will have direct benefit in terms of symptoms relief and the improvement of patients' health related quality of life. **ACKNOWLEDGEMENT OF FUNDING:** This multicenter trial is funded by The Dutch Cancer Society (grant number NKI 2006-3470), the Pink Ribbon Foundation and the Comprehensive Cancer Center, Amsterdam.

IL 2.19.2

Body Image, Sexual and Psychosocial Functioning in Women with Breast Cancer: Can We Fix What We've Broken? A Randomized Trial

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BACKGROUND: Although it is well documented that altered body image and sexual functioning is experienced among a significant number of breast cancer (BC) survivors, these issues are typically not addressed by health care professionals due to a number of factors. The aim of this study is to test an innovative intervention geared towards improving body image, psychosocial, sexual and relational functioning following breast cancer and treatment. **METHOD:** A prospective randomized controlled trial is recruiting 210 women to be randomized into either an intervention (8 week psychosocial support group incorporating guided imagery) or a control condition (standard care plus written educational materials) with follow-up to

one year post-intervention. Standardized measures on psychosocial and psychosexual functioning will be utilized. There are no planned interim analyses. **RESULTS:** The randomized trial is ongoing. Topics and exercises in the group include those on: negative self-image, changes in body size or shape, fatigue, decreased libido, fears and anxiety around sexual activity, challenges in communicating with partners and altered identities. To date 103 survivors have been recruited into the study, with a response rate of 28%, consistent with the reported proportion (20%–40%) of women demonstrating significant issues with body image and sexuality. The presentation will present baseline data and the qualitative data from the group therapy intervention: shifts in identity; physical and psychological changes over time; self-esteem issues and experiences with guided imagery. **CONCLUSIONS:** The randomized trial recruitment is on target. Qualitative data from videotaped group sessions suggests improvements in managing identity issues, body image and sexual functioning for women who have partners. **RESEARCH IMPLICATIONS:** This study will test a novel, targeted intervention that is designed to address persistent survivorship difficulties in the post-treatment phase. **CLINICAL IMPLICATIONS:** The intervention is women-centered, incorporates self-nurturing exercises and can be 'proactive' in assisting women to gain knowledge and skill in managing communication issues and alterations in self, body image and sexual functioning. **ACKNOWLEDGEMENT OF FUNDING:** The first author is a recipient of career scientist awards from the National Cancer Institute of Canada (NCIC) with funds from the Canadian Cancer Society and the Canadian Institutes of Health Research (CIHR)/The Ontario Women's Health Council. This study was funded by a grant from the Canadian Breast Cancer Research Alliance 017731, Quality of Life/Survivorship Competition.

IL 2.19.3

Examining the Relationships Between Self-Efficacy and Objective Measures of Physical Activity Behavior in First- and Second-Degree Relatives of Colon Cancer Patients

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BACKGROUND: Few interventions aimed at changing physical activity (PA) behavior have produced long-term behavior change (Rothman, 2000), demonstrating that behavior change and maintenance are complex issues requiring both self-regulation and self-efficacy. The objectives

were to (a) examine the effect of a self-efficacy intervention on task, barrier, scheduling, goal-setting and relapse efficacy in relatives of colon cancer patients undertaking a 9-month home-based PA program, and (b) examine the self-efficacy and self-regulation model in predicting objective PA behavior. **METHOD:** Following a 12-week self-efficacy and structured exercise program, relatives of colon cancer patients ($N = 107$; $M = 45.7$ years, ± 8.7 ; 91.0% first-degree relatives; 67.3% female) participated in a 9-month home based PA program. Participants remained in the same randomized condition: self-efficacy (intervention- INT) or nutrition (attention control- AC). The intervention group received monthly emails that focused on self-efficacy information (e.g., task, scheduling, barrier, relapse), while the attention control group received nutrition information. Physical activity (i.e., energy expenditure; EE = daily kcals/min/kg) was objectively assessed using Actical[®] accelerometers at 1 week following the structured exercise program, and at 1, 3, 6, and 9 months. Self-efficacy was assessed at all these time points except month 1. **RESULTS:** A repeated measure ANOVA revealed significant time effects for task ($\eta^2 = .18$), scheduling ($\eta^2 = .28$), goal-setting ($\eta^2 = .39$), and relapse ($\eta^2 = .37$), whereby all measures decreased across time. A significant group by time interaction effect was present for barrier efficacy ($\eta^2 = .13$), scores decreased across all time points in the AC condition, while barrier efficacy scores initially declined, followed by an increase and subsequent decrease across assessment points in the INT condition. Proxy self-efficacy variables that showed a relationship to EE were entered into a regression (i.e., week 1 self-efficacy predicting PA at month 1). Results revealed that week 1 self-efficacy variables predicted EE at month 6, and month 3 self-efficacy variables predicted EE at month 6, accounting for 11.1% and 8.8% of the response variance respectively. **CONCLUSIONS:** With the exception of barrier efficacy, the intervention was unsuccessful in preventing decreases in self-efficacious beliefs in a 9 month home-based exercise program. Self-efficacious beliefs are associated with objective measures of PA over a 9-month home-based exercise program. **RESEARCH IMPLICATIONS:** This trial is the first to explore the following issues in a population of relatives of colon cancer patients: (a) the effect of an intervention grounded in self-efficacy theory on self-efficacious beliefs (i.e., task and self-regulatory), and (b) whether self-efficacious beliefs predict objectively measured PA patterns. Results suggest that although self-efficacious beliefs fostered through initial experiences during an exercise program are associated with objective measures of PA behavior, these beliefs may be difficult to maintain. **CLINICAL IMPLICATIONS:** Alternative modes of delivering self-efficacy (i.e., motivational interviewing) based interventions need to be tested in

order to find more effective ways to maintain efficacious beliefs over long-term home-based exercise programs. **ACKNOWLEDGEMENT OF FUNDING:** The authors would like to thank the Social Sciences and Humanities Research Council of Canada (SSHRC) for funding this research study.

IL 2.20.1

Theoretical and Evidence-Based Development of the Profile of Preferences for Cancer Information Scale

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BACKGROUND: Individuals diagnosed with cancer vary in terms of their preferences for the type, amount, and sources of cancer information they wish to be exposed to. Scales currently available to measure cancer information-seeking behaviour (ISB) mainly focus on the dichotomy of active seeking and information avoidance. However, recent evidence point to more nuanced cancer ISB patterns. In line with this evidence, we propose the Profile of Preferences for Cancer Information (PPCI) scale to comprehensively measure ISB. **METHOD:** Initially guided by Self-evaluation Theory, a set of items were developed to capture different cancer ISB. This initial tool was pilot tested among women newly diagnosed with breast cancer ($n = 60$). Preliminary findings suggested that the tool discriminated among various ISB patterns; however psychometric properties were questionable particularly for the avoidance subscale. A subsequent in-depth concept analysis of ISB followed by a grounded theory study among 62 individuals with various cancer diagnoses served to further delineate various patterns or profiles of cancer ISB. Based on this evidence, the initial tool was revised to optimally capture the more delineated ISB patterns that emerged. **RESULTS:** The resulting PPCI is a 20-item, self-report instrument that measures the following five information-seeking profiles: 1) intense, 2) complementary, 3) fortuitous, 4) minimal, and 5) guarded. These profiles are characterized by differing in terms of amount/reasons, type, source, and overall management of cancer information. Individuals indicate, from (1) not at all like me, to (5) totally like me, the extent to which each item, such as 'I prefer the internet as a source of scientific cancer information' (intense profile) and 'I am mostly interested in seeking information from the perspective of others diagnosed with cancer' (fortuitous profile), reflect their ISB. The PPCI is currently being tested among individuals diagnosed with melanoma and colorectal cancers. **CONCLUSIONS:** The PPCI is a promising, theoretically, and empirically sound tool that can assist researchers and clinicians in capturing differential information-seeking profiles. **RESEARCH IMPLICATIONS:** Future studies will test the PPCI in samples differing in socioeconomic status, health literacy, culture, and with more varied cancer

diagnoses. **CLINICAL IMPLICATIONS:** By reliably documenting diverging cancer ISB, the PCCI can guide informational support through more targeted and tailored educational interventions. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research (CIHR), Fonds de la Recherche en Santé du Québec, McGill University, CIHR/NCIC Psychosocial Oncology Research Training program, and Groupe de recherche interuniversitaire en sciences infirmières du Québec.

IL 2.20.2

Development of a Screening Tool for the Identification of Psychooncological Treatment Need in Breast Cancer Patients

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BACKGROUND: Although about one third of breast cancer patients shows heightened psychosocial distress that may require psychooncological interventions its detection in daily clinical routine is poor and referral to mental health professionals is insufficient. The aim of the study was to develop a short screening tool for the detection of need for psychooncological treatment in breast cancer patients. **METHOD:** Over a period of six months 115 breast cancer outpatients attending the Department of Gynaecology at Innsbruck Medical University were consecutively included in the study. Logistic regression analysis and ROC-analyses were used to identify the most predictive item set from a set of questionnaires (EORTC-QLQ-C30, HADS and Hornheide Screening Instrument) and other additional questions. **RESULTS:** Data from 105 breast cancer patients (mean age 58.8, SD 12.3) were available for analysis. A logistic regression equation containing the EORTC-QLQ-C30 scales Emotional Functioning and Role Functioning as well as the yes-no question after psychiatric/psychological/psychotherapeutic treatment at any point in lifetime showed highest predictive power with regard to need of psychooncological treatment (AUC = 0.88; CI95% 0.82–0.95). A pilot study ($n = 20$) investigating applicability of a computerized version of this screening tool in oncological routine showed high acceptance and feasibility. **CONCLUSIONS:** The developed PO-screening tool showed high diagnostic accuracy regarding psychooncological treatment needs. The short assessment time and good usability of its computerized version allowed

easy implementation into daily oncological routine. **RESEARCH IMPLICATIONS:** It can be expected that the optimal combination of scales and items differs e.g. across tumor types and course of treatment and disease, therefore the logistic regression equation described is presumed to be specific for breast cancer patients. Moreover, further validity testing of the screening tool is needed. **CLINICAL IMPLICATIONS:** The study indicates that computer-based psychooncological screening tool is highly feasible in a clinical setting and well-accepted by the patients. Our specially developed Computer-based Health Evaluation System (CHES) showed high applicability in the conducted screening pilot and good acceptance by patients and medical staff. **ACKNOWLEDGEMENT OF FUNDING:** The 'Jubilaeumsfond' of the Austrian National Bank funded parts of the project financially.

IL 2.20.3

Psychometric Properties of the Screening Inventory Psychosocial Problems (SIPP) in Cancer Patients Treated with Radiotherapy

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BACKGROUND: Cancer often leads to psychosocial distress. Untreated distress may influence several health-related outcomes, such as compliance with therapy, and quality of life. Therefore, screening is an important component of adequate care. The Screening Inventory Psychosocial Problems (SIPP) is a self-administered questionnaire that strives to systematically identify psychosocial distress in cancer patients. Although the SIPP has been used as a screening inventory in several settings, the psychometric properties of the SIPP have not been well established. **METHOD:** We investigated the psychometric properties of the SIPP in cancer patients. Patients with diagnosis of lung, breast, prostate or gynecological cancer, were recruited from the MAASTRO Clinic, a radiation-oncology department in the Netherlands. Data from 289 cancer patients were assessed with the SIPP, the Hospital Anxiety and Depression Scale, the Distress Thermometer and the Mental Adjustment to Cancer scale. For additional ROC-analysis, an in depth Structured Clinical Interview (SCID-I) was also administered to 76 patients. In this study the SCID-I was used to identify anxiety and mood disorders, because these are the most common distress-related disorders in cancer patients. **RESULTS:** Three subscales (physical, psychological and financial/social) of the SIPP were used for analysis. The structure of the SIPP was adequate as shown by confirmatory factor analysis

and by the item-subscale correlation. Furthermore, internal consistency was good ($\alpha = 0.79$), except for the financial/social problems subscale ($\alpha = 0.51$). Validity was established for convergent and divergent construct validity. ROC analysis showed that the SIPP is able to differentiate between patients known to have clinical or subclinical symptoms of distress and those who do not (AUC0.83). **CONCLUSIONS:** The SIPP proved to be a reliable, valid screening instrument. It has several strong points; it measures a variety of distress symptoms that patients complete in three minutes, is specifically developed for use in cancer patients, is easy to score, and comprises items about the patient's perceived need for counseling. The score pattern enables medical staff to recognize the amount and type of distress at a single glance. Most other instruments are long and time-consuming, complex to be used in oncology-settings, were not specifically developed for cancer patients or focus on a single element of distress such as depressive/anxiety symptoms. **RESEARCH IMPLICATIONS:** Feasible instruments for psychosocial distress in cancer patients should meet the following criteria: brief, fitting on one page; easy to fill in; easy to score and interpret by medical staff and developed for use in cancer patients; The SIPP meets all these criteria and is an easy, high-quality and valid instrument to use in intervention studies. **CLINICAL IMPLICATIONS:** The SIPP is an good instrument for routine measurement of psychosocial distress. The score pattern of the SIPP enables medical staff to recognize the extent of distress at a single glance and to discuss this with the patient. Furthermore, the SIPP comprises useful items about the wish for counseling. All these aspects may facilitate the communication between medical staff and patient and the integration of medical and psychosocial care by referring patients to psychosocial caregivers. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.21.1

Transfer of Communication Skills Training to Workplace: Impact of a Program for Residents

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BACKGROUND: The importance of the transfer of communication skills training to workplace has not been enough studied especially for residents. This study aims to assess the efficacy of a 40-hours training program designed to improve residents' communication skills and their patients' satisfaction

during their daily clinical round. **METHOD:** Residents were randomly assigned to the training program or to a waiting list. Transfer of residents' communication skills were assessed in actual inpatients consultations during a half-day of clinical round for both groups. Consultations were audiotaped. Audiotaped transcripts were analyzed utterance by utterance using a computer assisted program (LaComm) to assess residents' communication skills. Patients' satisfaction was assessed with a visual analog scale after each consultation. Group and residents training attendance effect on communication skills were tested with Generalized Linear Poisson Regression Model. Group effect on patients' satisfaction was analyzed with Mann-Whitney test. **RESULTS:** Eighty-eight residents were included. The transfer of communication skills to workplace was only observed when residents training attendance was considered: residents' use of checking (OR = 1.02; $p = .045$) and empathy skills (OR = 1.21; p). **RESEARCH IMPLICATIONS:** Despite the positive result reported here, future studies should focus on the improvement of the efficacy of communication skills training in order to ensure a more important training effect size on transfer. **CLINICAL IMPLICATIONS:** Trainers and trainees should be aware that the transfer of the communication skills to the workplace remains difficult and needs particular attention. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium, by the C.A.M., training and research group (Brussels—Belgium).

IL 2.21.2

An International Randomized Trial of Skills Training for Oncologists Concerning Communication About Standard Treatment Options and Clinical Trials with Patients With Early Breast Cancer

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BACKGROUND: There has been a growing expectation that patients should participate in decisions about their medical care and give informed consent not only to clinical trials but also to standard treatments. The International Breast Cancer Study Group (IBCSG) conducted a randomized trial on training oncologists in clear and ethical information

delivery about standard treatment options and clinical trials, and strategies to encourage shared decision making. **METHOD:** The trial was conducted in Australian/New Zealand (ANZ) and Swiss/German/Austrian (SGA) centers, with the doctor as unit of randomization, and patient decisional conflict as primary endpoint. Medical, surgical, gynaecological, radiation oncologists, and their patients for whom adjuvant therapy was indicated, were eligible. Oncologists were randomized to receive the training, including a workshop with standardized teaching material and role-plays. Patients were recruited in the experimental or control group before (pre-cohort) and after the workshop (post-cohort). In both cohorts, patient measures were assessed before, and 2 and 16 weeks after consultation, and doctor measures before the workshop and 5 month thereafter. **RESULTS:** In ANZ centers, 17 eligible doctors recruited a total of 292 eligible patients. In SGA centers, 25 eligible doctors recruited a total of 326 eligible patients. Clinical and patient characteristics were balanced between the experimental and control groups for each language cohort (ANZ, SGA). Outcome data will be presented. **CONCLUSIONS:** Cross-cultural differences need attention in conducting international randomized controlled trials on communication interventions. This trial may contribute to the question, whether communication about standard treatment options and clinical trials can be taught and evaluated cross-culturally. **RESEARCH IMPLICATIONS:** Our findings may contribute to the design of randomized controlled trials about interventions on shared decision making in oncology, particularly regarding cross-cultural issues. **CLINICAL IMPLICATIONS:** Our findings may contribute to the development of evidence-based guidelines for presenting treatment options and discussing participation in clinical trials not only in breast but also in other cancer sites. **ACKNOWLEDGEMENT OF FUNDING:** This trial was a collaborative effort between the Centre for Medical Psychology and Evidence-based Decision-making, School of Psychology, University of Sydney, and the IBCSG. It was funded by the National Breast Cancer Foundation of Australia and Oncosuisse/Swiss Cancer League.

IL 2.21.3

I*CARE-Promoting Communication Skills Teaching and Research in a Comprehensive Cancer Center
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BACKGROUND: I*CARE (Interpersonal Communication and Relationship Enhancement) is a new program established in the Department of Faculty Development at the University of Texas MD Anderson Cancer Center that is focused on using multiple modalities to teach interpersonal and com-

munication skills to cancer professionals. **METHOD:** The centerpiece of the program is the I*CARE website at <http://www.mdanderson/ICARE> which is geared to oncologists, oncology trainees and other professionals and is a unique resource for teaching and learning key communication skills. It contains over 50 video segments demonstrating key skills such as non-verbal communication, giving bad news and discussing end of life issues as well as scenarios discussing the use of complementary medicine and a section on patient reactions to illness. These videos can be viewed directly on the site or downloaded via iTunes University for viewing on a laptop or other media and for teaching. **RESULTS:** A special feature is a video presentation by the actors William Hurt and Megan Cole called 'On Being an Oncologist' which represents reflection of the faculty and fellows on the emotional work of caring for cancer patients. A workbook for this video can also be downloaded. The website also contains a review of key articles in the literature, a comprehensive communication skills bibliography, interviews with key leaders in the field and events in communication skills from around the world. A unique feature of the programs is that it offers free continuing education credits for physicians and nurses. **CONCLUSIONS:** In addition to the web site, the I*CARE faculty offer educational programs within the cancer center. We have conducted 'role-training' using psychodrama techniques for our cancer professionals including oncology fellows, nurses, patient advocates, patient access specialists and chaplains. These workshops lasting two hours are held periodically and focus on subjects such as stress and burnout, difficult patient conversations and conflict resolution. We have trained over 500 professionals using these techniques. Evaluations indicate that they are relevant to practice and result in new confidence in handling difficult conversations. Clinical Leadership and Professionalism rounds are monthly seminars held for both palliative care and medical oncology fellows. These focus on challenging cases presented by a fellow. A faculty member in oncology leads the discussion and focuses the conversation. **RESEARCH IMPLICATIONS:** Communication Skills Research Conference is a multi-institutional, multi-disciplinary monthly discussion group designed to promote research collaboration among member institutions at the Texas Medical Center. Faculty from UT MD Anderson Cancer Center, UT School of Medicine and Texas Children's Hospital present ongoing research or ideas for research and invite collaboration among members. **CLINICAL IMPLICATIONS:** The I*CARE program will expand in the future to include a simulation laboratory for training faculty and oncology trainees in communication skills. This presentation will demonstrate some of the features of the site and discuss other aspects of the program. **ACKNOWLEDGEMENT OF FUNDING:** University Cancer Foundation, University of Texas MD Anderson Cancer Center.

IL 2.22.1

Psychological Response to Breast Cancer: Role of 5-HTTLPR Genetic Polymorphism of Serotonin Transporter

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BACKGROUND: Watson *et al.* showed that mental adaptation to cancer, namely hopelessness-helplessness and depression, was a significant negative prognostic factor for survival in early breast cancer. The difficulties in adaptation to stressful life events and the ensuing mental suffering have been associated with the polymorphisms of serotonin transporter (5-HTTLPR). The aim of this study was to examine the possible existence of relationships between 5-HTTLPR polymorphism and psychological response to the disease in early breast cancer patients. **METHOD:** A series of consecutive patients (aged 57.0 ± 3.1 years) with non advanced mammary carcinoma were evaluated at enrolment into the study (T0) and one month later (T1). The patients were characterized psychometrically using the Hospital Anxiety and Depression Scale (HADS), and the Mini-Mental Adjustment to Cancer Scale (Mini-MAC), to examine the psychological reaction to the disease. The genetic polymorphism 5-HTTLPR of serotonin transporter was also determined in samples of oral mucosa scrapings of the patients, and was found to follow the Hardy Weinberg equilibrium. **RESULTS:** When the patients were stratified for the 5-HTTLPR allelic variants, at T0 the patients carrying the LL haplotype had higher scores of Mini-MAC fatalism, as compared with carriers of an S allele. At T1, the carriers of the same variants with an S allele had higher scores of Mini-MAC fighting spirit. No significant differences were observed in for the other scales of Mini-MAC, and for HADS. The analysis of the differences between T1 and T0 vales indicated that patients with LL haplotype displayed a significant reduction in fighting spirit and anxious preoccupation scores of Mini-MAC. **CONCLUSIONS:** 5-HTTLPR increased vulnerability to mood disturbances in subjects exposed to stressful life events. When 5-HTTLPR was analyzed in women with early mammary carcinoma, significant differences in coping styles, measured by Mini-MAC, were observed in patients carrying the LL or SL/SS allelic variants, with high or low functional activity respectively. At recruitment, a significantly higher fatalism characterized the LL haplotype carriers. When the Mini-MAC scores were examined at T1, a lower fighting spirit characterized the subjects with the LL haplotype, and a significant reduction of fighting spirit and of anxious preoccupation were observed in LL carriers as compared with T0. **RESEARCH**

IMPLICATIONS: Subjects with LL haplotype displayed a lower fighting spirit, further decreasing at second evaluation. These findings raise the possibility to investigate the effects of a pharmacological intervention on serotonin transporter based on selective serotonin reuptake inhibitor antidepressant agents, aimed to reduce the high functional activity of the LL haplotype to the lower one possessed by the SS/SL genetic variants, and to assess at the same time the resulting associated psychological reaction to the disease. **CLINICAL IMPLICATIONS:** These results encourage the study of a larger sample of patients, also with other tumour types at different stages of the disease, for strengthening the preliminary nature of the findings reported. The results of such investigation may allow an easier identification of the patients vulnerable to difficulties in mental adaptation to the disease, and the evaluation of psychosocial and pharmacotherapeutic treatments performed also on the basis of the specific molecular-genetic characteristics of the subjects. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported by the 'Programma di Ricerca Scientifica di Interesse Nazionale of Italian Ministero dell'Istruzione, dell'Università e della Ricerca' entitled 'Phenotypic and genotypic characterization of mental adaptation to cancer and of the response to the treatment with antidepressant drugs in oncology (Anno 2007—prot. 20074XMRSE)'. The skilful contribution of Dr. Marianna Capozzo, and that of Ms. Sara Pavanello, undergraduate psychology student, in collecting and analyzing the psychometric data, is gratefully appreciated.

IL 2.22.2

Opening the Psychological Blackbox in Genetic Counseling: Recollections and Interpretations of Counselees Mediate the General, Psychological and Medical Impact of DNA-testing in BRCA1/2

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BACKGROUND: It is often assumed that the communication of DNA-test results has direct psychological and medical consequences for the counselee. However, subjective factors may mediate between DNA-test result and impact. Present study assessed mediation effects of the counselees' recollections and

interpretations regarding their cancer-risks and likelihood that the cancer in their family is heritable. **METHOD:** In this retrospective study, women tested for BRCA1 or BRCA2 completed questionnaires 5 years after disclosure. Participants had received unclassified-variants test result ($n = 76$), uninformative-negative DNA-test results ($n = 76$) or pathogenic-mutations ($n = 51$) in BRCA1/2. **RESULTS:** Compared to what counselors actually communicated about cancer-risks and heredity-likelihood, 10% to 42% of the counselees recalled and interpreted these correctly. Cancer-risks were recalled and interpreted as lower, heredity-likelihood as higher. Moderate correlations between recalling and interpreting suggested distinctive processes. Cancer-risks were recalled more correctly when measured in percentages instead of categories. Unclassified-variants were recalled and interpreted as giving very high cancer-risks and heredity-likelihood, uninformatives as low. Psychological and medical outcomes were predicted by actual communicated cancer-risks and heredity-likelihood. However, predictions reduced or became insignificant when recollections and interpretations were included in analyses and path analyses, suggesting mediation. Overestimations predicted life changes, breast/ovarian removal in counselees, and low quality-of-life in unclassified-variants. **CONCLUSIONS:** The impact of test results is strongly mediated by the counselees' recollections and interpretations of communicated risks. **RESEARCH IMPLICATIONS:** Research should not be focused on measuring the direct impact of DNA-testing, but on the intrapsychic processes in the patient that cause life changes after disclosure of a DNA-test result. **CLINICAL IMPLICATIONS:** Subjective processes should be addressed during counseling, especially if unclassified-variants are disclosed. **ACKNOWLEDGEMENT OF FUNDING:** Dutch Cancer Society.

IL 2.22.3

Reproductive Decision-making of Those at High Risk of Developing Multiple Tumors

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BACKGROUND: Li-Fraumeni Syndrome (LFS) and Von Hippel-Lindau Disease (VHL) are characterized by an increased risk of developing multiple tumors at various sites and ages for which preventive and treatment options are limited. This study evaluates the attitude towards prenatal diagnosis (PND) and pre-implantation genetic diagnosis (PGD). **METHOD:** In this nationwide study, carried out in collaboration with the nine family cancer clinics in the Netherlands, 48 Von Hippel-Lindau (VHL) and 18 Li-Fraumeni Syndrome (LFS) families were identified. Eligible family members were invited to complete a questionnaire, including questions on attitude towards PND, PGD and sociodemographic, medical and psychosocial variables. **RESULTS:** In total, 179 individuals (83%) participated. Of the high risk family members, 13% considered PND to be an acceptable option to use for LFS and VHL. In addition, 35% had a positive attitude towards PGD. Those with a current desire to have children were significantly more likely to have a positive attitude: 48% would consider the use of PGD. No other sociodemographic, medical or psychosocial variables were associated with a positive attitude towards PGD. The most frequently reported advantage of PGD was the avoidance of a possible pregnancy termination. Uncertainty about late effects of PGD was the most frequently reported disadvantage. **CONCLUSIONS:** Only a small minority of high risk family members consider PND to be an acceptable option. In comparison, approximately one-third have a positive attitude towards PGD. Half of those contemplating a future pregnancy would consider its use. The actual uptake for both reproductive options is expected to be lower. **RESEARCH IMPLICATIONS:** Long term follow-up studies are recommended to monitor individuals at high risk to develop cancer. This will result in additional information on the predictive value of attitudes on actual uptake, and the effect of undergoing PGD and PND on individuals' psychosocial health and well-being. **CLINICAL IMPLICATIONS:** High risk individuals, with a (current) desire to have children, should be informed of all possible reproductive options. Informing counselees about reproductive options can be done via written educational materials, but preferably also combined with counselling by a clinical geneticist. **ACKNOWLEDGEMENT OF FUNDING:** This study is financially supported by the Dutch Cancer Society.

IL 2.23.1

Assessing Quality of Life in Young Children with Cancer

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BACKGROUND: Most childhood cancers emerge before age 60 months. Assessment of disease and treatment impact in these children currently relies on proxy respondents such as parents and nurses. However, parents are not objective observers and nurses are often unfamiliar with the child. These problems introduce 'cross-informant variance', or bias, producing inaccurate reporting of the child's state. No direct assessment of cancer impact on children aged 3–5 years old exists. We therefore developed and tested one. **METHOD:** We compared parent and nurse (proxy) administered PedsQL (standard quality of life measure) with an interviewer administered novel storybook-based, direct assessment in 91 Chinese cancer patients aged 30–71 months, and self and proxy completed PedsQL assessments in 155 cancer patients aged 60–109 months of age, recruited from hospitals in the Pearl Estuary region of Southern China: 30 children completed both storybook and PedsQL. All respondents completed at least two assessments at different time points. Analyses were stratified by treatment status. **RESULTS:** The Storybook displayed five 'feelings' factors (Procedural/separation anxiety, Symptoms, Nausea, Treatment anxiety and Home issues) (55% of variance) and three 'Intensity' factors (Symptom, Nausea and Procedural intensity) (65% of variance). The storybook/PedsQL gave superior correlations in children self-completing both than between child storybook and proxy PedsQL of the same children. Intra-proxy PedsQL correlations were low. Proxy and child PedsQL correlated more in older than younger children, whilst Storybook and PedsQL differentiated treatment status in younger children but not older children, either self or proxy assessed. Storybook test-retest reliability within treatment/non-treatment groups exceeded 0.8. **CONCLUSIONS:** Proxy assessments are inferior to direct assessments when evaluating cancer impacts on children; different proxy assessors have low agreement. Children as young as 30 months of age can reliably indicate their quality of life when assessed in an age-appropriate manner, with clinically valid score patterns indicating adequate sensitivity. **RESEARCH IMPLICATIONS:** In young children with cancer, assessment should wherever possible be direct. Cross-variant bias is significant and inter-proxy ratings are poor. **CLINICAL IMPLICATIONS:** The Storybook illustrates the feasibility of direct assessment of Quality of life in children as young as 30 months old. This method should now be adopted as the gold standard. This will enable more precise assessment of symptom and comfort status in these children. **ACKNOWLEDGEMENT OF FUNDING:** Funding was provided by Health Care Promotion Fund of the Hong Kong Government grant 02030161.

IL 2.23.2

Affects of Brain Tumours on Coping Strategies in Children Between 6–16 Years

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BACKGROUND: While studies in children with brain tumours show that around 38% of these patients suffer from psychological disorders like depression, anxiety, and social withdrawal, loss of friends and feeling lonely, little is known about how children with a brain tumour cope with their problems in daily life situations. In order to being able to develop successful coping strategies this study compared the coping strategies of healthy children with those children suffering from brain tumours. **METHOD:** Due to the fact that boys and girls use different coping strategies this study additionally compared sex differences. Coping strategies from 35 children with brain tumours and 35 healthy children were administered using the German version of the KIDCOPE as standardised questionnaire. Scales included following ways of coping: Distraction, Social withdrawal, Cognitive restructuring, Self-criticism, Blaming others, Problem solving, Emotional regulation, Wishful thinking, Social support, and resignation. In both groups 45.7 % were male, 54.3 % female. Mann-Whitney U-tests were used to indicate statistical differences. **RESULTS:** Results revealed that children with brain tumours compared to the healthy control group show the tendency to have less self-criticism ($p = .068$) and less wishful thinking ($p = .052$), sig. less blaming others ($p = .015$), sig. less problem solving ($p = .044$), sig. less social support ($p < .001$), and sig. less resignation ($p < .001$). Girls showed more emotional strategies compared to boys. Furthermore boys use more cognitive restructuring and problem solving. In addition children with brain tumours reported the loss of friends. **CONCLUSIONS:** Children with brain tumours showed different coping strategies compared to healthy children. Children with tumours clearly avoid blaming and criticising themselves and others and show a less resignative behaviour. **RESEARCH IMPLICATIONS:** It remains to be explored why coping strategies change and if it would be helpful to assist children to develop other ways of coping. Furthermore it remains unclear that in healthy children watching TV is considered as negative regarding social withdrawing while for children with brain tumours watching TV is considered as important to be distracted. **CLINICAL IMPLICATIONS:** More practical guidelines to being able to

support children more effectively need to be developed. Social support from the peer group should be sustained as the loss of friends was described as very painful. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.23.3

Does Previous Encounter with Psychological Trauma Influence the Severity of Traumatic Stress Symptoms in Parents After Their Child's Cancer Diagnosis?

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BACKGROUND: Alternative theories have been proposed regarding how exposure to prior traumatic life events (TLEs) influences the reactions to subsequent threat or psychological trauma. One says that individuals with historical TLEs become more vulnerable to increased stress, while another says that earlier TLEs act as an immunisation, by enhancing individual resilience against distress. This study explored the interrelationships between earlier TLEs and disease-related traumatic stress in parents after their child's recent cancer diagnosis. **METHOD:** Parents ($N = 169$) of children with newly diagnosed childhood cancer were asked about their earlier experiences of TLEs. The kinds, amounts of, and date(s) for negatively experienced life events were recorded and summarised using an algorithm for an individual TLE-index. Disease-related traumatic stress following the child's cancer diagnosis was assessed by the Impact of Events Scale-Revised (IES-R). The IES-R measures symptoms of traumatic stress in 3 categories: Intrusion, Avoidance, and Hyperarousal. The relationship between exposure to prior TLEs and traumatic stress symptoms were calculated, and the potential of TLE to predict parental traumatic was evaluated. Results were analysed for possible differences between mothers and fathers, and between Swedish and immigrant parents regarding the influence of TLEs on stress outcomes. **RESULTS:** For the entire parent group, a significant positive association was found between earlier traumatic life events and the outcome on the Hyperarousal symptom sub-scale of IES-R. For Intrusion symptoms a tendency indicated a non-significant positive association, whereas Avoidance symptoms were unrelated to prior TLEs. Linear regression analyses confirmatively showed that a greater exposure to earlier traumatic life events predicted heightened parental hyperarousal symptoms in parents. Subsequent ANOVA and interaction analyses indicated no differences between (a) mothers and fathers, and (b) Swedish and immigrant parents regarding the impact of

TLEs on the reactions to the cancer diagnosis of the child. **CONCLUSIONS:** Findings support the vulnerability hypothesis, by showing that earlier traumatic life events increases parents' hyperarousal symptoms following their child's cancer. Results point to that mothers and fathers, and Swedish parents and today's immigrant parents in Sweden are equally at risk for increased stress reactions, as a consequence of exposition to earlier TLEs. **RESEARCH IMPLICATIONS:** The individual's past history needs to be paid attention to in investigating potential determinants of parental distress response to childhood cancer. Earlier TLEs can be subject to more detailed study, combined with the study of other potential risk factors related to past experiences. Growing numbers of immigrant arriving from war—and conflict zones world-wide, are of particular interest as they may be particularly vulnerable to distress when faced with their child's malignancy. **CLINICAL IMPLICATIONS:** This information tells that including screening of parents history of possible earlier traumas in the routines of standard psychosocial care can facilitate identification of parents in need of extraordinary surveillance and prophylactic psychological support. Parent care needs to be prepared for that parents who have encountered previous traumas may develop distress reactions that needs intensified support interventions and/or referral to professional therapy that cannot be provided within the childhood cancer care organisation. **ACKNOWLEDGEMENT OF FUNDING:** Funding was received from The Swedish Childhood Cancer Foundation, and The Cancer and Traffic Injury Fund in Sweden.

IL 2.24.1

Prevalence and Predictors of Poor Sleep Quality in a National Cohort of Danish Women With Primary Breast Cancer

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BACKGROUND: Mounting evidence indicates that many cancer patients suffer from poor sleep quality. Few studies, however, have investigated relevant predictors, and these studies have often been limited by the use of a single item to measure sleep quality and/or by small sample sizes. The current study examined the prevalence and predictors of poor sleep quality in a national cohort of Danish women with primary breast cancer using the Pittsburgh Sleep Quality Index (PSQI).

METHOD: The nationwide cohort consisted of 4917 Danish women with primary breast cancer. Of these 3343 (68%) completed the PSQI along with measures assessing depression, anxiety, physical activity/functioning, and health behaviours 3–4 months post-surgery. With the participants' permission, data on disease status, treatment, and comorbidity were obtained from the Danish Cancer Cooperative Group (DBCG) and surgical departments while sociodemographic information was obtained from Danish national longitudinal registries. **RESULTS:** Over half (57.8%) of these women were found to suffer from poor sleep quality as indicated by a score PSQI score greater than 5. Multiple logistic regression including the sociodemographic, psychological, and cancer and non-cancer related health status variables identified six significant predictors of poor sleep quality. In order of strength, these were: more depressive symptoms (OR = 1.14, $p < .001$), lower physical functioning (OR = .985, $p < .001$), older age (OR = 1.03, $p < .001$), higher level of anxiety (OR = 1.04, $p = .001$), not having a child under 18 living at home (OR = .924, $p = .003$), and smoking a greater number of cigarettes per day (OR = 1.02, $p = .004$). **CONCLUSIONS:** A high proportion of women with breast cancer experience difficulty sleeping. Psychological variables, namely depression and anxiety, appear to be important predictors for poor sleep quality in women with breast cancer, as does lower physical functioning while disease- and treatment-related variables appear unrelated. **RESEARCH IMPLICATIONS:** The link between depression, anxiety, and poor sleep quality found here is consistent with previous research in cancer and other areas. Given this, successful interventions aimed at reducing any of these adverse symptoms are likely to be those that employ a holistic approach rather than targeting a single symptom. **CLINICAL IMPLICATIONS:** Screening could be used to identify cancer patients with poor sleep quality and would allow for this and related symptoms to be addressed by the treating health professional or referral if required. **ACKNOWLEDGEMENT OF FUNDING:** The Danish Cancer Society, Sygekassernes Helsefond, Danish Research Council.

IL 2.24.2

A Prospective Study of Post-traumatic Stress in a Nationwide Cohort of Danish Women With Primary Breast Cancer

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BACKGROUND: There is considerable between-study variation in the prevalence of post-traumatic

stress in women with breast cancer (prevalence rates from 0 to 32%). This is probably due to methodological differences and the large number of studies using small samples of convenience. The aim of the present study was to explore prevalence and predictors of cancer-related post-traumatic stress at baseline and one year later in a large, nationwide cohort of women treated for breast cancer. **METHOD:** A total of 4917 women aged 18–70 yrs. with primary breast cancer constituted the study cohort. Of these, 3343 women aged 18–70 yrs. (68% response rate) completed a questionnaire package including the Impact of Events Scale-Cancer (IES-C) and measures of social constraints (SCQ), social support (SSQT), and social network at baseline 3–4 months after surgery, and 3033 (91%) also completed the IES at followup, 15–16 months after surgery. The Danish Breast Cancer Cooperative Group (DBCG) and the surgical departments provided information on eligibility and clinical data, including tumor size, nodal involvement, chemotherapy, type of surgery, and comorbidity. **RESULTS:** IES-scores were significantly ($p < 0.0001$) reduced at follow-up (Mean (\pm SD):16.3 (15.4) vs. 20.1(15.9). At baseline, 20.1% had IES total-scores ≥ 35 , suggesting possible PTSD, compared to 14.4% at followup. Multiple logistic regression showed that PTSD at baseline was associated with older age, lymph node involvement, comorbidity, high levels of social constraints and problem-specific support, and low levels of daily emotional support and social network diversity (OR: 0.9 to 1.5; p : 0.02 to 0.0001). Predictors at baseline for PTSD at follow-up were nodal involvement, PTSD-caseness, high social constraints, and low daily emotional support (OR: 0.9 to 1.3; p : 0.02 to 0.0001). **CONCLUSIONS:** The results from this first nationwide prospective study of post-traumatic stress in breast cancer indicate that a considerable proportion of women experience cancer-related post-traumatic stress symptoms, both 3–4 months after surgery and one year later. The results also confirm lack of social support as a possible important risk factor of sustained long-term post-traumatic stress for women with breast cancer. **RESEARCH IMPLICATIONS:** Further studies identifying women at high risk for cancer-related post-traumatic stress and exploring long-term effects of psychosocial interventions are needed. **CLINICAL IMPLICATIONS:** Women with more severe disease, who experience high levels of social constraints and low levels of emotional support, may be at higher risk of developing long-term post-traumatic stress symptoms and could perhaps benefit from counseling and other supportive interventions. **ACKNOWLEDGEMENT OF FUNDING:** The Danish Cancer Society, Sygekassernes Helsefond, Danish Research Council.

IL 2.24.3

Alexithymia as a Risk Factor for Major Depression 15–16 Months After Surgery in a Nationwide Cohort of Danish Women Treated for Primary Breast CancerSøren Christensen¹, Robert Zachariae¹, Anders Bonde Jensen², Susanne Møller³¹*Psychooncology, Aarhus University Hospital, Aarhus, Denmark,* ²*Oncology, Aarhus University Hospital, Aarhus, Denmark,* ³*Danish Breast Cancer Cooperative Group (DBCG), Rigshospitalet, Copenhagen, Denmark*

BACKGROUND: It has been suggested that the personality trait of alexithymia is a vulnerability factor associated with increased risk of medical and psychiatric disorders. The aim of the present study was to explore whether alexithymia is a risk factor for major depression following surgery for breast cancer while adjusting for potential confounding factors. **METHOD:** A total of 4917 Danish women aged 18–70 yrs. receiving standardized treatment for loco-regional invasive breast cancer constituted the study cohort. A questionnaire package including Beck's Depression Inventory (BDI-II) and the Toronto Alexithymia Scale (TAS-20) was mailed out 3 months post-surgery (baseline) and 15 months post-surgery (follow-up). Overall response rates were 68% at baseline and 93% at follow-up. Probable cases of major depression were identified according to the manual (cutoff ≥ 17). DBCG and the surgical departments provided data on eligibility, clinical variables and comorbidity. Data on psychiatric history, demographic factors, and socioeconomic status were obtained from national longitudinal registries. **RESULTS:** High TAS total scores emerged as a significant risk factor for major depression at follow-up (OR = 1.017; $p = 0.01$) when adjusting for baseline measures of BDI, demographic factors, socioeconomic status, health status, clinical variables, and health behaviors in a logistic regression analysis. Of the three TAS subscales, only the DIF subscale (Difficulties Identifying Feelings) independently predicted major depression (OR = 1.044; $p = 0.004$), when entered in a hierarchical logistic regression with backward elimination adjusting for the baseline measures. **CONCLUSIONS:** The results confirmed alexithymia as an independent risk factor for poorer adjustment to breast cancer in terms of major depression following surgery for primary breast cancer. Of the three TAS subscales, only the DIF subscale carried independent prognostic information, indicating that this component of alexithymia may play a particularly important role in coping with breast cancer. **RESEARCH IMPLICATIONS:** Psychosocial intervention studies aimed at improving the ability to identify and label feelings could clarify the causal role of alexithymia in psychosocial adjustment following breast cancer.

CLINICAL IMPLICATIONS: Patients experiencing problems in identifying their feelings and emotions following breast cancer may benefit from targeted supportive interventions. **ACKNOWLEDGEMENT OF FUNDING:** The Danish Cancer Society, The Health Insurance Foundation, The Danish Research Council for the Humanities.

IL 2.25.1

Evaluation of Thyrotropin-Releasing Hormone (TRH) as a Treatment for Cancer-related FatigueJayesh Kamath¹, Andrew Winokur¹, A. J. Prange Jr³, George Yarbrough²¹*University of Connecticut Health Center, Farmington, Connecticut, United States,* ²*TRH Therapeutics LLC, Portland, Oregon, United States,* ³*University of North Carolina, Hillsborough, North Carolina, United States*

BACKGROUND: Fatigue is the most common and the most debilitating symptom related to cancer and cancer treatments. Despite its high prevalence and devastating effect on quality of life, very little evidence exists on pharmacological interventions for treatment of cancer-related fatigue. Substantial experimental evidence, both in animal models and human studies, support analeptic properties of thyrotropin-releasing hormone (TRH). Patients reported significant and persistent improvement in energy, motivation, cognition and psychomotor retardation in past studies involving TRH administration. **METHOD:** We are evaluating efficacy and safety of synthetic TRH (0.5 mg and 1.5 mg doses) as a treatment for cancer-related fatigue in this ongoing 4-week, randomized, double blind, placebo-controlled, cross-over study. A total of 22 women with breast cancer experiencing clinically significant fatigue and without any medically reversible cause of fatigue (e.g. anemia) will be enrolled. The primary outcome measure is the visual analog scale for energy (VAS-E) assessed at 3, 7 and 24-hour post TRH and saline administration. The secondary outcome measures include the multidimensional fatigue inventory, a 6-minute walking test, the hospital anxiety and depression scale, the Leeds sleep questionnaire and quality of life using the functional assessment of cancer therapy (FACT-G). Specific markers of inflammation (e.g. IL-6, TNF-alpha) and cortisol levels pre/post TRH and saline administration will be investigated. **RESULTS:** To date, 12 experimental trials with 3 subjects have been completed. Each subject received two TRH (0.5mg and 1.5mg) and two saline infusions in accordance with the crossover study treatment schedule. Four of the six TRH trials demonstrated significant anti-fatigue responses (at-least 20 point increase in VAS-E) as assessed by the VAS-E, the 6-minute walking test and the MFI. These responses were rapid in onset, robust, long-lasting (>24 hr), and dose

independent. Five of the six saline trials did not show any anti-fatigue responses. Thus, predicted responses (i.e., positive anti-fatigue effects with TRH or no responses with saline) have been noted in 9 (75%) of the total 12 experimental runs. Transient increase in blood pressure and heart rate were the main, but expected side effects seen with the TRH administration. **CONCLUSIONS:** These preliminary observations are consistent with our hypothesis that TRH can relieve fatigue in patients with breast cancer. TRH administration was safe, tolerable and did not cause any unexpected side effects. These therapeutic effects can be readily understood in the context of the normotrophic, homeostasis-promoting actions of TRH agonism. More data are needed to substantiate these findings. Enrollment is continuing for the present study. This pilot, proof-of-principle study is a vital first step towards the future development of TRH-based therapeutics including oral TRH analogs to treat cancer-related fatigue. **RESEARCH IMPLICATIONS:** Evidence on pharmacological interventions for cancer-related fatigue is limited. This pilot study provides evidence for pursuing TRH systems as a potential target to treat cancer-related fatigue. Oral TRH agonist analogs can be investigated as a treatment cancer-related fatigue in larger, prospective, placebo controlled trials. Ongoing investigation of inflammation markers and cortisol levels in the present study may provide critical insights into the etiology and pathophysiology of cancer-related fatigue. **CLINICAL IMPLICATIONS:** Cancer-related fatigue and its impact on quality of life have taken center stage as effective but frequently debilitating cancer treatments are leading to longer survival. There is a pressing need to develop evidence-based treatments to address this serious clinical issue affecting the lives of millions of cancer patients. The present study is a crucial first step towards the development of a novel intervention to treat cancer-related fatigue. **ACKNOWLEDGEMENT OF FUNDING:** We acknowledge the support of Susan G. Komen Foundation grant and the University of Connecticut General Clinical Research Center NIH grant M01 RR06192.

IL 2.25.2

Psycho-social Profile of Family Carers of Patients Receiving Palliative Care

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BACKGROUND: Family carers of palliative care patients are at risk of poor psycho-social outcomes such as anxiety, depression and prolonged grief, although reported rates of these disorders vary in the literature. This sub-study of a longitudinal project exploring bereavement outcomes sought to describe the psycho-social profile of family carers after their relative was admitted to palliative care. **METHOD:** All primary family carers of patients with advanced cancer admitted within one week were invited to participate in the study. Family carers who agreed to participate completed a questionnaire with the assistance of a researcher. Data were collected on a number of sociodemographic variables, prolonged grief risk factors, and validated self report measures of: carer preparedness, carer competence, social support, optimism, family functioning, carer appraisal, dependency, grief/loss, anxiety, depression and demoralisation. **RESULTS:** Nearly half (44%) of the 301 carers (recruited thus far) had a probable anxiety and/or depressive disorder; 40% scored above the cutoff for probable anxiety and 20% scored above the cutoff for probable depression. These carers also reported higher levels of pre-death grief while caring for their relative. Higher levels of pre-death grief were also found to be positively associated with: lack of family support, bereavement dependency, caregiver esteem, impact on finances, impact on schedule, impact on health, social support, family functioning, demoralisation, and negatively associated with optimism. **CONCLUSIONS:** These findings emphasize the significant psycho-social burden that confronts many family carers. It is the first study to provide a detailed psychosocial profile of family carers of patients admitted to palliative care and provides information which could assist in the identification of at-risk carers. While this study is limited by the reliance on cross sectional data, it is part of a longitudinal study that will examine predictors of mental health for carers six and thirteen months post loss. **RESEARCH IMPLICATIONS:** Future research into the mental health of carers should focus on longitudinal data that examines the predictors of mental health for carers. Research into the development, reliability and validity of assessment tools of carers' mental health as well as effectiveness studies examining supportive interventions for carers are also required. **CLINICAL IMPLICATIONS:** Clinicians need to be aware that a high percentage of family carers of patients admitted to palliative care may be experiencing psychological distress. Palliative care services should assess all family carers and offer effective psychosocial support to carers. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by beyondblue: the depression initiative as part of a Victorian Centre of Excellence grant.

IL 2.25.3

Cultural Issues in Facing Death

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BACKGROUND: Individual and social attitudes relating to reaction to loss have been undergoing significant changes during the last decade. The aftermath of loss depends on various conditions. The presentation disjoints the role of traditions, psychological aspects of the individual while it also touches the role of palliative care. **METHOD:** The presentation collects multiple information on the diverse role of tradition in connection of death using the tools of cultural anthropology. **RESULTS:** Formerly it was the community, the rituals and the traditions that helped facing death, while in the developed world individual autonomy is dominant. In traditional communities mourning was not only accepted, but it was an expected form of behavior associated with numerous rituals. The individual psychological reactions (coping and defensive mechanisms) depend on personality structure, and loss processing varies with the individual, too. All societies have their 'healers' (samans, doctors, etc.) who are 'omnipotent' people help to overtake illnesses. Cultural differences in this area are substantial but the omnipotent saver is a determinative personality in all different cultures. **CONCLUSIONS:** By today the majority of the old traditions concerning death and dying have ceased and the attitude system of the society regarding death and bereavement have also undergone changes. Effective bereavement today means rapid mourning process, few personal reactions and an early back-to-normal lifestyle. The individual reactions depends on the personality structure, but it is a common human need to get help from strong 'healers' in facing severe illness and death. In today's modern societies this mission is completed through palliative care. The need for it is universal, regardless of frontiers and nations. **RESEARCH IMPLICATIONS:** The exact knowledge on the cultural tradition of a community helps to develop a supportive palliative care system that accommodates to the changing psychological, physiological, and -last but not least—cultural needs of the dying persons and their family members. **CLINICAL IMPLICATIONS:** It is important to analyze aggression and remorse handling linked to loss as well as the role and the consequences of suppression in order to give most effective support in the crisis situations in the end of life care. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.26.1

Quality of Life and Utilisation of Psychosocial Treatment Programs of Breast Cancer Patients With Comorbid Anxiety and DepressionBarbara Vogel, Nico Hutter, Harald Baumeister, Jürgen Bengel, Almut Helmes
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BACKGROUND: Comorbid mental disorders are common among cancer patients: Around 50% suffer from comorbid mental disorders. However, not all patients receive adequate treatment. This can lead to lower quality of life. The aim of this study was to investigate the association of comorbid mental disorders (anxiety and depression) with utilisation of psychosocial treatment programs and quality of life in breast cancer patients. **METHOD:** One hundred and thirty-five breast cancer patients completed the Hospital Anxiety and Depression Scale (HADS-D) and the EORTC Quality of life questionnaire (QLQ-C30) within a week of either surgery or the beginning of neo-adjuvant chemotherapy. Patient-reported utilisation of psychosocial treatment programs (e.g. psychotherapy, social or pastoral counselling, support groups) was also assessed. A HADS depression and anxiety score 11 indicated the presence of anxiety and depression. To test for group differences in utilisation of psychosocial treatment programs and quality of life Student's *t* tests or χ^2 analyses were conducted controlling for age, disease severity and cancer treatment. **RESULTS:** 8.7% of all patients were depressed, 21.1% had clinically relevant anxiety symptoms and 22% had either anxiety or depressive disorders. 26 patients (19.8%) attended psychosocial treatment programs. Patients with comorbid mental disorders reported less utilisation of support programs compared to patients without mental comorbidity (5 vs. 21), however this difference was not significant. The presence of anxiety or depression was significantly associated with reduced quality of life scores on all EORTC scales (*p* between $<.001$ and $.032$), except for role functioning (*p* = 0.067). **CONCLUSIONS:** The study showed that patients with comorbid anxiety or depression did not attend psychosocial treatment programs in accordance to their mental health status. Comorbid anxiety or depression had a detrimental impact on patients' quality of life. The association was not only found for psychosocial aspects of quality of life, but also for somatic aspects: Patients who were clinically depressed or suffered from anxiety had significantly lower physical, emotional, social and cognitive functioning and a lower global health status. **RESEARCH IMPLICATIONS:** Further studies should analyse reasons why patients with

mental comorbidity do not use appropriate psychosocial treatment programs. Longitudinal studies are necessary to assess the causal association between quality of life and comorbid mental disorders. **CLINICAL IMPLICATIONS:** The allocation of support programs needs further optimisation to guarantee that patients with comorbid mental disorders receive appropriate treatment. Recognition and management of depressive and anxiety related symptoms is an important issue in cancer treatment since such symptoms impair patients' quality of life. **ACKNOWLEDGEMENT OF FUNDING:** This research grant was funded by the Landesstiftung Baden-Württemberg, Germany.

IL 2.26.2

Disease-Related and Disease-Independent Stressors Contribute to Illness Intrusiveness in Head and Neck Cancer

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BACKGROUND: The illness intrusiveness theoretical framework maintains that disease and treatment influence quality of life by interfering with psychologically meaningful activity (*illness intrusiveness*). A variety of disease and treatment factors contribute to illness intrusiveness, but research has not yet examined whether disease-related (e.g., interpersonal issues, stigma, uncertainty) and disease-independent stressors (e.g., family member's unemployment or legal difficulties) also contribute. We address this question with data from two naturalistic studies in head and neck cancers. **METHOD:** Data come from two independent studies in a research program concerning illness intrusiveness and quality of life in head and neck cancer. Respondents included head and neck cancer outpatients ($N_s = 252$ and 538) at Princess Margaret Hospital, Toronto, Canada. In addition to other psychosocial instruments, respondents in both studies completed the Checklist of Cancer-Related Stressors, a cancer-independent stressful life events checklist, and the Illness Intrusiveness Ratings Scale. Study 2 respondents also completed a modified version of the Memorial Sloan-Kettering Symptom Inventory. Research personnel independent of the cancer center gathered data via individual interviews. **RESULTS:** Hierarchical multiple regression analyses tested the incremental

associations between illness intrusiveness and its hypothesized determinants. Results of both studies indicated that exposures to (a) each of eight distinct, cancer-related stressors and (b) cancer-independent stressful life events correlated significantly and uniquely with illness intrusiveness. Study 2 results indicated that these effects were incremental to the statistically significant and unique effects of cancer-related symptom burden on illness intrusiveness. **CONCLUSIONS:** Cancer-induced disruptions to lifestyles activities and interests (i.e., illness intrusiveness) compromise quality of life. Cancer-symptom burden, cancer-related stressors, and cancer-independent stressful life events all contribute significantly and uniquely to experienced illness intrusiveness. This, in turn, supports the hypothesis implicit in the illness intrusiveness theoretical framework that the psychosocial impact of cancer is contingent on the larger life context in which disease and treatment occur. **RESEARCH IMPLICATIONS:** Theoretical modeling of the psychosocial impact of cancer and its treatment must incorporate symptom burden, cancer-related stressors, and cancer-independent stressful life events. Valid tests of hypotheses validly about the psychosocial impact of cancer require experimental designs that control for cancer-independent stressors, in addition to symptom burden and cancer-related stressors. The present findings support the illness intrusiveness theoretical framework as it relates to quality of life and the psychosocial impact of life-threatening disease. **CLINICAL IMPLICATIONS:** Efforts to facilitate adaptation must address multiple stressors, each of which contributes uniquely and independently to the disruption of lifestyles, activities, and interests (i.e., illness intrusiveness). Psychosocial Oncology interventions must avoid the pitfall of focusing exclusively cancer-related events because cancer-independent stressors add incrementally to the adaptive challenges and coping demands with which cancer patients must contend. These implications are likely increasingly important to successful adaptation as the time since completion of treatment increases. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research.

IL 2.27.1

How Accurate is the HADS as a Screen for Emotional Complications of Cancer? A Meta-analysis Against Robust Psychiatric Interviews

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BACKGROUND: Of all the severity scales, the Hospital Anxiety & Depression Scale (HADS)

has been the most popular in cancer settings. It is a relatively brief self-administered rating scale of symptoms and functioning with anxiety and depression subscales although scoring is complex with several reverse scored items. **METHOD:** We searched and appraised all studies that compared the HADS with a robust psychiatric interview. We separated studies of the subscales and combined scale. We divided the analysis into those examining syndromal depression (largely major depression) and those examined mixed affective disorders (depression, anxiety, adjustment disorders combined). Against depression 9x studies of the HADS-D; 5x of the HADS-T and 2x of the HADS-A were identified. Against affective disorder, 4x studies of the HADS-D; 8x of the HADS-T and 3x of the HADS-A were identified. Across all studies the prevalence of significant clinical depression was 14% according to psychiatric interview but 21.5% by the HADS alone. **RESULTS:** Studies reported results at almost all possible cut-points with little consistency. Only 8 authors used an ROC curve. Against depression all versions of the HADS were of equivalent accuracy. Fraction correct scores: HADS-D 81.4%; HADS-A 81.8%; HADS-T 83.4%. Thus all versions were poor at ruling-in depression but good at ruling it out. The clinical utility index (UI+, UI-) was 0.214 and 0.789 for the HADS-D. Against affective disorders, there appeared to be advantage for the HADS-D and a relatively poor performance for the HADS-A. Fraction correct scores: HADS-D 78.3%; HADS-A 65.9%; HADS-T 72.6%. The clinical utility index (UI+, UI-) was 0.364 and 0.724 for the HADS-D. However looking at clinical value (utility index) only the HADS-D achieve 'good' rule out status and all methods were an inadequate method of case finding. **CONCLUSIONS:** The HADS and its subscales should not be relied upon to detect significant depression or even broadly defined emotional (psychiatric) disorders. However as a first step in screening the HADS-D appears to be the optimal test. Used alone it can rule out both types of disorder and has the advantage of only 7 items. **RESEARCH IMPLICATIONS:** Future studies should compare the HADS with other methods to see if alternatives offer better performance. In addition adaptation of the HADS must be compared with robust interviews and not the HADS full scale alone. **CLINICAL IMPLICATIONS:** Clinicians should not rely on the HADS for case-finding but could use the HADS as a first step in an algorithm (multi-step) approach. Applying the HADS on several occasions may hold promise. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.27.2

Development of an EORTC Quality of Life Fatigue Module Phase III

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BACKGROUND: Fatigue is one of the most distressing symptoms for cancer patients affecting their quality of life in all phases of the treatment or stages of the disease. EORTC fatigue module is designed as an international instrument to be used in all areas of treatment and to cover all tumour diagnoses in all phases and stages of cancer. The theoretical approach is based on a multidimensional model of fatigue including the physical, emotional and cognitive domain. **METHOD:** The aim of the Phase III project is the pre-testing of the preliminary module with respect to understanding, comprehensiveness and applicability (EORTC Module Development Guidelines). The module has been translated in seven European languages. The translated modules were reviewed by native speakers of the language who have experience in working with patients (physicians, nurses, psychologists or other members of the healthcare profession). Patients were assessed by questionnaires (EORTC QLQ C30 with the EORTC Fatigue Module FA R15). First, patients filled in the questionnaire according to the given instruction and then they were interviewed about the responses. The methodology was following the EORTC guidelines for developing phase III modules (Sprangers *et al.*, 1998; Cull *et al.*, 2002). **RESULTS:** We included 318 patients of seven European

countries covering a wide range of cancer diagnoses, tumor stages and types of treatment. All types of treatment and care settings were covered. In the qualitative analyses only few items have to be improved. Based on the a priori given three-dimensional structure of the scales uni-dimensionality of each scale was tested using the Rasch model (IRT). In the subscales only few have to be deleted to achieve a sufficient homogeneity. In the other domains all items fit was sufficient for all items. A cross-country comparison could offer us an insight into the difference in perception and attitude across countries due to cultural and language differences. Based on these analyses we were able to revise the FA R15 to a FA R13 version. **CONCLUSIONS:** EORTC FA R13 may be used as a phase III module in clinical trials. **RESEARCH IMPLICATIONS:** According to the guidelines for development of EORTC modules psychometric analyses will be carried out in phase IV. **CLINICAL IMPLICATIONS:** EORTC FA R13 may be used in clinical trials as well as assessment instrument in routine care. **ACKNOWLEDGEMENT OF FUNDING:** We acknowledge German Fatigue Society (Cologne) and EORTC Quality of Life Department (Brussels) for funding this study.

IL 2.27.3

Psychometric Evaluation of the 'Consultation and Relational Empathy'(CARE) Measure in Cancer Care

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BACKGROUND: A psychometrically sound patient-reported assessment of clinician empathy can be indicated for outcome research, at interventions and in medical practice. The aim of this investigation was the evaluation of the psychometric properties of the German version of the Consultation and Relational Empathy' (CARE) measure in cancer patients using confirmatory factor analysis (CFA). CARE is a measure, which assesses clinician empathy from the subjective perspective of the patient and is well developed and a widely used instrument. **METHOD:** This was a cross-sectional, retrospective study with 323 inpatient cancer patients in Germany. CFA was conducted a) to test the one-dimensional structure of the Scottish original version (Mercer and Reynolds, 2002) and b) to determine whether the intended construct was indeed measured (validity). CFA assumes each manifest variable to be a distinct

indicator of an underlying latent construct, whereby different constructs are permitted to be inter-correlated. The appropriateness of a specific CFA model was assessed by measures of global and local fit. Additionally, multivariate analyses (structural equation modeling, regression analyses, ANOVA) were also used to examine convergent, divergent and construct validity. **RESULTS:** The one-dimensional structure of the Scottish CARE instrument can be replicated by CFA in cancer care with very good measures of global and local fit (TLI 0.97, CFI 0.98, RMSEA 0.08). In a cross-validation of our results, we found that the CFA indices are similar to a Scottish sample of patients in general practice. Hypotheses-consistent relationships of different patient- and clinician-specific factors as well as of socio-demographic and disease characteristics of the cancer patients can also be shown. The latter seem to be additional indicators of convergent, divergent and construct validity. **CONCLUSIONS:** The German version of the CARE measure can be seen as a psychometric satisfactory patient-reported assessment of clinician empathy in cancer care. **RESEARCH IMPLICATIONS:** Future research should replicate the psychometric properties of the CARE measure with bigger samples of patients with different kinds of cancer diagnosis and stage. Moreover, an in-depth analysis of convergent, divergent, and construct validity is also required. **CLINICAL IMPLICATIONS:** The CARE-scale can be used in cancer care research, medical education but also in medical practice by clinicians in oncology e.g. as a time-economic feedback instrument for the evaluation of strengths and weaknesses of their empathic behaviour, as a personal behaviour checklist within a consultation and/or as a checklist to ask patient preferences before/during a consultation. **ACKNOWLEDGEMENT OF FUNDING:** We are grateful to the Else Kröner-Fresenius Foundation for providing Dr. Melanie Neumann with moral and financial support during the course of this study (grant number P43/05//A33/05/F0).

IL 2.28.1

Cognitive Existential Couple Therapy for Men with Early Stage Prostate Cancer and Their Partners

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BACKGROUND: Studies over 15 years have shown that after diagnosis of prostate cancer the partner, not the patient himself, reports higher levels of psychological distress and is motivated to seek psychological help for the couple. We showed that patient distress increased in the months following diagnosis and the couple's relationship deteriorated. We also showed patient distress accelerated over the months following diagnosis with advanced prostate cancer. A couple-focused intervention is needed. **METHOD:** We have completed a pilot of Cognitive Existential Couple Therapy (CECT) at Peter MacCallum Cancer Centre with ten couples where one of the couple has been diagnosed with early stage prostate cancer. We are launching a RCT of CECT versus medical treatment as usual. We have developed a manual for CECT adapted from a manual for group therapy previously trialled successfully in women diagnosed with early stage breast cancer. We surveyed the couples before and after the pilot intervention to explore change in couple relationship, partner response to cancer, coping, benefit finding, mental health and impact of events. **RESULTS:** Data collected from the pilot couples will be presented along with some preliminary data from the RCT being launched in early 2009. The performance of the continuous psychometric measures being used will be reported. Qualitative reflections of the couples on their response to CECT will be presented separately. **CONCLUSIONS:** Our observational longitudinal study of couples facing prostate cancer suggests that a couple-focused psychological intervention is needed. Our pilot study has established that a tailored couple therapy is acceptable and valued by patients and their partners and the questionnaire battery being used to evaluate the effectiveness of CECT is acceptable to the couples. **RESEARCH IMPLICATIONS:** If the RCT can demonstrate that CECT is effective in reducing psychological distress in patients and/or their partners over time then we will be able to use our qualitative data to modify and improve the intervention to maximise benefit. Such an effect from our intervention would also confirm that prostate cancer does cause significant distress over time in those directly affected by it. **CLINICAL IMPLICATIONS:** If we can show that this time focused and practical intervention is effective in preventing psychological distress we can use these findings to advocate for routine psychological support for all couples in Australia facing a diagnosis of prostate cancer. **ACKNOWLEDGEMENT OF FUNDING:** The pilot was supported by the Pratt Foundation and the RCT is to be funded by beyondblue.

IL 2.28.2

Patient and Spouse Cognitions in Advanced Breast Cancer: Implications for Treatment

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BACKGROUND: The purpose of the present study was to identify cancer-related cognitions among patients in active treatment for advanced breast cancer and their spouses, and to determine whether these cognitions were related 1) between spouses and 2) to depressive symptoms. **METHOD:** Fifty-six couples where the woman was being treated for Stage III or IV breast cancer were recruited from the Indiana University Simon Cancer Center. Couples completed a series of questionnaires including the Impact of Events Scale (IES), the Cognitive Appraisals of Health Scale (CAHS), the Life Orientation Test (LOT) the Responses to Depression Rumination Scale (RTD), and the Center for Epidemiological Studies Depression Scale. Participants completed their surveys at home and were paid \$30 for their participation upon the return of the questionnaires. **RESULTS:** Average age was 52 (SD = 12.23) for patients and 53 (SD = 12.17) for husbands. Couples reported an average income between \$60K and \$70K and were married for an average of 26 years (SD = 14.51). There were no differences in scores between groups in any of the cancer-related cognitions or on the CESD ($p > .05$). Patients' cognitions correlated with each other and with her scores on the CESD, but did not correlate with any spouse cognitions or CESD scores. Spouse cognitions did not correlate with spouse CESD scores. **CONCLUSIONS:** Findings suggest that individuals within these couples did not influence each other's cancer related cognitions. Furthermore, these cognitions, when negative, were associated with more depressive symptoms in patients but not spouses. **RESEARCH IMPLICATIONS:** More research is necessary to determine factors associated with mood in spouses of breast cancer patients. For patients with negative cognitions, interventions aimed at reconceptualizing the cancer experience may result in improved mood, although the direction of the relationship was not determined in the present study. **CLINICAL IMPLICATIONS:** Both patients and their spouses develop cognitions about the cancer that are fairly consistent across measures in advanced patients. Healthcare providers should attempt to impact these perceptions early in the patients' cancer experience. Findings may support the use of cognitive behavioral therapy for patients with depressed mood but suggest that such therapy

might not be the best approach for spouses. **ACKNOWLEDGEMENT OF FUNDING:** The present study was supported by the National Cancer Institute.

IL 2.28.3

Measuring and Conceptualizing Marital/Partner Status and Marital/Partner Relationships in Cancer Research

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BACKGROUND: Marital/partner relationships are known to influence rates of cancer screening, emotional and physical outcomes after diagnosis and treatment, the use of preventive health services during survivorship, and decisions about end of life. This presentation will review how marital/partner status and the quality of marital/partner relationships are measured and conceptualized in the cancer literature, and to inform the development of a cancer-specific, patient/partner-reported outcome measure to assess marital/partner relationships. **METHOD:** An electronic bibliographic search was conducted for years 1998–2008 for cancer-related research articles in which marital status and the quality of the marital/partner relationship were measured. Approximately 600 studies were examined to determine how marital status was coded, what dyadic measure was used, and if these variables were conceptualized as dependent, independent, or mediator/moderator variables. Constructs associated with marital/partner relationships were captured from the identified measures, then organized into a conceptual framework. **RESULTS:** Marital/partner status was most often a binomial, independent variable coded as ‘married’ and ‘other.’ ‘Cohabiting’ was frequently grouped with ‘married,’ or not coded at all. Twenty-three relationship measures were identified and one key measure emerged, Spanier’s Dyadic Adjustment Scale. Relationship quality was primarily used as an independent variable, but there appears to be a growing trend in psychosocial oncology research to use it as a dependent or moderator variable, particularly in structural equation modeling. Most measures contained one or more of the following constructs: adjustment/coping, intimacy, behavior, communication, commitment, social support/network, and satisfaction. **CONCLUSIONS:** There is no consensus regarding the coding of marital/partner status, but tacit agreement on using the DAS to evaluate the quality of marital/partner relationships in cancer populations. Most of the reviewed studies appear to treat assessments of the marital/partner relationship as a static, predictor variable with minimal attention as to how the quality of the

relationship may vary relative to milestones in the cancer experience. None of the 23 measures included constructs such as caregiving or care-receiving, nor considered how cancer and its treatment affects couples’ economic well-being, religious beliefs and practices, social networks, parenting, or leisure activities. **RESEARCH IMPLICATIONS:** Ideally, the coding of marital/partner status should be as specific as possible. ‘Cohabiting’ should be separate from ‘married’ because of possible differences in economic status, health insurance coverage, and legal authority for making medical decisions. Most of the measures were developed with white, educated, and healthy populations. Researchers might consider using methods outlined in the NIH Patient-Reported Outcomes Measurement Information System to develop a measure of relationship quality for culturally and economically diverse cancer populations. **CLINICAL IMPLICATIONS:** Clinicians need information about a patient’s marital/partner status to optimize communication about the cancer diagnosis, treatment, and surveillance, and to consider the needs of the couple during the management of patient care. When appropriate, clinicians might ask couples how the cancer experience has affected the quality of their marital/partner relationship. When problems are detected, referrals to marital therapy may be offered to help maximize favorable cancer outcomes. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.28.4

Risk of Affective Disorders After Spouse’s Breast Cancer Diagnosis

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BACKGROUND: Several studies have indicated that spouses or partners of cancer patients may develop major psychosocial problems. However, no prospective study has examined the risk for psychiatric diseases in partners of cancer patients. This study examined the risk of affective disorders in male partners after the diagnosis of breast cancer (BC) using a prospective cohort study design in Denmark. **METHOD:** We studied 1,175,518 men who were born between 1925 and 1973, 30 years of

age when entering the cohort, residing in Denmark in the period 1994–2003, with no past history of affective disorders, and who had lived with same partner at least 5 years, continuously. Information on cancer diagnosis, socioeconomic, demographic and health-related indicators was obtained from various Danish national administrative and clinical registers. We used Cox regression analysis method to assess risk of hospitalization with affective disorders defined by the International Classification of Diseases (ICD-8R or ICD-10) with follow-up through 2006. **RESULTS:** A total of 16,730 men had a partner, who was diagnosed with BC. In multivariable Cox proportional regression analysis, men whose partner was diagnosed with BC diagnosis were at an increased risk of being hospitalized with an affective disorder. This finding was adjusted for BC clinical status at the diagnosis (tumor size, number of lymph node tumor positive, ER and PGR receptor status, and treatment of chemotherapy, hormone therapy, or radiation therapy). **CONCLUSIONS:** This prospective cohort study supported the hypothesis that men whose partner was diagnosed with BC were at increased risk of being hospitalized with an affective disorder compared to men whose partner had no breast cancer. One may add that hospitalization only occur among severely depressed persons, which indicate that the clinical problem is much more prevalent in the population of spouses when including spouses treated with anti-depressive medication and the even larger population, which may be anticipated to experience mood disorders. However, this study included only the most severe outcome. **RESEARCH IMPLICATIONS:** This study had several advantages compared to previous studies. It is the first study using a prospective cohort design, it is based on so far the largest sample, and we were able to control for potential confounders including socioeconomic, demographic and health-related indicators, which have been shown to be associated with risk of affective disorders. We had access to the only existing nationwide and population-based register of psychiatric disorders to measure the outcome under study. **CLINICAL IMPLICATIONS:** The finding illustrates that a cancer disease may impose severe stress in the person who is closest to the patient—the partner. A BC diagnosis may thus not only influence the patient but also may also seriously affect the partner. Such interpersonal health effects challenge our understanding of cancer as not only a biological disease but also a disease with important social effects. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by grants from the Japan Society for the Promotion of Science (JSPS) Postdoctoral Fellowships for Research Abroad, from the Foundation for Promotion of Cancer Research (Japan) for the

3rd Term Comprehensive 10-year Strategy for Control, and with support from the Danish Cancer Society.

IL 2.28.5

Risk of Cancer After Spouse's Breast Cancer Diagnosis

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BACKGROUND: Illness in a person may affect the health of the spouse or partner and a possible explanation could be related to a shared life style and environment. Despite data from several prospective studies it still remains unclear whether a partner's cancer diagnosis is associated with the risk of cancer. This study examined the risk of cancer in the partner following the diagnosis of breast cancer (BC) using a prospective cohort design in Denmark. **METHOD:** We studied 1,132,751 men with a partner who were born between 1925 and 1973, entering the cohort at age 30 years, who resided in Denmark between 1994 and 2003. Information on socioeconomic, demographic, health-related indicators and cancer diagnosis was obtained from various national Danish administrative and clinical registers. We used Cox regression analysis to assess the risk of cancer overall and by site as classified by a Danish modified 7th revision of the International Classification of Diseases with follow-up through 2003. **RESULTS:** Overall 12,335 men experienced that their partner was diagnosed with BC during the 10 years of follow-up. In multivariable Cox proportional regression analysis, men whose partner experienced a BC diagnosis were at a 20% increased risk of being diagnosed with cancer (hazard ratio (HR), 1.21; 95% confidence interval (95% CI), 1.11 to 1.32; $N = 552$). This finding was marked in prostate cancer (HR, 1.85; 95% CI, 1.52 to 2.24; $N = 113$). **CONCLUSIONS:** This study supported the hypothesis that the experience of a BC diagnosis in the female partner may increase the risk of cancer in the male partner. This was most profound in the analyses of the risk for prostate cancer. **RESEARCH IMPLICATIONS:** This prospective cohort study including the largest sample ever used for this purpose examined the risk of cancer after a partner's BC diagnosis. We

were able to control extensively for potential confounding variables including socioeconomic, demographic and health-related indicators which have been shown to be associated with risk of cancer. **CLINICAL IMPLICATIONS:** This study supported that a BC diagnosis may be associated with increasing risk of cancer in the partner. Especially, this association was marked for the risk for prostate cancer. The observed association suggests that partners share the same environment, social class and lifestyle which then affect their risk of cancer. Our findings thus points to a social effect of a cancer disease across gender and genetic differences. **ACKNOWLEDGEMENT OF FUNDING:** This study was carried out with support from a Research Fellowship from the Scandinavia-Japan Sasakawa Foundation, a Post-doctoral Fellowship for Research Abroad from the Uehara Memorial Foundation, the Promotion of Cancer Research (Japan) for the 3rd Term Comprehensive 10-year Strategy for Control, and support from the Danish Cancer Society.

IL 2.29.1

Comparison of Long-term Quality of Life and Symptom Burden Between Prostate Cancer Survivors Who Were Treated With Radiotherapy or Were Eligible for Active Surveillance Who Were Managed Expectantly: A Matched Study

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BACKGROUND: Research on long-term health-related quality of life (HRQL) of low-risk prostate cancer patients managed with active surveillance (AS) is scarce. We aimed therefore to assess and identify factors associated with the long-term HRQL of prostate cancer survivors managed expectantly. **METHOD:** From the population-based Eindhoven Cancer Registry, 71 men who fit the criteria for AS were matched with 71 survivors treated with external beam radiotherapy (RT) of similar demographic and clinical characteristics. Patients completed generic-(SF-36) and cancer-specific (QOL-CS) HRQL, and symptom burden (UCLA-EPIC, SAc) questionnaires 5–10 years after diagnosis. **RESULTS:** AS and RT patients had mostly comparable generic- and disease-specific HRQL. RT patients have poorer bowel function (87.1 ± 13.1 versus 92.8 ± 10.7 , $p = 0.0008$), more bowel function bother (85.0 ± 16.4 versus 93.7 ± 10.1 , $p = 0.0006$), and more problems with getting an erection. Seventeen (24%) AS and 13 (18%) RT patients had disease progression requiring active treatment since initial diagnosis. Multivariate regression analyses (corrected for comorbidity and clinical disease

progression) indicate that the management strategy of low-risk prostate cancer patients independently predicts differences in physical functioning, bodily pain, spiritual and total well-being, and bowel function and bowel bother. **CONCLUSIONS:** Our study demonstrates that patients managed expectantly at initial diagnosis (AS) have comparable HRQL and less symptom burden than RT patients up to 10 years since diagnosis, even after controlling for comorbidity and clinical disease progression. **RESEARCH IMPLICATIONS:** Strong points of our study include HRQL assessment of a population-based sample managed expectantly up to 10 years since diagnosis. Our study can therefore be considered unique in providing information on the long-term effect of expectant management on HRQL and symptom burden. Moreover, inclusion of disease progression for consideration when assessing long-term HRQL in patients managed expectantly has, to our knowledge, not been previously reported. **CLINICAL IMPLICATIONS:** Patients diagnosed with low-risk prostate cancer could be overtreated with active treatment at diagnosis and its associated complications could impair HRQL. Expectant management with AS could be a viable alternative although possible stress of living with untreated cancer needs to be addressed. Therefore, besides having adequate and relevant information on the natural history of low-risk prostate cancer and its treatment options, patients could also benefit from psychological support in their decision-making. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.29.2

Variation in Patients' Emotional Distress with the Progression of Lung Cancer: The Experience of a Cohort of Patients From Quebec, Canada

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BACKGROUND: The diagnosis of cancer is emotionally threatening, especially for patients with aggressive types of tumor, such as lung cancer. Some authors have reported higher levels of distress in patients with lung cancer compared to other types. The goal of this study is to report emotional distress experienced by patients from the diagnosis to the advanced phase of their cancer and to explore characteristics associated to it. **METHOD:** A prospective cohort study of patients with lung cancer was conducted in the province of Quebec (Canada). Patients were recruited from five hospitals in three different regions of the province. They completed, at baseline, several validated questionnaires regarding their sociodemographics,

psychosocial characteristics and the involvement of a family physician (FP) and a navigator in their care. Emotional distress (POMS) was reassessed every 3 to 6 months, whether patients had metastasis or not, for a maximum of 18 months. Mixed models with repeated measurements were performed to identify variation in emotional distress. **RESULTS:** In this cohort of 395 patients, emotional distress scored low at diagnosis (0.66 ± 0.59 on a scale of 0 to 4), raising only to 1.11 ± 0.67 at the advanced phase ($p < 0.0001$). Involvement of a FP seemed to influence patients' distress at all phases of their cancer, but more particularly at the advanced phase ($p = 0.07$). Younger patients ($p = 0.02$) and women ($p = 0.001$) experienced significantly higher level of distress throughout their journey, except at the advanced phase where those aged 65 and men had higher levels of distress. **CONCLUSIONS:** In contrast to some authors' earlier findings, patients in this cohort reported low levels of emotional distress throughout their cancer journey. Even though the observed increase in distress level with progression of cancer was statistically significant, it remained rather low even at the advanced phase. Organization of care may have contributed to such results, but this was difficult to demonstrate in this study, since interdisciplinary teams with nurse navigators were implemented more widely in Quebec during the study, reducing the variability, between centers, in organization of cancer care. Also, most patients had a family physician involved in their care. **RESEARCH IMPLICATIONS:** This cohort study shows that even though lung cancer is an aggressive type of tumor with a high mortality rate, patients do not necessarily report high emotional distress. It is thus important to develop effective strategies to identify those at higher risk of emotional distress. Future research should focus on the implementation and evaluation of early detection models to achieve that goal. **CLINICAL IMPLICATIONS:** It is an erroneous assumption to consider patients with lung cancer as a homogeneous group with high risk of emotional distress. Systematic assessment of distress at the diagnosis of lung cancer and regular reassessment of it throughout the cancer journey is necessary to identify patients who are really at higher risk of emotional distress, in order to offer them the appropriate therapy and to prevent further deterioration. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the Canadian Institutes of Health Research.

IL 2.29.3

Prevalence of Psychological Distress in Cancer Patients in India: A Nationwide Study

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BACKGROUND: The psychological distress of cancer patients must be viewed within the context of the biological, personal, interpersonal, socio-cultural and spiritual settings of patients. Considering the diverse nature of the Indian setting, our understanding of patients' distress within this context remains limited. Against this background, for the first time in the country a nation wide study was conducted to understand the prevalence of Psychological distress in cancer patients in India. **METHOD:** A mixed cohort of 3000 adult cancer patients across 20 cancer centres in India was approached to participate in the study. The sample included patients from diverse socio-demographic backgrounds from mainly three medical categories: (i) Newly diagnosed patients (all types and stages), (ii) on treatment (All types and phases of therapy). (iii) Post-treatment (follow up). Patients' personal, socio-demographic and medical details were gathered using Interview schedule designed for the purpose of this study. The Distress Thermometer (NCCN) was used to assess the nature and severity of distress. **RESULTS:** Data of 2594 patients culminated for final analysis. Sample consisted of 1490 women and 1104 men; Age = 18–82 years ($M = 52.7$ Years; $SD = 13.3$). The salient and statistically significant findings are highlighted: a) 52.1% of patients had mild—moderate distress (score < 5). b) 40% of patients had moderate—severe distress (> 5). c) Patients reported high levels of emotional (63.3%) and physical problems (52.3%). d) Distress severity was greater in women than men. e) Emotional distress was higher in women and middle aged (31–50 years) patients. f) Fear (52.3%), worry (42.5%), fatigue (63.0%), pain (52.3%) and sleep (42.0%) were predominant problems. f) Patients with higher distress levels had more number of problems on Problem list of DT. g) Patients reported several problems not included in the DT's Problem list. **CONCLUSIONS:** The Psychological distress of Cancer patients in an Indian setting is across the distress continuum. Forty percent of patients experienced moderate to severe distress and 52% of patients had mild to moderate degree of distress. Emotional and physical problems are the most predominant sources of distress for patients. Although distress may appear common to all cancer patients, individual specific and disease specific needs of patients must be addressed in a clinical situation. The findings make a case for routine screening and address the psychosocial needs of cancer patients by integrating Psycho-oncology into main stream cancer care. **RESEARCH IMPLICATIONS:** The data-base provided paves the way for the following: a) To explore further the specific nature of cancer patient's distress. b) Develop culture specific tools and interventional models to suit the Indian setting. c) Collaborative and cross-cultural research. d) For health care planner and policy

makers the data provides adequate rationale to bring about shifts in the existing paradigm of cancer care in the country by integrating psychosocial care into mainstream cancer care. **CLINICAL IMPLICATIONS:** The findings will have far reaching implications for clinical practice. Clinicians will now recognize that psychological distress in their patients is indeed a major problem, despite the strong family fabric in the Indian society. Effective Psychosocial care becomes possible only through proper identification and routine evaluation. This can become possible only by integrating psycho-oncology into mainstream cancer care. **ACKNOWLEDGEMENT OF FUNDING:** This Project [DIPR-PI-2006/OB-3] was funded by Defence Institute of Psychological Research (DIPR), R&D Organization, Ministry of Defence, Government of India, Delhi, India.

IL 2.29.4

A Prospective Multicenter Study: Psychological Well Being Outcome Related to Multimodal Treatment in Locally Advanced Rectal Cancer Patients Samantha Serpentine¹, Elisa Alducci¹, Paola Del Bianco², Paola Zotti⁴, Giorgia Belluco³, Davide Bernini¹, GianLuca De Salvo², Paola Toppan¹, Salvatore Pucciarelli¹

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BACKGROUND: The purpose of the study is to prospectively evaluate psychological well being in locally advanced rectal cancer patients undergoing curative surgery after neoadjuvant chemo-radiotherapy (CRT). **METHOD:** Between February 2003 and June 2006 149 patients (Male/Female: 92/57; mean age: 62.5, range: 29–84) with locally advanced rectal cancer eligible for preoperative CRT followed by surgery were enrolled in the study. Psychological well being was measured with the Italian version of Psychological General Well Being Index (PGWBI), a self-administered questionnaire providing 6 multi-item scales (Anxiety, Depress mood, Self-control, General Health, Well Being, Vitality) and a general index. The administration time-table was the following: before CRT (T0), 3 weeks after completion of CRT (T1), at 6 months (T2) and at 12 months after surgery (T3). **RESULTS:** PGWBI was completed by 149 patients at T0, 138 at T1, 119 at T2 and 99 at T3. Anxiety improved ($p < .0001$) following RCT and then at 6 and 12 months after surgery compared to T0; Depress mood and Well being

showed an improvement (respectively $p = .0009$; $p < .0001$) from baseline to 6 and 12 months after surgery; General health resulted higher ($p = .0067$) at 12 months after surgery in comparison with baseline whereas self control and vitality remained unchanged. Finally, the Index score improved ($p = .0002$) at T3 compared to T0. **CONCLUSIONS:** The results of this study indicated an important improvement of psychological well being outcomes at 6 and 12 months after multimodal treatment. **RESEARCH IMPLICATIONS:** Up today, there are still few reports concerning Quality of Life (QoL) dimensions at long term following surgery and very little is known about psychological well-being in rectal cancer survivors, despite psychological well-being has been defined as the most important contributor to global QoL in cancer survivors. **CLINICAL IMPLICATIONS:** This study underlines the important role of the psycho-emotional dimension in global QoL; in particular these findings suggest the opportunity of a systematic and appropriate evaluation of QoL and Well Being in rectal cancer patients at the diagnosis, during the treatments and at long-term, to individuate specific areas of psychological intervention, in order to structure a multidimensional, focalized and personalized assistance strategy. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.29.5

Prospective Evaluation of Quality of Life and Psychosocial Issues Associated with Chronic Graft Versus Host Disease-Results of an Interim Analysis

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BACKGROUND: Although many studies have been conducted to show association between allogeneic hematopoietic stem cell transplantation (HSCT) and quality of life (QOL), little is known about chronic graft versus host disease (cGvHD) and its impact on perceived QOL, physical functioning and psychosocial distress in a

long- term perspective. **METHOD:** 146 patients ($n=98$ with cGVHD, ♂:♀, 73:73, median age 44 years (18–72)) after allogeneic HSCT were evaluated according to the NIH criteria based cGVHD activity assessment, the Lee Chronic GVHD Symptom-Scale (L-cGVHD-SC), FACT-BMT, Human Activity Profile (HAP), SF36, Berlin Social Support Scale (BSSS), 24 Item Adjective Measure (24-AM), HADS and the Distress-Thermometer. Enrollment occurred between day 100 and 365 after HSCT or in the presence of cGVHD also later on. Follow-up surveys were conducted at 1, 2, 3, 5, 8, 12 and 18 months after baseline. At all time points disease status, comorbidities and medication were documented. **RESULTS:** Severity of cGVHD correlates inverse with HAP activity score ($r = .29, p < 0.001$), FACT TS ($r = .29, p = < 0.001$) and pain ($r = .26, p < 0.01$). HADS Depression: severe (> 11) 15,3%, moderate (8–11) 62,5%; Anxiety: severe 26,4%, moderate 68,8%. Depression correlates with pain ($r = .29, p < 0.0001$), social support measured by BSSS ($r = .22, p = < 0.001$) and inverse with FACT-BMT TS ($r = .24, p = < 0.001$). Anxiety however correlates with activity profile ($r = 0.20, p > 0.01$). Cumulative incidence of return to work shows a considerable, but nonsignificant difference of 30% for cGVHD- patients versus 47% for patients without. Pulmonary manifestation has the strongest impact on QOL (FACT-BMT TS; $p = < 0.001$) and activity profile (HAP, $p = < 0.001$). **CONCLUSIONS:** Severity of cGVHD has an remarkable influence on QOL in HSCT-survivors. Severity correlates with impairment of physical functioning as well as daily activities. Moreover this leads to impairment of various aspects of QOL, especially in terms of emotional and social wellbeing. Professional reintegration is severely limited among patients with cGVHD. Evaluation of organ manifestations of GvHD detected a significant negative impact of lung manifestation on activity profile as well as QOL. Incidence of anxiety and depression is high in patients with cGVHD. Depression is associated with pain and social support, where as anxiety correlates with activity profile. **RESEARCH IMPLICATIONS:** The results of this interim analysis support the need to address cGVHD and its impact on QOL and psychosocial recovery when evaluating outcome after HSCT. Further research needs to clarify the role of specific symptoms of cGVHD as well as the influences of comorbidities and specific therapeutic regimens on QOL. Furthermore it is necessary to develop, implement and evaluate interventions to achieve improvement of QOL and psychosocial recovery of transplant survivors. **CLINICAL IMPLICATIONS:** Preliminary data suggest a long- term impact of cGVHD on psychosocial recovery and QOL of transplant survivors. This emphasizes the need for psychosocial evaluation and support in clinical practice as

well as specific rehabilitation programs. In order to meet the needs of post-HSCT patients screening instruments e.g. FACT-BMT should be repeatedly administered in clinical routine. Special attention should be paid to patients with cGVHD lung manifestation or pain or low social support. **ACKNOWLEDGEMENT OF FUNDING:** AM-GEN GmbH, Roche Pharma AG.

IL 2.30.1

Psychosocial Opportunities in the ICU: Goals of Care Program

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BACKGROUND: Patients admitted to ICUs and their families experience serious biopsychosocial challenges. Families report high levels of distress and dissatisfaction even years after the experience. Paradoxically, while technical aspects of care in the ICU have dramatically advanced, humanistic aspects of the experience have not been adequately valued or addressed. The purpose of this presentation is to share a unique evolving model that systematically integrates Goals of Care as an essential element of care in the ICU. **METHOD:** To understand the needs of patients most likely to be admitted to the ICU, biopsychosocial screening data was analyzed using 462 outpatients separated into Stage 4 ($n = 110$)/Stages 1–3 ($n = 352$) [i] collected at a UCSD. [ii] At City of Hope, selected patients admitted to the ICU and their families are offered an interdisciplinary family conference establishing Goals of Care and a tailored time-sensitive educational packet within 48 hours of ICU admission. [i] Loscalzo MJ, Palliative care and psychosocial contributions in the ICU. *Hematology* 2008;481–490. [ii] Loscalzo M, Clark K. Problem related distress in cancer patients drives requests for help: a prospective study. *Oncology*. 2007;21:1133–1138. **RESULTS:** As expected, patients in Stage 4 are at higher risk of problem-related distress than patients in Stages 1–3. Stage 4 patients reported significantly more problems (mean = 8) as distressing (rated > 3) than Stages 1–3 patients (mean = 5), p . A comprehensive literature review confirmed that psychosocial and palliative care services in the ICU have not kept pace with technical and medical advances. [i] [i] Ahmed N, Bestall JC, Ahmedzai SH, Payne SA, Clark D, Noble B. Systematic review of the problems and issues of accessing specialist palliative care by patients, carers and health and social care professionals. *Palliat Med* 18:525–542, 2004. **CONCLUSIONS:** The literature and data presented support the need for a comprehensive Goals of Care program in the ICU. Patients in the ICU

and their families have added burden as they attempt to cope and make informed decisions. Within the context of this highly technical and emotionally charged environment where ambiguous information is common, new ways to partner with patients and families are necessary. A Goals of Care program integrated into the standard of clinical care has the potential to create new partnerships among patients, families and health care staff. The Goals of Care program is ongoing. **RESEARCH IMPLICATIONS:** ICUs are high-cost, emotionally charged environments where patients and families may feel isolated and powerless and the staff frustrated. In many situations, patients are not able to speak for themselves. Goals of Care conferences may be one way to partner with patients and families to humanize the ICU experience. Other areas for research related to this program include: moderation of staff stress, staff retention, cost savings, length of stay, timely referrals, safety, and constituent satisfaction. **CLINICAL IMPLICATIONS:** The most significant clinical implication for this project is meeting the basic humanistic needs of patients and families in the ICU. Another essential part of the program is the partnership with ICU staff to promote an environment of support that is equal to the excellence in the technical care. This is also a unique opportunity for the systematic integration of psychosocial and palliative care services as an essential part of care in the ICU. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 2.30.2

Improving Psychosocial Outcomes Among African- and Latina-American Breast Cancer Survivors

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BACKGROUND: Reports on psychosocial interventions document the efficacy of individual telephone interventions to improve coping and psychosocial functioning among cancer patients, including BCS. The less favorable survivorship outcomes of ethnic minorities and paucity of literature documenting culturally and linguistically responsive intervention studies add to the urgency of this research. This study investigates the effectiveness of a psycho-educational intervention with African-American and Latina breast cancer survivors (BCS). **METHOD:** Participants were recruited from the California Cancer Surveillance Program, hospitals, community health clinics, and support groups. Eligible participants included women 18 years of age and older, within one to 6 years of a breast cancer diagnosis, and stages 0–III. Participants completed a baseline and follow-up measure that assessed health-related quality of life

(HRQOL) outcomes. Additionally, social support and stress were assessed during the intervention sessions. Based on level of burden, participants were assigned to the low (LiTx) or high intensity (HiTx) condition. The LiTx group received survivorship materials only the HiTx group received 8 telephone sessions and survivorship materials. **RESULTS:** Preliminary results included 110 (44 African-American and 66 Latina-American) BCS. Findings revealed significant differences between the LiTx and HiTx groups in HRQOL scores ($p < .05$) at baseline. African-American BCS reported higher HRQOL scores than Latina BCS during baseline (p). **CONCLUSIONS:** Preliminary findings on the efficacy of the psychosocial intervention reveal significant improvements in HRQOL as measured by the FACT. Further, results indicate that at baseline Latina BCS report less favorable overall HRQOL scores than African American BCS, but made significant improvements as a result of the intervention. Findings also suggest that long-term and late effects may persist among BCS, but symptoms are responsive to intervention. **RESEARCH IMPLICATIONS:** These results are encouraging and provide evidence that culturally and clinically responsive psycho-educational interventions are effective for improving HRQOL outcomes and reducing the life burden among low-income and ethnic minority populations. Similar interventions if implemented early may help alleviate and prevent some negative outcomes among survivors at greatest risk for poor outcomes. **CLINICAL IMPLICATIONS:** Findings may enlighten clinicians and researchers on practical models and strategies to reduce stress and preserve emotional stability. If this psycho-educational intervention is found to be effective, then other professionals in the field may use it as a guide to improve HRQOL and psychosocial outcomes within diverse and underserved communities. **ACKNOWLEDGEMENT OF FUNDING:** Department of Defense W81XWH-04.

IL 2.30.3

Psychotherapy of Dysfunctional Fear of Progression in Cancer Patients

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BACKGROUND: Fear of Progression (FoP) is one of the main sources of distress in cancer patients. High levels of FoP are associated with reduced quality of life and require psychotherapeutic

treatment. The purpose is to present a controlled trial investigating the effects of two psychotherapeutic interventions on reducing dysfunctional FoP in cancer patients. The interventions comprised either cognitive-behavioral group therapy (CBT) or supportive-experiential group therapy (SET), lasting four sessions each. **METHOD:** 174 cancer patients were recruited from two rehabilitation clinics and randomly assigned to either the SET or CBT. The main outcome was FoP assessed with the Fear of Progression Questionnaire (FoP-Q) directly before (T1) and after (T2) the intervention, as well as three (T3) and 12 months (T4) after discharge. Secondary outcomes were anxiety, depression, and quality of life assessed with the questionnaires Questions on Life Satisfaction, Questionnaire for general health status, and the Hospital Anxiety and Depression Scale. Patients recruited for the control group received treatment as usual and were assessed with the FoP-Q at T1, T2, and T4. **RESULTS:** Analyses showed a significant main effect for time and a significant interaction for group \times time for the main outcome variable. Thus, FoP decreased significantly over time in both intervention groups in contrast to the control group that showed only short-term improvements. The interventions were also effective in reducing secondary outcomes except life satisfaction. **CONCLUSIONS:** The study indicates that FoP can be effectively reduced with short psychotherapeutic interventions. **RESEARCH IMPLICATIONS:** It remains to be investigated whether such interventions are also beneficial for patients from acute settings or long-term survivors. **CLINICAL IMPLICATIONS:** Based on the findings of the study we suggest to doctors and psychooncologists to ask patients for their fears during routine medical treatment and not to wait until some of them may mention it themselves. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the German Federal Ministry of Education and Research (BMBF) and the German Pension Insurance Administration (VdR), grant no. 01 09889606 (B7 RFB).

IL 2.30.4

What is the Effect of Dignity Therapy Among Advanced Cancer Patients in Denmark?

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BACKGROUND: Dignity Therapy (DT) is a brief, psychotherapeutic intervention for patients with advanced cancer developed by Chochinov *et al.* DT invites the patient to reflect on important aspects of their life, relationships, and things they would want to be known or remembered. These recorded conversations serve as basis for personal documents, which the patient can bequeath to family and friends. The aim of this study was to investigate DT in Danish patients with advanced cancer. **METHOD:** The DT Question Protocol was translated to Danish and feasibility tested as reported previously. From 2005 to 2007 we recruited adult advanced cancer patients from a hospice and a hospital based palliative care unit. Patients were offered DT according to Chochinov *et al.*'s guidelines. The Structured Interview for Symptoms and Concerns (SISC), the EORTC QLQ-C15-PAL, the Hospital Anxiety and Depression scale, and the Palliative Dignity Inventory (PDI) were administered before, after and 2 weeks after the intervention together with a satisfaction questionnaire. Pre-/post scores were compared using Wilcoxon signed rank test (two-sided). **RESULTS:** 42% of the patients were eligible. Hereof, 21% ($N = 80$) completed DT. Patients reported ($N = 55$ right after/ $N = 31$ after 2 weeks), that DT was helpful (73%), satisfactory (89%) and would help the relatives (87%), heightened sense of purpose (56%), dignity (49%), and will to live (47%). Percentages 2 weeks later were slightly lower. Pre-/post measures from 50 patients showed that many patients (30–70%) had no symptoms/problems at baseline (ceiling effect) preventing detection of change. Among those reporting symptoms/problems initially, significant improvement was found in depressive mood, suffering, appearance, unfinished business, to accept things as they are, and in being treated with respect. **CONCLUSIONS:** DT has demonstrated to be a relevant, meaningful, and manageable intervention for patients with advanced cancer in Denmark. They reported high satisfaction with the intervention—largely similar to Canadian/Australian results—and DT was beneficial in relation to the patient's overall psychological well being and in relation to the family. Thus, this intervention that was developed in a North American setting appears equally relevant in a Northern European context. **RESEARCH IMPLICATIONS:** Future research may continue exploring the connections between DT and different aspects of dignity and investigate the effects on other outcomes further. More attention may also be given to the voice of the relatives, who receive the documents. **CLINICAL IMPLICATIONS:** We plan to introduce DT more widely in palliative care in Denmark. **ACKNOWLEDGEMENT OF FUNDING:** The project was funded by The Danish Cancer Society.

IL 3.31.1

In Depth Influential Factors Towards Participation in Mammography Screening in Greece

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BACKGROUND: Breast cancer is a threat for the female population worldwide. In Greece, 1,500–1,800 women die annually from breast cancer out of the 4,000 who are affected. Interestingly, only 5% of them are detected at an early disease stage, through mammography screening. The aim of this study is to explore the psychological, socio-economical and health related factors that influence Greek women's decisions to utilise or abstain from mammography screening. **METHOD:** Questionnaires and interviews were utilised as measurement tools, placing interviews at the centre of this study's focus. Data were collected in Athens-Greece, during the period March-July 2008, accessing 6 women's associations. Cultural, professional, political and educative women's associations were selected, to maximise the variety of the sample's characteristics. One hundred and eighty six questionnaires were collected. Interviewees were recruited using the questionnaires and 33 semi-structured interviews followed. Descriptive and constant comparative data analysis has been used for the questionnaires and interviews respectively. Literature related to health behaviours is being used to assist in the interpretation of the study findings. **RESULTS:** According to the questionnaires, 85% of the participants attend mammography screening, but not on a regular basis. However, preliminary findings from the interviews' analysis suggest the existence of obstacles towards breast screening. The problematic communication between women and health care professionals and deficiencies of the health care system are identified as external key factors responsible for women's abstinence from mammography screening. Psychological factors (such as fear), ideology towards breast cancer early detection and cancer experiences arising from women's immediate social network determine their participation in mammography screening. Lack of familiarisation and education on cancer and its early detection is perceptible. **CONCLUSIONS:** Power relationships, education, familiarisation with cancer and health taboos in Greek society appear to influence women's behaviour towards mammography screening. These issues need to be taken into account in any future interventions with Greek women and breast cancer screening. **RESEARCH IMPLICATIONS:** To our knowledge, this is the first attempt to shed light on the actual reasons women abstain or participate in mammography screening in Greece, by using a qualitative interpretative approach. Interpretation of the findings by

the use of existing health behaviour models provides the opportunity for those models' future enhancement. This can serve as the basis for further hypothesis testing and motivation for future quantitative studies, targeted to female populations in general. **CLINICAL IMPLICATIONS:** The particular findings could constitute the basis for future interventions on: a) Training programmes to the National Health care Sector, b) the advancement of the health care providers' communicational skills with female patients, c) the creation of a permanent trustful relationship between women and doctors and d) the balance between society's and health care providers' approach to the healthy female Greek population, in order to educate and familiarize them with breast cancer and breast screening. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.31.2

Breast Cancer Screening in France: Reasons for and Barriers to Participate. Results of the EDIFICE Survey

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BACKGROUND: Since screening for cancer has been advocated, funded, and promoted in France, it is important to evaluate practices and attitudes of the general population and general practitioners (GPs) toward breast cancer screening (BCS) strategies. The evaluation of these practices and attitudes was the objective of the EDIFICE survey, a large cohort of patients and doctors. **METHOD:** EDIFICE was a nationwide study performed by the Institute TNS Healthcare—SOFRES, carried out by telephone among a representative sample of 1609 subjects living in France, aged between 40 and 75 years old and a representative sample of 600 GPs. Among the former, 507 women were interviewed about BCS. A 170 item questionnaire was used in order to address previous screening for cancer. **RESULTS:** 93% of the women stated that they had performed at least

one screening exam for breast cancer, while 7% stated that they had never taken one. 70% of GPs stated that they systematically offered women a BCS test. Variables correlated to non or bad compliance to breast cancer screening are age, low socio-economic and educational status, social isolation, not consulting a gynecologist nor a GP, having other priorities in life and no personal health worries. Fear of cancer is not a barrier while fear of the screening exam is one. Five distinct typology profiles of women will be described. CONCLUSIONS: While 65% of our group is following screening recommendations properly, 35% of the women are not adequately screened; considered as 'fatalist' or 'refractory' to the screening program, they identify themselves negatively or do not feel concerned by screening campaigns and invitation to participate. Specific prevention messages need to be designed for them. The involvement of GPs to BCS is depending on his knowledge about screening and type of relationship to her patient. RESEARCH IMPLICATIONS: To evaluate the impact of diverse typology specifically oriented campaigns. CLINICAL IMPLICATIONS: EDIFICE identifies typology profiles of women who have specific needs in terms of: information and education about screening, GPs' information and education, nature of doctor-patient relationship. In order to improve attitudes regarding regular BCS, screening campaigns must be adapted to these respective needs. ACKNOWLEDGEMENT OF FUNDING: Laboratoires Roche.

IL 3.31.3

Knowledge, Attitude and Behaviour of University of Ibadan Women Toward Cancer of the Cervix and Its Prevention

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BACKGROUND: The two commonest cancers in Nigerian women are cancers of the breast and the uterine cervix. The occurrence of cancer in the Nigerian community affects health very negatively. The main objective of this study is to find out the knowledge, attitude and practices of the female staff towards cancer of the cervix as a leadership group in the local effort to improve knowledge, attitude and practices towards the prevention of these cancers here. **METHOD:** A sample of 302 female staff of the University of Ibadan which comprised 151 academic and 151 non-academic staff was studied. These were all the female staffs that were simple randomly selected from some of the departments on the main campus of the university and willing to participate in the study. The instrument used in collecting the information was self constructed and validated and called

'Knowledge, attitude and practice towards cervical cancer scale' (KAPCCS). This instrument is made up of three sections. The data were analyzed using descriptive statistics, T-test and one way analysis of variance. **RESULTS:** Questions of knowledge of cancer of the cervix were graded as high, medium and low for the analysis. One hundred and twenty three (40.73%) have high knowledge, 115 (38.08%) medium, while 64 (21.19%) have low knowledge. The academic staff were statistically significantly more knowledgeable of cervical cancer than the non-academic staff ($p = 0.05$). Two hundred and thirty-two (232 or 76.82 %) have a positive attitude towards preventive measures for cancer of the cervix. However, as much as 210 (73.5 %) of the women had never undertaken a Pap smear or other screening test for the condition. **CONCLUSIONS:** The occurrence of cancer in the Nigerian community affects health very negatively, manifesting with demoralizing symptoms and often becomes a thing of concern to many only when it has reached advanced stage and has started having psychological impacts that impinge on the stability of affected individual and family. Significantly high knowledge of academic women in the University will have over positive impact on the society. Further studies is needed in this area to identify appropriate information strategies to prevent cultural barrier to screening. **RESEARCH IMPLICATIONS:** Research implication: Research is needed in the preventive aspects of cancers such as the role of HP virus in this locality. **CLINICAL IMPLICATIONS:** Clinical implication: There is need for more education and the promotion of cancer screening and services in this locality beginning with such educated women as in the universities as important change agents for this area of the health services. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.31.4

Affective, Cognitive, and Behavioral Impact of a False Positive Cancer Screening Test Result: Results from a Longitudinal, Case Control Study

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BACKGROUND: Receipt of an abnormal test result during routine cancer screening is not a benign event, even when clinical follow-up suggests no cancer is present (i.e., FP result). While research has shown a FP result can be distressing, the impact on other types of outcomes is not well documented. This study identifies the impact of a FP test result during ovarian cancer (OC) screening on a broad set of affective, cognitive, and behavioral outcomes. **METHOD:** Participants included 325 women receiving a FP test result during

routine annual transvaginal (TVS) screening for OC (FP Group). A baseline assessment occurred prior to a follow-up TVS test intended to clarify a recent abnormal TVS result. Additional assessments were 1 and 4 months post-baseline. At each assessment, affective (distress, positive screening consequences), cognitive (OC risk perception, cancer screening efficacy beliefs) and behavioral (cancer screening intentions, monitoring and blunting behaviors) outcomes were assessed. 325 matched (age, OC screening hx) women receiving normal results during annual routine OC screening completed 3 similar assessments over a 4 month period (HC Group). **RESULTS:** Repeated measures ANCOVA's revealed IES Intrusion and Avoidance scores were elevated in the FP Group, declined over time, but remained elevated relative to the HC Group at follow-up (p 's < .05; TIME-GROUP interaction). The FP group reported fewer positive consequences from their screening experience and greater perceptions of OC risk at all 3 assessments (p 's < .05; GROUP main effects). The FP group reported more screening-related monitoring and blunting behaviors, declining over time (p 's < .01; TIME \times GROUP interaction). No effects were found for perceived efficacy of screening or intentions to participate in future screening for ovarian, breast or colorectal cancers. **CONCLUSIONS:** An FP cancer screening test result is not a benign event, even when follow-up indicates no malignancy is present. In addition to triggering distress, the current study suggests an FP test result can impact other important affective, cognitive, and behavioral outcomes including increased perceptions of OC risk, fewer positive consequences derived from screening participation, and greater screening-related monitoring and blunting behaviors. While declining over time, this impact remains evident 4 months post-FP result. **RESEARCH IMPLICATIONS:** A FP screening test result can negatively impact a variety of affective, cognitive, and behavioral outcomes. Very importantly, these outcomes (greater distress, fewer positive consequences, greater risk perception, screening-related monitoring and blunting behavior) are potentially linked to future participation in routine cancer screening. Consequently, future research examining the impact of FP screening test results should examine a broad variety of outcomes and identify their impact on subsequent participation in routine cancer screening. **CLINICAL IMPLICATIONS:** Individuals receiving FP results during routine cancer screening should be monitored for potential negative affective, cognitive, and behavioral responses that could affect current QOL and future participation in cancer screening. Appropriate information and psychological support should be available to recipients of FP results during routine screening. Fortunately, the impact of an FP result during OC screening does not

'spillover' and affect efficacy beliefs or behavioral intentions associated with screening for breast and colorectal cancers. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by R01 research grant CA84036 from the U.S. National Cancer Institute.

IL 3.31.5

Computerized Prospective Screening for High Levels of Emotional Distress in Head and Neck Cancer and Referral to Psychosocial Care

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BACKGROUND: The goal is to investigate prospectively the prevalence of high levels of emotional distress and referral rate to psychosocial care in head and neck cancer (HNC) patients. **METHOD:** 55 consecutive newly diagnosed HNC patients were asked to complete the Hospital Anxiety and Depression Scale (HADS) and the EORTC QLQ-C30 and H&N35 quality of life questionnaires on a touch screen computer-assisted data collection system on their first visit and during follow-up visit. Sociodemographic, clinical, and quality of life parameters were compared to a high level of distress (HADS score >15). Number of patients with a high level of distress were compared to referral rates to psychosocial care as retrieved from patient hospital files. **RESULTS:** At time of diagnosis, 18% (10/55) of the patients had a high level of distress (related to tumor stage and site, and global quality of life and social eating) versus 25% (14/55) at follow-up (related to a variety of quality of life parameters). Low levels of distress at baseline or follow-up were noted in 64%; 18% had normal scores at baseline and developed distress at follow-up; 11% had high levels at baseline and returned to normal scores at follow-up, and 7% had persistent distress from baseline to follow-up. No patients were referred to psychosocial care at time of diagnosis. At follow-up visit 21% (3/14) were referred, all patients who developed a high level of distress after initial diagnosis. **CONCLUSIONS:** High levels of emotional distress are common and few patients are referred to psychosocial care. **RESEARCH IMPLICATIONS:** Further research is needed to investigate to what extent and at what point in time patients want psychosocial care, whether referral rates at present are in agreement with what patients want or may increase when structured screening is applied in clinical practice, and which

intervention modalities are cost-effective in HNC cancer patients. **CLINICAL IMPLICATIONS:** Careful monitoring is of major importance in cancer care because of the varying burden on the patient by the disease itself, the treatment (often during a long period), and acute or long-term side-effects of treatment with a great impact on quality of life and emotional functioning. In patients with persistent high levels of distress, psychosocial intervention is recommended. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.32.1

Physical Activity Amongst Australian Cancer Survivors: Prevalence of Activity, Receipt of Health Professional Recommendation, and Survivors' Preferences for the Timing and Delivery of Programs

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BACKGROUND: With increases in cancer survival, promotion of healthy lifestyle behaviours among survivors is receiving considerable attention. Post diagnosis physical activity (PA) has been shown to improve symptoms, fitness, quality of life and survival. This study aimed to describe the prevalence of being sufficiently active at six months post-diagnosis, receipt of health professional recommendation to increase PA, and survivors' preferences for the timing and delivery mode of programs to promote PA. **METHOD:** The Cancer Survival Study is a 5-year longitudinal study of a population based sample of cancer survivors of the eight most incident cancers, recruited through cancer registries in two large Australian states. Participants completed their first survey six months post-diagnosis, including items assessing self-reported PA. Survivors of breast, colorectal and prostate cancers were invited to participate in a lifestyle sub-study and completed a computer assisted telephone interview that assessed their receipt of provider advice regarding lifestyle changes since they were diagnosed, and preferences for the timing and delivery mode (face-to-face, telephone, mailed, computer, DVD) of lifestyle interventions. **RESULTS:** Of 1265 survivors (82% recruitment rate), 18% were undergoing chemotherapy and 10% radiotherapy at 6 months post-diagnosis. Overall, 41% were sufficiently active (SA). Rates of SA were compared for those who were undergoing active, passive or no treatment. Of the 112 survivors who participated in the sub-study, 34% recalled being advised to make lifestyle changes. There was high interest in lifestyle programs. Participants suggested programs be offered at

diagnosis (30%) and upon completion of treatment (51%). There was large variation in preference for delivery mode with the most popular being written materials (36%). Gender differences in delivery preference were evident. **CONCLUSIONS:** Not surprisingly, less than half of the cancer survivors were sufficiently active at 6 months post-diagnosis. We recommend the development of programs to promote PA in multiple delivery formats, and suggest they be offered (where appropriate) at any point during the treatment and recovery trajectory, with timing based on individual patient functioning and preference. Strategies to increase lifestyle recommendations and referrals by health professionals as part of standard care need to be explored. **RESEARCH IMPLICATIONS:** Longitudinal tracking of a range of cancer types will allow us to better understand the impact of various treatments on survivor PA levels. Interventions to promote PA need to be developed for survivors of different tumour sites taking into account their priorities for various delivery modes. Health professional perceptions about the appropriateness of PA interventions for cancer survivors should be explored. **CLINICAL IMPLICATIONS:** There is high interest amongst survivors in receiving assistance to increase their PA. Health professionals have an important role to play in recommending lifestyle change at a time when survivors may be seeking health care strategies that they can control. Differences in delivery mode preference between gender and cancer type should be considered by health professionals when recommending PA to cancer survivors. **ACKNOWLEDGEMENT OF FUNDING:** The Cancer Survival Study is funded by NHMRC, The Cancer Council NSW, The Honda Foundation and Hunter Medical Research Institute. The sub-study reported here was funded by the University of Newcastle.

IL 3.32.2

Development and Clinical Use of the Health Profile, a Generic Multidisciplinary Screening Tool for Adequate Choices in Supportive Cancer Care

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BACKGROUND: A comprehensive, multi-disciplinary assessment of cancer patients needs at the time of diagnosis can substantially improve decision making on non-pharmacological care supply. We illustrate the 'Health Profile', a short and clinically workable screening tool that allows for a simultaneous screening for possible risk factors and complaints of cancer patients in different fields. It was jointly developed by physiotherapists, dieticians, social workers

and psychologists out of 5 Belgian hospitals. **METHOD:** The Health Profile is a short multidisciplinary screening tool, developed by cross hospital working groups and in line with the scientific literature. The instrument encompasses complaints from validated symptoms scales, and selected items from the EORTC-QL30 and the IPAQ. It's given to each patient without prior referral by the oncologist. Further steps in supportive care are based on a combination of the Health Profile (psychosocial, physical and nutritional complaints and risk factors) and the medical record (diagnosis and treatment plan). Referral for further assessment is based on criteria defined by consensus among experts in each discipline. **RESULTS:** We present detected needs and planned interventions for 798 patients screened with the Health Profile. Results are compared with the findings of a retrospective analysis of 284 medical records, conducted before the introduction of the Health Profile. We underline the benefits of using a common screening tool for all supportive disciplines as a starting point for planning supportive interventions: earlier detection of more varied needs, tailoring of interventions, patient empowerment. We illustrate the indirect benefits: more efficient use of qualified personnel, better mutual understanding, exchange of information and cooperation between caregivers of different disciplines, more coordinated care. **CONCLUSIONS:** A hierarchical model, in which the physician exclusively decides about supportive care interventions, leads to underdetection of needs, and a suboptimal use of knowledge available in many supportive disciplines. The Health Profile is a useful and clinically workable screening tool that allows for a better and more comprehensive detection of needs and complaints. A multidisciplinary screening tool is a prerequisite for the implementation of coordinated supportive care and secondary prevention. A common multidisciplinary screening tool for all disciplines, as opposed to separate monodisciplinary instruments, leads to direct and indirect improvements of the quality of care. **RESEARCH IMPLICATIONS:** The Health Profile is a first attempt to combine self assessment and risk factors from different disciplines into one instrument and to determine criteria for further assessment in each discipline. More research is needed on the development and validation of short, multidisciplinary screening tools. **CLINICAL IMPLICATIONS:** We clearly demonstrate the many clinical benefits of using a common multidisciplinary screening tool for supportive cancer care. Its clinical implementation proved to be manageable and promising. **ACKNOWLEDGEMENT OF FUNDING:** The Foundation against Cancer (Belgium).

IL 3.32.4

Building an Online Cancer Community

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BACKGROUND: Cancer patients and carers use the internet to gather information, understand their diagnosis, find out and make decisions about treatment, make anonymous enquiries, and seek support. Other studies have found that up to 65% of people access the internet in search of online support groups. The internet may be used not only to gather information and gain support from others, but also to make sense of the lived experience of cancer. **METHOD:** Contributions from 720 online participants from www.cancersupportonline.org.au were collected over a six-month period and a thematic analysis was undertaken. Two independent coders coded all messages to determine categories and added keywords to identify topics and message objectives. Messages were separated in categories and then major topics and message objectives were identified from the keywords. Messages were re-coded based on message objective and main topic. Content, themes and categories were then assessed from a semantic perspective. Users' demographics were also recorded. **RESULTS:** There were 878 messages posted and coded. Three quarters of the total participants were women. Almost half of the participants were young adults (18–44 years old) affected by cancer. Fifty-two percent of all messages were in the psychosocial category and a third in the medical category. The most important psychosocial topic for carers was the dynamics of their relationships. The online participants were more often providing rather than seeking information, while carers were more often seeking than providing information. **CONCLUSIONS:** This study confirms existing research into the use of message boards which indicates that in addition to receiving valuable information, people feel supported. Such interaction facilitates a psychosocial connection with others in a similar situation. Content analysis has revealed that the main themes involve information regarding treatment, emotional support, and medication/treatment side effects. Message boards are a useful tool for sharing information with others who have similar experiences and are a means by which people are able to both give and receive emotional support. **RESEARCH IMPLICATIONS:** Seeking information and support from online sources is associated with positive outcomes, including improved communication with health care professionals. Information seekers are more likely to prepare questions for their doctor and to ask more questions per consultation. They may be more likely to share their feelings, have an improved understanding, and greater knowledge. By actively participating in treatment decisions, patients may feel more empowered, with enhanced

coping strategies and improved self care. **CLINICAL IMPLICATIONS:** Health care and health care decision making have undergone a change in recent decades. Patients are now encouraged to participate in their own health care, and to independently seek out knowledge. It can be assumed that increasing access to online health information and peer support will serve to educate patients about their illness, motivate them to participate in their care, better evaluate treatment options, and will foster social support. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.33.1

Do Communication Skills Trainings Improve Behavior, Attitude and Patient Outcomes Equally? Evidence from a Systematic Review and Meta-analysis

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BACKGROUND: Communication with cancer patients is a challenging task for health care professionals and has been shown to be very important for patient's well-being. Previous reviews investigating the efficacy of communication skills trainings (CST) in oncology hold two main shortcomings: very few studies were included¹ and meta-analytic aggregation of effects of single studies were incomplete^{2,3}. This meta-analysis presents a systematic approach and update to determine the efficacy of CST in oncology. **METHOD:** A thorough search strategy for publications was developed (systematic search of references databases including EMBASE, PsycInfo, Medline and the Cochrane library) and studies considered in previous reviews were included. Additionally, studies citing key publications and contacts with experts were used for identification. 1507 publications were identified and 158 retrieved in full text for in-depth screening. Studies were classified according to their design: Level 1 studies used a control group and level 2 studies were uncontrolled evaluations. Results of controlled studies will be stratified by outcome (behavior, attitudes, work-related distress, patient outcomes and other) and aggregated in mean effect sizes. **RESULTS:** Thirteen controlled studies in 22 publications and 21 uncontrolled studies reported in 23 publications were identified and analyzed according to reported effects. Duration of courses reported in controlled studies ranged from 6 to 105 hours. Courses of uncontrolled studies lasted anywhere between one day up to a full year training program. Of the controlled studies, 18 reported effects of CST on behavior, 7 on attitudes, 3 on work-related distress and 8 included results on patient outcomes. Of uncontrolled studies, 14

reported effects of CST on behavior, 3 on attitudes, 2 on work-related distress and 2 included results on patient outcomes. **CONCLUSIONS:** Analyses of effect sizes for controlled studies are under way and will be reported at the conference. A variety of strategies are applied to teach communication skills to health care professionals working with cancer patients. Most publications focused on effects of CST on health care physician's communication behaviors and few on effects the communication had on the side of the patient. **RESEARCH IMPLICATIONS:** The area of evaluation of efficacy regarding CST is understudied, as only few controlled trials have been conducted. In addition, the assessment of more patient outcomes is a necessary next step in the process of improving understanding of the effects of CSTs. **CLINICAL IMPLICATIONS:** Cancer centers may be encouraged to provide regular trainings to staff in order to improve communication and further improve their care of seriously ill patients. However, the additional workload of long workshops may not be underestimated in busy clinical practice and further emphasizes the need to establish the optimal duration of CST. **ACKNOWLEDGEMENT OF FUNDING:** Swiss Cancer League for initiative and funding.

IL 3.33.2

Project COPE—Communicating with Oncology Patients Effectively: How Educating Physicians on End of Life Issues Helps Patients Have a Dignified Death

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BACKGROUND: Project COPE (Communicating with Oncology Patients Effectively) studied the efficacy of a comprehensive training program designed to educate medical and nursing staff with regard to effective and therapeutic ways of communicating with terminally ill patients. The study empirically measured the success of teaching medical staff to introduce treatment options, present difficult information to patients, and have end of life discussions. This program of research was designed to empower doctors to communicate most effectively with patients and family members as they traveled through the cancer journey. **METHOD:** Subjects included medical school residents and nursing students. Subjects were interviewed about their perceived ability to provide support to families; their comfort in talking about life-threatening illness to patients; and what they think would help them to effectively introduce such topics. Interviews were performed pre- and post exposure to a series of 6 structured in-service lectures. Content of the lectures

consisted of didactic material about the nature of emotional attachment in ill children; how to talk to traumatized children and families in a supportive and developmentally appropriate manner; and how to discuss end-of-life options. The protocol for these lectures was based upon published research about attachment disorder in traumatized children. **RESULTS:** The three variables of (1) *Level of Confidence*, (2) *Patience* and (3) *Understanding of Developmental Issues* were measured through Pearson *r* correlation coefficients. Results revealed that medical residents and nursing students who underwent the 6-week structured educational program reported significant improvements in two of the three variables as measured from pre- and post testing interviews. Based on Likert-style questionnaires, education of house staff produced changes in perceived quality of confidence when discussing issues of death and dying and in increased levels of patience with the child when at the bedside. **CONCLUSIONS:** It is our finding that teaching medical staff more effective ways to listen to, and understand, the mechanisms of metaphor and symbolic language in a dying child's play and dialogue greatly improves the care that he or she will receive. Medical staff involved in Project COPE approached the bedsides of dying patients with greater confidence and increased patience, and family members experienced the last days of their child's life to include positive and meaningful lessons for their family's future survival. Another conclusion that is drawn from this study is that, for a dying child, truth and open communication confer dignity on end of life. **RESEARCH IMPLICATIONS:** Findings suggest that researchers may wish to explore other variables that can negatively impact the communication styles of medical staff when working with dying children. In particular, an examination of the relationship between history of death in the medical staff's family of origin and their style of communicating with the ill child might render theoretical and practical solutions for the physician. Moreover, such research may allow psychologists to create greater psychosocial interventions for staff members working with this difficult population. **CLINICAL IMPLICATIONS:** Our findings suggest that training medical personnel through structured educational lectures is an essential part of treating the ill child and his family. The program greatly increases the patient's ability to discuss his needs and wishes with the medical team and his or her family. In addition, improving a physician's confidence, patience and understanding of the special needs of the dying child will improve the quality of the patient's last days of life, and aid the survivors' subsequent grief responses. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.33.3

The Transition from Curative to Palliative Care in Oncology—A Special Challenge Requires Special Communication Skills Training. Evaluation of a Specific and Individualized Training Concept—A RCT

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BACKGROUND: The transition from curative to palliative care is a challenging process—both for patients and physicians. Besides adequate information, patients and significant others need basic emotional support from their physicians. However, physicians lack training in this topic. We therefore conceptualized a communication skills training (CST) that a) contains specific aspects about breaking bad news and the transition to palliative care, b) addresses the expression of empathy and c) includes the needs of significant others. **METHOD:** The training workshop is based on personal learning goals that are extracted from video assessment. Additionally, transfer into daily communication routine is facilitated by individual coaching after the workshop. To verify the effects of the CST we are using a RCT including 40 physicians. They have been randomly assigned to a waiting control group and a training group. We assess 1) acceptance of the workshop, 2) self-reported effects by the physicians, 3) evaluation of the actor-patients and 4) the evaluation of the consultations by blind raters using a target-orientated checklist. In particular, we analyze the individually verbalized learning goals. **RESULTS:** Acceptance of the CST (1) was very satisfying; physicians considered e.g. the training very relevant and training methods to be very helpful. They stated that their benefit was very high. In physicians' self-ratings (2) the training group reported more knowledge, felt more comfortable and was more satisfied with their consultations. Physicians from the training group also felt better enabled to give emotional support but did not experience more emotional distress. We will also report data from the evaluation of the actor patients (3) and from the blind raters (4). **CONCLUSIONS:** To our knowledge, there is no preexisting CST on the transition from curative to palliative care. We also focused on the involvement of significant others in the consultation, a difficult communication task often present in every day life on the ward. The presented individualized CST is well accepted by physicians and enhances knowledge and the feeling of self-efficacy. Data from actor patients and from blind raters will allow further conclusions about the training effects. We also added new aspects of evaluation of CST by using individual learning goals as measurement of effect. **RESEARCH**

IMPLICATIONS: Researchers may be interested 1) in the topic of the CST—the transfer from curative to palliative care, involving significant others, 2) in the training methodology (maximally individualized in small groups) and 3) in the evaluation methodology: we present a specifically developed checklist for this CST and present the evaluation of the individual learning goals. **CLINICAL IMPLICATIONS:** Suppliers of RCT may be interested in the content as well as the methodological aspects (individualized training and evaluation). Oncologists may benefit from communication techniques concerning the transition from curative to palliative care. **ACKNOWLEDGEMENT OF FUNDING:** We thank the ‘Deutsche Krebshilfe e.V.’ (German Cancer Aid) for funding (Grant Nr. 107480).

IL 3.34.1

Does a Taxane-containing Adjuvant Chemotherapy (CT) Regimen Affect Quality of Life (QL) More Than Standard CT Regimens in Early Breast Cancer?: Results From the UK TACT Trial

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BACKGROUND: A modest survival benefit but increased toxicity has been shown for taxane-based chemotherapy (CT) over anthracyclines alone in adjuvant treatment of early breast cancer (EBC). The TACT Trial compared sequential FEC-docetaxel (FEC-D) to standard anthracycline-based CT (FEC or E-CMF; no significant benefit for the FEC-D regimen was shown. However, an exploratory analysis supported the worldwide evidence suggesting that some EBC subgroups may benefit from taxane-based therapy so quality of life outcomes remain important. **METHOD:** Patients from a subset of centres completed the EORTC QLQ-C30, BR23 & HADS questionnaires at baseline (Bs), and after CT cycles 4 & 8. Patients completed diary cards to assess distress or impact on daily activity for 15 toxicity items during Cycles 1, 5 and after cycle 8; all measures were completed at 9, 12, 18 & 24 months (M) follow-up. Impact of the CT regimens was compared via mean change scores from baseline at each time point. Differences in subscale scores ³10 points were considered clinically relevant. Standard clinical threshold scores for HADS were applied. **RESULTS:** 829 (418 FEC-D; 411 Control) patients

formed the QL sub-study; Questionnaire compliance was 99% at Bs, 83% at Cycle 8 and 78% at 24M. Analyses were based on 796 (401 FEC-D; 395 Control) patients; median age 49yrs (range 27–71). Post CT, FEC-D was associated with significant worsening of global QL and most functional domains with increased pain but not beyond 9M. Anxiety and depression were similar by regimen over time. Diary card toxicities were significantly worse for FEC-D during treatment; persistent effects at 24M affected control patients equally. Few differences between regimens reached clinical significance. **CONCLUSIONS:** Within the context of a general negative impact of CT on QL, the FEC-D regimen had a greater impact than control regimens throughout the 8-cycle treatment period, but these differences resolved by 24M and most QL parameters reverted to near baseline levels. Longer term effects of CT such as fatigue and joint pains may continue to impact on QL irrespective of the regimen used and warrant attention by clinical teams during follow-up. **RESEARCH IMPLICATIONS:** Standard QL measures are sensitive to specific chemotherapy effects but should be administered well beyond the end of treatment to capture longer-term symptoms. Use of this diary card, which describes the extent to which symptoms caused distress or interfere with function, was a valuable adjunct to evaluation of treatment toxicities and should be considered in future clinical trials of chemotherapy. **CLINICAL IMPLICATIONS:** Patients considering adjuvant CT should be thoroughly appraised of the range and severity of adverse effects of chemotherapy as well as the extent of potential benefits, before decision-making. They can be reassured that most effects are short term but they may need considerable support from the treating team to manage long chemotherapy regimens and late effects of treatment. Ongoing monitoring over 2 years is needed to ensure that QL is optimised. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK, Educational grants from Sanofi-Aventis, Pfizer and Roche.

IL 3.34.2

Cognitive Functioning After Allogeneic Hematopoietic Stem Cell Transplantation with Mild vs. Intense Neurotoxic Conditioning Regimens for Treatment of Hematological Neoplasias

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BACKGROUND: Mild to severe cognitive impairments have been found in several studies among patients receiving chemotherapy and hematopoietic stem cell transplantation (HSCT). However, comprehensive studies are needed to clarify the short and long term impact of different conditioning regimens and HSCT. In the present multicenter study, we assessed the prevalence of cognitive dysfunctions in the course of treatment and the role of neurotoxic intensity of conditioning regimens among patients with hematological neoplasias following allogeneic HSCT. **METHOD:** 102 patients (61% male) with mixed hematological neoplasias (41% acute myeloid leukemia) at an average of 48 years of age were assessed before (t0), 100 days after (t1) and one year following (t2) allogeneic HSCT. 36% of participants received intense neurotoxic conditioning regimens. A battery of valid neuropsychological tests was used covering the cognitive domains of attention, memory, executive and psycho-motor function. A z-score of $z \leq -1.4$ SD below the mean of zero was defined as cut-off for neuropsychological impairment in a test parameter and specific cognitive function. Measures assessing self-perceived cognitive impairments and psychological distresses were additionally applied. **RESULTS:** At each assessment time, significant impairments in several neuropsychological test parameters across all cognitive domains were found compared to published test norms. At baseline, participants had impaired cognitive functions in 50% of the test parameters. No significant change in the prevalence of cognitive impairments was observed over time except for a mild increase of psycho-motor dysfunction at t2. Patients who were classified as having intense neurotoxic conditioning were more likely to exhibit impairments in the domain attention at t1 ($P < 0.05$, $d = 0.53$), and showed a different course of attention over time compared to patients with mild neurotoxic conditioning ($P < 0.01$, $\eta^2 = 0.05$). **CONCLUSIONS:** A noteworthy amount of patients was classified as having cognitive impairments prior to HSCT. Possible explanations include the impact of the hematological cancer disease and invasive treatments applied prior to conditioning regimens and HSCT. No long term increase in cognitive impairments was found in the domains attention, memory, executive functions. Psycho-motor function, however, seems the only domain vulnerable to long term treatment-induced impairments. **RESEARCH IMPLICATIONS:** Results indicate the investigation of specific cognitive impairments following cancer treatments more closely related to daily activities and occupational requirements. Furthermore, prospective studies that include further follow-up assessments such as two and five years after HSCT would help to clarify the long term course of cognitive functioning in cancer survivors.

CLINICAL IMPLICATIONS: Results provide important implications for patient education prior to HSCT, indicating no increase in long term cognitive impairments. A decline in cognitive functioning was primarily limited to psycho-motor functions. However, subgroups of patients and in particular those with intense neurotoxic conditioning regimens might be at greater risk for developing short term cognitive impairments particularly in the domain attention. **ACKNOWLEDGEMENT OF FUNDING:** This multicenter study was supported by a research grant from the German José Carreras Leukemia Foundation.

IL 3.34.3

Relationship of Clinician-rated Toxicity and Quality of Life in Three Randomized Clinical Ovarian Cancer Trials

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BACKGROUND: In clinical oncology trials the National Cancer Institute Common Terminology Criteria (CTC) is the standard grading system for monitoring adverse events. The objectives of this study are to explore the relationship between clinician-graded toxicity symptoms and patient-reported quality of life (QoL); to determine the correlation between clinician-graded symptoms based on the CTC grading and patient-reported QoL outcomes; and to investigate the degree of agreement between physician-ratings and patients-ratings on common toxicity symptoms. **METHOD:** Patients enrolled in three ovarian cancer chemotherapy trials (OVAR 3 $N = 798$, OVAR 5 $N = 1.282$, OVAR 7 $N = 1308$) with stage IIB-IV disease participated in this study. Patients were randomized after debulking surgery according to the clinical trial protocols. Toxicity data were collected at each chemotherapy cycle using the National Cancer Institute CTC grading. QoL was assessed every other cycle using the European Organization for Research and Treatment of Cancer (EORTC) Quality of Life Questionnaire (QLQ-C30). Correlations between toxicity ratings and QoL ratings and the degree of agreement between severe adverse events and severe QoL impairments were performed. **RESULTS:** Leucocytopenia and neutropenia were

the most frequently reported hematologic toxicities. Alopecia, nausea, emesis/vomiting, constipation, peripheral neuropathy, myalgia, pain, and dyspnea were the most frequently reported non-hematologic symptoms. The correlation between CTC grading and the QLQ-C30 functioning scales were weak. **CONCLUSIONS:** The study showed, that the QoL measurements can detect severe adverse events earlier than the CTC system. Clinicians should not entirely rely on the CTC grading to capture information related to patient well-being, but consider patient-reported symptoms or changes in QoL as well. **RESEARCH IMPLICATIONS:** The inclusion of patient-reported outcome measures in clinical trials may be a useful approach to assess treatment-related symptoms in addition to the common toxicity documentation. Since the CTC has the potential for under-reporting especially subjective symptoms, the patient's perspective should be considered as the gold standard and validated QoL measures or patient-reported symptom assessment scales should be used. **CLINICAL IMPLICATIONS:** The disparity between clinician-graded symptoms and patient-reported symptoms may have serious clinical implications. The CTC guides treatment decisions and patients may not receive the required supportive care interventions during chemotherapy. There is evidence that patient-reported outcome assessments provide significantly more toxicity symptoms than the CTC reporting system. **ACKNOWLEDGEMENT OF FUNDING:** None.

IL 3.35.1

Meta-analysis of Moderators of Psycho-oncology Therapy Effectiveness: 'It's the Sick Who Need a Doctor'

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BACKGROUND: Although psycho-oncology is more than 30 years old, no comprehensive investigation of variables moderating adult psycho-oncological therapy effectiveness has been previously undertaken due to the complexity of these variables and the variety of therapy and research approaches in the extant literature. We investigated the impact of a large range of socio-demographic, psychological, medical and therapy related potential moderators by meta-analysis of controlled trials. Psychological outcomes measured were anxiety, depression, and general distress. **METHOD:** The search for primary studies included the reference lists of previous meta-analyses, selected reviews, and an extensive electronic search for both published and unpublished literature, resulting in the examination of more than 3000 records. The dataset comprised 150 studies,

including pseudo-random and naturalistic experimental designs, many unpublished studies and additional unpublished data provided by authors. Preliminary meta-analyses of external and internal validity threats were undertaken to screen research quality, exposing two trial design confounds. The dataset was cut accordingly before substantive analyses were undertaken. **RESULTS:** Main effects for patients with established distress before therapy were medium-strong at $g = 0.52-0.70$. Broad treatment types (education, relaxation, CBT, expressive-supportive therapies) were assessed for impact and trajectory of effect, and a sense of their roles and value in relation to each other and to distressed patients and patients generally were obtained. It was found that more distressed patients produced stronger therapy effects, translating (generally) into patients with cancer at sites other than the breast and at particularly stressful and demanding points in their cancer experience, and patients who are more socially isolated (poor, older, single, men). **CONCLUSIONS:** The debate as to whether therapies should be directed towards the distressed or preventatively to all cancer patients is advanced by the findings that baseline distress or, to a lesser degree, the screening out of recruits with complex psychological needs moderated results produced stronger effects. The prominence of some socio-demographic and disease variables in moderating results also provides important guidance for refocusing future research and practice. Findings regarding the strengths of different therapy types relative to psychological outcome, certain demographic features, and their effectiveness trajectories should also be useful in designing more effective therapy packages and will be discussed. **RESEARCH IMPLICATIONS:** With appropriate exposure, this study could help re-orient psycho-oncology therapy research and practice towards socially and medically more distressed patient groups. Researchers will be challenged to design scientifically acceptable investigations around the social and medical constraints affecting these populations, including the smaller numbers representing many less studied disease sites and stages, social isolation, poverty, and debilitating medical conditions. **CLINICAL IMPLICATIONS:** Those engaged in providing psycho-oncological therapies will also be challenged to find ways to reach the more distressed patient groups. There are roles and principles applicable to all of the caring professions, and to voluntary groups, in achieving this. Results concerning the strengths and effectiveness trajectories of respective therapy types will be of particular interest to clinicians/therapists. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Society of New Zealand.

IL 3.35.2

Impact of the Cancer Transitions: Moving Beyond Treatment Program on Health-Related Quality of Life and Lifestyle ChangeM. F. Miller¹, M. Golant¹, J. Taylor¹, I. Ahmed¹, J. Buzaglo¹, H. Justice², C. Neal²¹The Wellness Community, Washington, DC, United States, ²Lance Armstrong Foundation, Austin, TX, United States

BACKGROUND: There is an urgent need for research and programming addressing the medical, physical and emotional challenges that cancer survivors face within one year after they complete treatment and leave the support of the cancer care system. **METHOD:** *Cancer Transitions: Moving Beyond Treatment* was piloted at ten centers across the United States in 2007 (phase I) and 2008 (phase II). A total of 151 survivors of breast ($n = 76$), blood ($n = 16$), gynecologic ($n = 22$), lung ($n = 8$), colorectal ($n = 9$), prostate ($n = 4$), and other ($n = 15$) cancers participated in the program. The intervention was a six-week, community-based program for cancer survivors including education and support on medical issues, exercise, nutrition and emotional needs that survivors face after treatment. Pre- and post-test questionnaires were completed on site and included the SF-12 health survey, an impact of cancer scale, the International Physical Activity Questionnaire, and a fat- and fiber-related dietary behavior questionnaire. Three and 6 month follow-up questionnaires were mailed. Participation rates at the six sessions ranged from 75–94%. **RESULTS:** Following the intervention, there was a significant increase (mean \pm SE) in the mental component summary score of the SF-12 (2.4 ± 0.8 , $p = 0.002$), and the increase was maintained at 3 months (2.7 ± 1.0 , $p = 0.01$) and 6 months (2.9 ± 1.2 , $p = 0.023$). There were significant increases over time in the role physical ($F = 7.49$, $p < 0.001$), vitality ($F = 4.26$, $p = 0.0058$), social function ($F = 3.94$, $p = 0.0090$) and the role emotional ($F = 5.54$, $p = 0.0010$). There was a reduction in the negative impact of cancer; the greatest impact was on health-related worry with a significant ($p < 0.01$) decrease at all time points. Participants also reported less negative changes to their body, lower life interference, and a reduction in their negative outlook on life. There was a significant increase in physical activity, and, during Phase II, a significant improvement in fat- and fiber-related dietary behavior. **CONCLUSIONS:** Results from the pilot study of the Cancer Transitions: Moving Beyond Treatment program showed that participants experienced positive changes following the 6-week intervention in health-related quality of life and lifestyle change and at 3- and 6-month follow-up. Cancer survivors participating in the program felt a significant

decrease in health worry as well as a significant increase in quality of life around physical, mental and social functioning. Participants increased physical activity and improved fat- and fiber-related dietary habits. **RESEARCH IMPLICATIONS:** These findings are worthy of replication and warrant further investigation with a larger sample. A replication study has begun in five sites in Canada. **CLINICAL IMPLICATIONS:** The Cancer Transitions intervention will be an important addition to community-based programs for meeting post-treatment needs of cancer survivors and is currently being introduced to and adopted by community-based organizations and cancer centers across the United States and internationally in Canada. **ACKNOWLEDGEMENT OF FUNDING:** Lance Armstrong Foundation.

IL 3.35.3

Interventions for Fatigue During Curative Cancer Treatment: the Effect of a Nursing Intervention and Cognitive Behaviour Therapy in a RCTM. M. Goedendorp¹, M. F. M. Gielissen¹, M. E. W. J. Peters², C. A. V. Verhagen², G. Bleijenberg¹¹Expert Centre for Chronic Fatigue, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands, ²Medical Oncology, Radboud University Nijmegen Medical Centre, Nijmegen, Netherlands

BACKGROUND: Fatigue is a distressing symptom and up to 99% of the cancer patients experience fatigue during cancer treatment. The general idea is that physical activity is important for managing fatigue. Psychosocial interventions specifically for fatigue are promising, but the number of randomized controlled trials (RCTs) are scarce. Our aim was to evaluate two types of interventions during curative cancer treatment in a RCT, comparing them with usual care. **METHOD:** Participating cancer patients were randomized to a brief nursing intervention (BNI), cognitive behaviour therapy (CBT) or usual care (UC), and were assessed before cancer treatment after six months. Fatigue was measured using the Checklist Individual Strength. The BNI consisted of two sessions and focused on increasing and maintaining physical activity during cancer treatment. The CBT consisted of an average of six sessions. In addition to increasing and maintaining physical activity, the CBT focused on regulating the sleep-wake cycle, accepting the consequences of cancer and treatment, managing the experience of cancer in relation with others, and challenging to make future plans. **RESULTS:** Seventy-seven participants were assigned to the BNI, 82 to the CBT intervention and 81 to the usual care group. Results of ANCOVA showed that the CBT group was

significantly less fatigued after cancer treatment compared to the UC group ($p < 0.05$), but no difference was found between BNI and UC ($p = 1.000$). **CONCLUSIONS:** CBT specifically for fatigue is an effective intervention to manage fatigue during cancer treatment. The nursing intervention, which was brief and focused on physical activity, was not effective for fatigue. **RESEARCH IMPLICATIONS:** The role of physical activity in managing fatigue during cancer

treatment should be determined. Future research should reveal if the effect of CBT will be maintained at follow-up. **CLINICAL IMPLICATIONS:** This study shows that a more broad intensive intervention specific for cancer fatigue can relieve fatigue shortly after cancer treatment. A short intervention that only focussed on physical activity was not sufficient. **ACKNOWLEDGEMENT OF FUNDING:** Funding for this study was provided by the Dutch Cancer Society.

Poster Presentations

P1.1.1

Class Matters: Class-based Patterns of Health Care Navigation After a Pediatric Cancer Diagnosis

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BACKGROUND: Many prominent health disparities scholars have hypothesized that one important mechanism linking low SES with negative health outcomes is differential patterns of health care navigation among high and low SES patients. This research examines families of pediatric cancer patients who have the same ‘access’-care provided by the same providers in the same settings—and finds that there high and low SES families enact systematically different patterns of health care navigation. **METHOD:** First, participant observation was conducted by researchers as volunteers at a pediatric cancer charity for a thirteen-month period. Second, in-depth interviews with twenty-five parents of children who have cancer were conducted. Third, five families were followed over a sixth month period, including a total of thirty interviews with parents and over ninety hours of observation in family homes, while families were admitted to the hospital and as they interacted with health care providers. A nuanced conceptualization of SES was used which measured each families’ income, wealth, job flexibility, benefits, experience derived from work and education, class based culture. **RESULTS:** Results reveal that there are systematically distinct class-based patterns of navigating the health care community after a pediatric cancer diagnosis. Findings indicate that parents draw from their class-based approaches to child rearing in their every-day life when interfacing with the health care community. These class-based scripts have a strong influence on how they ‘make sense’ of their child’s illness, advocate for their child, make treatment decisions, communicate with health care providers, follow treatment protocols, and parent their sick child. This poster will focus on findings that identify the distinct features of class-based patterns of health care navigation.

CONCLUSIONS: Recent scholarship highlights the strong association between an individual’s SES and their health outcomes, yet there is little understanding of the pathways that produce this link. This research underscores the need to examine families’ lives in context to fully understand their health care behavior. Through innovative methodology, it finds that there are distinct, class-based patterns of navigating the health care community after a pediatric cancer diagnosis. It provides a theoretical framework to understand why and how families make health care decisions after a pediatric cancer diagnosis. **RESEARCH IMPLICATIONS:** Scholarship on health disparities has been lacking a clear theoretical framework. This research provides theory from which to derive future hypothesis: that class-based patterns of child rearing extend to families’ interaction with the health care community and provide cultural scripts for how parents navigate the health care system. This research also provides insight on how to measure SES in health research, and how to design studies that capture the complicated factors influencing health care navigation. **CLINICAL IMPLICATIONS:** This research provides insight on opportunities for intervention to help high-risk families cope with pediatric cancer. The interview and observation data provide rich accounts of families’ experiences coping with pediatric cancer, and the obstacles they face in the process. Opportunities and implications for intervention will be discussed in the poster. **ACKNOWLEDGEMENT OF FUNDING:** The Mark Diamond Research Fund, The State University of New York at Buffalo.

P1.1.2

Alternative Therapy in Precancerous Lesions of the Uterine Cervix: A Cameroonian Experience

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University Hospital Center, Yaounde, Cameroon

BACKGROUND: Cameroon is an underdeveloped country with a population of approximately 17,000,000 million. 12 000 new cases of cancers are

diagnosed in the country each years and 11% of these are cervical cancers .7HPV vaccine is not available. Worldwide, low grade precancerous lesions can resolve spontaneously and high grade dysplasias need cryotherapy or surgical excision. Alternative therapy have shown its efficacy in cancerology. In the other hands, honey has been used for the treatment of many diseases. **METHOD:** In this cross sectional non control study, we used honey in the treatment of 108 precancerous lesions of the uterine cervix. After informed consent, women were included after a free cervical cancer screening campaign. Women with precancerous lesions had to choose between cryotherapy, surgical excision and application of honey on the cervix for three months. **RESULTS:** 95% of the patients had normal pap smears after three months of treatment. 5% of the patients had persistent precancerous lesion of the cervix after 3 months of follow up and were sent for cryotherapy or surgical excision. None of the patient include in this protocol was lost of sight. **CONCLUSIONS:** We can conclude that the results obtain from this preliminary study are due to honey but the high percentage of regression of precancerous lesions observed in our series shows that honey therapy can play a role in cervical cancer. **RESEARCH IMPLICATIONS:** We will carried out a control trial on honey therapy on precancerous lesions of the cervix in this low income setting. **CLINICAL IMPLICATIONS:** This alternative therapy can be useful for the treatment of precancerous lesions of the cervix in low income countries after further studies. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.1.3

QUIT-tobacco Programs: Initiatives of Community NGO to Control Respiratory Cancer in Tribal/Rural India

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BACKGROUND: Indian Farmers/Adolescents using crude-tobacco leading to high incidence of respiratory-cancer . Priority must high for this issue due to high mortality/morbidity. Developing-nations have less expertise in tobacco-deaddiction. we used community-volunteers to reduce tobacco-consumption de-addiction-project [QUIT-tobacco-movement]. **METHOD:** 14 villages from rural-India included. $n = 378$, age 14–35. Tobacco-addicts graded clinically. 24 months project. Tobacco-users counseled for tobacco-consumption, educational/social factors. Evaluation questionnaire analysis done. Traditional faith-healers incorporated for better impact. Surprisingly 74% used tobacco due to psychological reasons [stress,

fatigue, false sense of well-being]. 23 tobacco-users dropouts from study. This was unique initiative because it was designed & carried out by our NGO-volunteers from trained in counseling. **RESULTS:** 321 participants showed positive attitude towards quitting tobacco after counseling sessions [4-sessions in 2 months-period]. Of these 284 subjects quit tobacco for >8 weeks. of these 39 subjects able to abstain for short period [4 weeks] but eventually restarted habit. Post-project-surveillance showed need for community help Rehabilitation-programs. Of 321 who responded positively majority [287] adolescents started using tobacco due to peer pressure [84%], imitation of tobacco advertising on media [14%], Influenced by films. TV [58%]. **CONCLUSIONS:** Community-NGO-volunteers are cost-free NGO-resource for tobacco-control-projects, serve as effective-channel to implement tobacco-control-program. NGOs in developing-nations should utilize our approach to reduce cost in QUIT-tobacco-programs for better impact in rural/tribal areas where qualified Oncologists/psychiatrists are rarity. Government/NGOs has to carry out Inflammatory airway-diseases interventional programs with available resources with above approach. We intend to form Umbrella group of NGO activists to workout planned approach to this issue at IPOS-vienna-2009 congress. **RESEARCH IMPLICATIONS:** Developing nations have little manpower/resources/technologies for QUIT-tobacco-movement. With help/guidance of 11th-IPOS we need to train activists from resource-poor-nations in counseling-services. Cancer-care-givers needs to be sensitized towards psycho-social issues of cancer-sufferers. Especially in resource-poor-developing-nations there is urgent need to familiarize them to mental trauma/humiliation suffered by cancer diagnosis. By interaction with senior-researchers at IPOS-Vienna-congress we shall carry back expertise/knowledge from IPOS congress back into our NGO community in rural/tribal India. **CLINICAL IMPLICATIONS:** At 11th IPOS I as NGO-representative shall exchange our concerns/experiences/difficulties about psycho-social needs of cancer-sufferers with congress-participants. IPOS-participation will spread our activities in collaboration with conference participants. Analysis of international trends in psycho-oncology & its correlation with our study will help clinicians develop a plan to tackle such issues in developing-nations. Presentations by leading cancer researchers on issues of breast cancer at Vienna-congress will also modify our future action plan of our Community-work. **ACKNOWLEDGEMENT OF FUNDING:** This was a project designed & conducted by volunteers of this cancer NGO in rural/tribal India. We did not receive any funding. All 12 volunteers, 2 nurses & one psychologists [Abstract presenter] gave their free services for this project. All breast cancer patients were those who returned to villages after

chemo/surgery in city hospitals. This was a unique effort 'As a Community study without any funding resource'.

P1.1.4

Culturally Relevant Cancer Risk Counseling for Underserved Latinas

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BACKGROUND: The primary purpose of this project was to evaluate the effects of a culturally relevant genetic cancer risk assessment (GCRA) intervention on a population of underserved Latinas, and examine a social-cognitive-cultural model of post-GCRA cancer screening and prevention behaviors that can guide future GCRA and psychosocial interventions for this population. **METHOD:** Four focus groups were conducted in separate single sessions consisting of Latinas that have undergone GCRA. Participants were recruited through a letter of invitation. Following informed consent, participants completed a demographic questionnaire that included items assessing perceived cancer risk and satisfaction with GCRA. The focus groups entailed a facilitated discussion of the key study variables and other culturally relevant issues that may impact the GCRA intervention. **RESULTS:** Data suggest that the pre-GCRA period may be the most distressing time for these women. Perceived sense of lack of information and uncertainty about what to expect appeared to play a key role in distress. Most women initially had negative expectations (i.e. expecting the worse or a bad outcome), but ultimately felt hopeful that they could learn more about the GCRA process and what it meant for them. The overwhelming majority were extremely satisfied with the appointment experience. Information was cited as the primary contributor to positive psychosocial outcomes—specifically increased locus of control and self-efficacy. The major cultural themes identified in the focus groups were fatalism/destiny, religious and spiritual coping, how cultural attitudes and belief influence lack of information, community awareness, and public health issues. **CONCLUSIONS:** Preliminary data indicate that the pre-GCRA window may be most distressing for this population indicating that this may be the most appropriate time for psychological intervention. The time period prior to GCRA can provide insight into social, cognitive and cultural factors that may play a role in how underserved Latinas understand hereditary cancer risk information and subsequently try to obtain and implement cancer screening and prevention recommendations. **RESEARCH IMPLICATIONS:** This study helps address gaps in applied

cultural and behavioral cancer genetics research on Latinas at risk for hereditary breast cancer and ovarian cancer. **CLINICAL IMPLICATIONS:** Findings will assist in the design of culturally-relevant interventional studies for this rapidly growing population. **ACKNOWLEDGEMENT OF FUNDING:** Redes en Accion: The National Latino Cancer Network/National Cancer Institute.

P1.1.5

Quality of Life in Lower Income, Primarily African American Cancer Survivors

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BACKGROUND: While racial/ethnic cancer health disparities in incidence, treatment, and mortality are well documented, the psychosocial characteristics of underserved, minority cancer survivors are poorly understood. In this study, we explored quality of life in low income, primarily Black survivors in treatment or follow-up for a first cancer diagnosis. The Functional Assessment of Cancer Therapy-General Scale (FACT-G), a validated measure in psychooncology, was used to measure health-related quality of life (QOL). **METHOD:** We examined baseline data from an intervention study designed to meet the informational needs of low income cancer survivors. QOL was measured by three subscales of the FACT-G: social/family well being (SWB, scale range 0–28), functional well-being (FWB, scale range 0–28) and emotional well-being (EWB, scale range 0–24). QOL subscales were examined by using *t*-score conversions to obtain a normative comparison to a reference group of cancer patients. Regression analyses examined the relation between QOL subscales and potential correlates (e.g., age, marital status, education, cancer type, gender and time since diagnosis). **RESULTS:** Of the 106 participants (68% female; 77% Black), the mean age was 53 years (± 10). The average annual household income was less than \$10,000. The most common diagnoses were breast (37%) and colorectal (15%) cancer. Participants reported a mean of 22.0 ± 5.8 on SWB; 17.1 ± 7.3 on FWB; and 19.1 ± 4.8 on EWB. Converting to *t*-scores yielded respective SWB, FWB and EWB scores of 49.8, 47.2 and 50.1. Older age was associated with better FWB, longer time since diagnosis with better SWB, and being female, married and having more education was associated with better EWB (*p* values .05). **CONCLUSIONS:** The quality of life among our sample

of low income, predominantly African American cancer survivors, as measured by FACT, compared well to the more heterogeneous reference group of adult cancer patients. Older individuals and survivors further away from diagnosis reported the highest functional well-being and social well-being, respectively. Our results suggest that educational attainment, marital status, and gender were associated with emotional well-being. Cancer type and time since diagnosis, however, were not related to indices of health related quality of life. **RESEARCH IMPLICATIONS:** These findings suggest the need for further research to identify the characteristics contributing to QOL success, including the mechanisms by which certain characteristics (e.g., being older) appear predictive of better outcomes. Prospective studies will be important in understanding these cross-sectional results. Alternatively, the FACT-G may not adequately measure the quality of life domains most relevant to this group of cancer survivors and further research into its use in this population is needed. **CLINICAL IMPLICATIONS:** Practitioners working with low income, primarily African American cancer survivors should continue to routinely assess QOL in this population, but remain cognizant that assessment tools may not fully capture QOL of domains important to this group of survivors. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by Cooperative Agreement Number U48/DP000567-1 from the Centers for Disease Control and Prevention. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the Centers for Disease Control and Prevention, the Department of Health and Human Services, or the U.S. government.

P1.1.6

Risk of Cancer and Information Among Patients with Severe Psychiatric Disorders

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BACKGROUND: Patients with severe psychiatric disorders often show impairment at cognitive and interpersonal levels, poor compliance with health style and at-risk behavior. This can often expose them to an increased risk to develop physical illness, including cancer. In fact, studies have shown that the incidence of cancer is higher among patients with schizophrenia and

severe depressive disorders than in the general population. **METHOD:** The study was carried out in Ferrara, Italy and was based on a comparison between a group consisting of patients with severe psychiatric disorders followed by the Mental Health Department and a control group composed by subjects with no psychiatric disease recruited in the community general practices. A semistructured interview examining the subjects' medical history, history of cancer in the family, physiological and/or medical factors related to cancer incidence, life style and risk behaviour (e.g. smoking habit, number of cigarettes, alcohol habits, diet), adherence to screening programs for cancer, attention to and recognition of physical symptoms was administered to all participants. A short questionnaire, the Knowledge for Cancer Risk (KCR), consisting of 12 true/false items investigating the subjects' knowledge about behavioural risks of cancer, was also completed by each subject. **RESULTS:** 185 patients (80 men and 105 women) with severe psychiatric disorders (i.e. schizophrenic spectrum disorders, chronic affective disorders) and 173 healthy subjects (82 men and 91 women) participated in the study. Familiarity for cancer was slightly higher among psychiatric patients than healthy subjects, especially for lung and breast cancer ($\chi^2 = 4.4$, $p = 0.01$). Psychiatric patients differed from the control group regarding being smokers ($\chi^2 = 36.5$, $p = 0.01$), living with heavy smokers ($\chi^2 = 19.3$, $p = 0.001$), doing little physical exercise ($\chi^2 = 11.4$, $p = 0.001$). No difference was found on participation to screening tests (mammography, fecal blood test, PAP test). Psychiatric patients showed lower scores (indicating poorer knowledge) on the KCR than controls ($t = 3.7$, $p = 0.01$). **CONCLUSIONS:** This study has demonstrated that patients with severe psychiatric illness had a higher behavioural risk for cancer compared to the control group. This was related to a higher prevalence of smokers and a larger exposure to passive smoking observed in the research group vs controls. Other important risk factors was little physical exercise. Attention by health services (e.g. psychiatry, community medicine) seemed however quite good with no differences between patients and healthy subjects regarding screening campaigns for cancer. Psychiatric patients, however, demonstrated to have misinformation about the risk factor for cancer. **RESEARCH IMPLICATIONS:** The study shows the need for education and training on the common risk factors for cancer in order to reduce the risk of developing a devastating illness in those who already suffer from debilitating mental disorders. More research is needed on how to networking community medicine, oncology prevention programs and psychiatry research areas as far as this specific subjects is concerned. **CLINICAL IMPLICATIONS:** Clinical implications regard

the necessity of having a good organization in the health system, as it seems to be in our center, one of the first Italian towns where the psychiatry reform took place starting the beginning of the 70's. Marginalized segments of the populations should receive optimal care from the medical as well as from the psychiatric viewpoint. Commitment in educational programs aimed at changing at-risk behavior is necessary in mental health systems. **ACKNOWLEDGEMENT OF FUNDING:** The authors acknowledge the University of Ferrara, the Department of Mental Health and the Local Health Agency in Ferrara, and the Fondazione Cassa di Risparmio di Ferrara for their support in this study.

P1.1.7

Community Based Participatory Research Strategies: Designing a Cancer Outreach Program in Puerto Rico

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BACKGROUND: Developing effective cancer outreach programs in Puerto Rico presents a unique challenge due to low levels of health literacy and few existing resources. This study partnered the Ponce School of Medicine (Puerto Rico), the Moffitt Cancer Center (Florida), and local community leaders to develop a cancer outreach program using a community-based participatory research (CBPR) approach. All partners are working together to define specific cancer related issues and to articulate a plan to target them. **METHOD:** Forums and focus groups were conducted with various community leaders including cancer survivors, healthcare providers, caretakers and representatives from community and faith based organizations. A quantitative psychosocial needs assessment was also performed. The methods used served the purpose of identifying needs and barriers related to cancer services, as well as to identify community stakeholders that will become part of a community steering committee. Forums and focus groups were audiotape and transcribed; the results were coded for key themes, using a grounded theory approach. The information gathered is being disseminated among the community in order to prioritize on cancer related issues. **RESULTS:** Among the issues identified is the limited access Puerto Rican cancer survivors face to health care and supportive services. Another identified concern was the centralization of services in the island's metropolitan area compared to rural

zone, elevated treatment costs, and limited insurance coverage. Cancer survivors emphasized psychological and spiritual support needs and stressed the important role of the health care provider as part of their support network. **CONCLUSIONS:** In spite of the challenges that arise through this type of collaboration; the partnership has fostered co-learning experiences among the community and the academia. The partnership helped us learn about different strategies for the development of solid collaborative and mutual relationships with the affected community. By using multiple strategies of data collection we learned that many of the issues brought forth by the community are closely related to disparities in terms of health care access. Also, we realized that outreach efforts must consider the delivery of professional supportive services such as psychological and spiritual help as well as support groups. **RESEARCH IMPLICATIONS:** Research paradigms that integrate community members and researchers may help respond to health disparity challenges. **CLINICAL IMPLICATIONS:** Clinicians are an important component of the cancer survivor/patient support network. Part of the role as a professional supporter is to assess the needs and barriers that may interfere with their quality of life. **ACKNOWLEDGEMENT OF FUNDING:** This project was supported by the National Cancer Institute/NIH Grant U56CA126379.

P1.1.9

Initial Steps for Improving Services to Cancer Survivors in a Community Mental Health Center

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BACKGROUND: Numerous challenges exist for the provision of services to cancer survivors within community mental health centers (CMHC) (e.g., clinician awareness, training, lack of insurance coverage for this type of service). This presentation will describe suggestions for addressing these challenges based on efforts in a rural mental health center in the Midwestern United States. **METHOD:** Data from a recent examination of cancer identification in intake assessments at a CMHC are compared to representative national prevalence rates to identify possible issues surrounding awareness of cancer survivorship. Potential areas for improvement are identified, along with suggestions for augmenting the intake process to enhance detection of survivorship status. **RESULTS:** This presentation will describe the modification to the intake procedures of a CMHC designed to improve the identification of cancer survivorship while remaining sensitive to the efficiency of the intake

assessment procedure. **CONCLUSIONS:** Plans for future steps to further integrate psycho-oncology services within a CMHC will be discussed. **RESEARCH IMPLICATIONS:** The study of cancer survivorship in individuals with mental health conditions is essential, given the high incidence of serious health conditions in those affected by serious mental health problems. However, this remains an underserved and understudied population of cancer survivors. This presentation will identify steps that are necessary to the integration of psycho-oncology research in community mental health settings. **CLINICAL IMPLICATIONS:** CMHCs provide mental health services to consumers who are largely underprivileged and often underserved medically. Within these settings, issues of cancer survivorship may go unassessed, unrecognized or attributed to other presenting illnesses. This presentation will describe the implementation of an enhanced clinical assessment procedure designed to more consistently identify cancer survivors within CMHC consumers. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.1.10

Prevalence of Cancer Survivorship in Community Mental Health Center Consumers: Identification by Consumers Versus Clinicians at Clinical Intake

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BACKGROUND: Cancer survivors comprise nearly four percent of the U.S. population and survivorship issues are receiving increasing research and clinical attention. However, for those cancer survivors who are consumers of mental health services at a community mental health center (CMHC), survivorship issues may go unrecognized. This may be, in part, due to the under-identification of cancer survivors in the consumer population by CMHC clinicians. **METHOD:** The initial intake assessments of consumers at a rural, Midwestern community mental health center are examined to evaluate the prevalence of cancer survivorship. All clinician-conducted intake assessment reports for a period of 15 months have been reviewed to determine those cases in which a prior cancer diagnosis was noted. Consumers also completed a self-report questionnaire including items pertaining to their personal cancer history. **RESULTS:** The presence or absence of a cancer history, as reported in the consumer questionnaire, will be examined in relation to the documentation of cancer survivorship in the intake report of the CMHC clinician. Through statistical analysis, this study will indicate the reliability of the clinician identification of

cancer survivorship in mental health consumers. **CONCLUSIONS:** This presentation will examine the correspondence between self-reported and clinician-reported prevalence of cancer survivorship within a sizable sample of consumers of mental health services at a rural CMHC. **RESEARCH IMPLICATIONS:** This study provides a basis for future research examining cancer survivorship within the chronically underserved population of individuals affected by serious mental illness. **CLINICAL IMPLICATIONS:** These data speak to the importance of assessing cancer survivorship as an element of a comprehensive initial assessment. It is essential for treating clinicians to hold an accurate appreciation for the impact of cancer and survivorship issues when delivering treatment to those affected by mental illness and cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.1.11

The Dynamics of Communicating Terminal Diagnoses Within the Hispanic Community: Integrating Hospice into the Picture

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BACKGROUND: This study explores how physicians communicate information regarding a terminal diagnosis and a hospice referral with Hispanic patients. Physicians have the burden of discussing a terminal diagnosis with their patients. This responsibility is further complicated when communicating with Hispanic patients who have language barriers, immigration concerns and different cultural views about end of life issues. Through the physicians' discourses, themes emerged concerning individuals' and family members' beliefs regarding a terminal diagnosis and treatment options. **METHOD:** A qualitative in depth exploratory study was conducted by recruiting ten physicians in a convenience sample. The physicians in the study represented diverse cultural backgrounds reflecting the patterns of use by Hispanics. Demographic data pertaining to the physician's age, gender, place of birth, length of time in the United States, religion, years of practice and area of specialty was attained. Tape-recorded in-depth, open-ended, semi-structured interviews were conducted with physicians and transcribed. Open coding and thematic categorization of these responses were included in the qualitative content analysis, and translated interviews were analyzed seeking to substantiate salience of themes across the sample. **RESULTS:** The physicians' responses provided valuable insights regarding terminal illness and hospice referrals with patients and families within the Hispanic community. The findings

indicate the need for training opportunities and education for physicians about health beliefs and decision-making processes among Hispanics. This study draws attention to key components of health care which encourages physicians to identify cultural beliefs, language barriers and the role of family members in decision making when discussing a terminal diagnosis and a hospice referral with Hispanics. Hospice referrals and health care decisions among Hispanics are intertwined within the context of the physician, the patient and their family. **CONCLUSIONS:** Physicians play a key role in educating Hispanic individuals about their terminal diagnosis and hospice services, thereby underscoring their need of education, skills and tools in order to effectively work with the Hispanic population. The research outcomes illustrate how limited English proficiency and lack of hospice literature in Spanish as well as limited access to Spanish speaking health care providers intensify the Hispanic terminally ill vulnerability when exploring health care treatment choices with their families. The physicians in the study identified the Hispanic community's need for education about hospice services including culturally relevant audio and visual materials in Spanish. **RESEARCH IMPLICATIONS:** Future research related to Hispanics' utilization of treatment recommendations in oncology is essential since physicians identified having limited knowledge and skills in discussing terminal diagnoses with Hispanic patients. Additional research pertaining to physicians' educational training regarding communication of end of life issues and hospice referrals is also needed. Research exploring effective strategies for Hispanics regarding communication with physicians is necessary. Cultural competence training for physicians regarding Hispanic terminally patients and families will also be advantageous. **CLINICAL IMPLICATIONS:** When discussing end-of-life issues with Hispanic patients and their families, health care providers need to be knowledgeable of barriers that emerge due to limited knowledge of language, immigration status, cultural factors and beliefs related to end of life decisions. Information is needed regarding the cultural implications of a terminal diagnosis and a hospice referral with Hispanics, since the concept of hospice may be foreign; therefore a detailed discussion about the services must occur. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.1.12

Improving Outcomes for Young Adults with Cancer: A Collaborative Model

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BACKGROUND: Over 70,000 young adults are diagnosed with cancer annually in the United States. The strides made in cancer treatment have generally bypassed this group and while both younger and older patients are seeing improvements in survival rates, the rates for young adults have improved far less, and the gap is worsening. This lack of progress in survival improvements leaves young adults diagnosed with cancer today having a worse prognosis than those diagnosed 25 years ago. **METHOD:** The Lance Armstrong Foundation developed an innovative response to combat these disparities in quality cancer care. The **LIVESTRONG Young Adult Alliance (LSYAA)** is a coordinated, collaborative and multidisciplinary effort to address those factors that contribute to the unequal burden of cancer experienced by young adults. LSYAA membership includes 177 representatives from 110 hospitals, government agencies and advocacy organizations working together to achieve common goals. Their projects are based on the recommendations and strategies of the Adolescent and Young Adult Oncology Progress Review Group (PRG), a group of nearly 100 prominent members of the global scientific, medical, and advocacy communities. **RESULTS:** Projects completed to date by the LSYAA are cross-cutting and impact disciplines across the cancer control continuum. Examples include creating of a blueprint for professional development in the field of young adult oncology; documents for IRB members to use in the review of protocols targeting this age group; a catalogue of existing patient navigation programs that serve the young adult cancer community; six grants in the amount of \$27,500 awarded to tissue banks to gather and report data on tissue samples in the young adult population; and targeted retrospective analysis examining existing manuscripts from earlier studies of 10 specific cancers. **CONCLUSIONS:** This collaborative model, bringing together multidisciplinary professionals and advocates, has allowed for expedited progress and the achievement of evidence-based strategies to improve outcomes for young adults affected by cancer. Data from LSYAA driven projects will be reviewed to pursue new hypotheses that cancers in young adults are biologically distinct and warrant dedicated resources for research. It is our goal that this work will bring attention to this population as one that is unique and warranting tailored services and continued research in the future; and serve as a model for others working with historically underserved populations. **RESEARCH IMPLICATIONS:** The **LIVESTRONG Young Adult Alliance** is a replicable model connecting researchers, clinicians and advocates. This relationship allows researchers to interface with non-profit organizations that may provide financial support for their work and increased accruals to studies through the relationships built with institutions and organizations working directly with cancer survivors. Additionally, research

has been accelerated through multi-institution work and data-sharing as a result of researchers with common focus being brought together in the LSYAA. **CLINICAL IMPLICATIONS:** The LIVESTRONG Young Adult Alliance is a mutually beneficial model that connects clinicians and advocates. In addition to collaborating on projects that benefit the young adult population, this relationship allows for referrals from healthcare professionals to psychosocial support services and from support services to healthcare delivery channels, reducing gaps in services across the cancer clinical care continuum over time. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.1.14

Unmet Needs in Chinese, Greek, Arabic and English-Speaking Cancer Patients in New South Wales

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BACKGROUND: Distress and unmet needs are high in English-speaking cancer patients in Australia, yet the needs of culturally and linguistically diverse (CALD) populations are largely unknown. Our group has been conducting research to: 1) develop and validate culturally appropriate measures of unmet needs; 2) establish the prevalence and predictors of distress and unmet needs, and document quality of life and patterns of care in a population-based sample of 1000 Chinese, Greek, Arabic and English-speaking cancer patients. **METHOD:** We recruited, through four Australian Cancer Registries, participants born in Chinese, Greek, Arabic and English-speaking countries and diagnosed between 2004 and 2007 with one of the 12 most prevalent types of cancer. Participants were mailed a questionnaire booklet in their preferred language. The booklet included the HADS and FACT, a section on patterns of care, and items from the SCNS and CaSUN, in addition to culturally specific items of unmet need identified in focus groups conducted in Phase I of our research. **RESULTS:** Recruitment commenced in September

2008. In this paper we present and discuss data for participants recruited through the New South Wales Central Cancer Registry. Shared and unique items of unmet need are presented, along with data documenting levels of anxiety, depression, and quality of life. **CONCLUSIONS:** Cross-cultural research is needed to improve culturally sensitive cancer care and ensure equity of access, but is complex to conduct. Results from Phase I of our research indicate that CALD people with cancer living in Australia experience specific difficulties which should be addressed by the health system. This study is the first to investigate these in a large, population-based sample. **RESEARCH IMPLICATIONS:** Results will inform the development and evaluation of culturally appropriate and targeted interventions to improve the level and quality of service provision. **CLINICAL IMPLICATIONS:** Results may identify areas in which clinicians and service providers need to take special care when seeking to provide culturally appropriate care for CALD patients. **ACKNOWLEDGEMENT OF FUNDING:** The Australian National Health and Medical Research Council funded this study.

P1.1.15

Exploring the Breast Cancer Experiences, Needs and Preferences of Women Aged 70 Years and Over

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BACKGROUND: Over a third of breast cancer cases are diagnosed in women aged 70 years and over; many with other health conditions. However the breast cancer experiences of these women have largely been neglected. This presentation reports on a study exploring in-depth older women's breast cancer experiences in the context of age-related co-morbidities in order to inform the development of appropriate supportive interventions for the increasing numbers of older women diagnosed with breast cancer. **METHOD:** Thirty women over 70 who had experienced breast cancer and had one or more co-morbidities, were identified by advertising in the public media. One-to-one, face to face interviews were conducted exploring their breast cancer experiences and information and support needs. The interviews were analysed in accordance to The Framework Approach (Ritchie and Spencer, 1994). This involved analysing the transcripts identifying key repetitive themes relating to the main aims of the study outlined above but also recording any emerging new themes. The median age of the interviewees was 80 years old and the median time of diagnosis was 1992, with a range of 1 to 8 co-morbidities. **RESULTS:** Key

themes from the interviews indicate that the impact of breast cancer is long lasting and continues to affect women's lives for many years following treatment. A core finding throughout the research has been the concept of 'invisibility', and how this group of older women felt that their preferences and needs were neglected and marginalised from initial diagnosis to post operative living. This included failure to disclose breast cancer diagnosis, inadequate provision of information concerning post mastectomy care, reconstruction surgery, bras and prostheses. Ongoing issues relating to increasing comorbidity were not been addressed, such as the impact of arthritis on the fitting and wearing of prostheses. The women also identified a need for wider social understanding of the consequences of breast cancer treatment, particularly the visual impact of mastectomy. **CONCLUSIONS:** The key themes from this study indicate that women aged 70 years and over confront a range of exclusionary practices throughout their experience of breast cancer from failure to disclose diagnosis to mobility issues in post operative living with other health conditions. In identifying these practices, this study suggests a range of information and support mechanisms to improve these experiences. In particular the provision of options for treatment and full disclosure of information to older women, so they can be adequately prepared to make their own decisions about treatment and ongoing care. Older women's support needs should be examined in the light of their other health conditions rather than as 'older' people. **RESEARCH IMPLICATIONS:** Future research should include survey work to investigate how the exclusionary practices identified relate to a larger sample, in particular how they affect long term living. Ways of decreasing the marginalisation of older women need to be developed and tested, taking into account physical, social, psychological and sexual needs. Research is needed into the interactions between the consequences of breast cancer treatment and other comorbidities. **CLINICAL IMPLICATIONS:** Preliminary findings from this study suggest the need for more communication, information and support for older women with breast cancer, throughout all stages of their breast cancer experience, with particular reference and consideration to other health conditions. Options for treatment and full disclosure of information should be given to older women so that they can be adequately prepared to make their own decisions about treatment and ongoing care. **ACKNOWLEDGEMENT OF FUNDING:** This presentation will report on a study funded by Macmillan Cancer Support which has brought together researchers and research partners affected by cancer to design and develop the study.

P1.2.1

Beyond Traditional Face-to-Face Psychological Support in Oncology: Breast Cancer Patients' Needs When Referring to a Psycho-Social Cancer Phone Centre

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BACKGROUND: At the European Institute of Oncology (IEO), psychological support is more accessible for breast cancer patients and relatives during recovery and treatment. Via a psychosocial cancer phone centre, staffed by professional psychologists, we aimed to investigate patients' concerns and offer them a more comprehensive tool for receiving support in every phase of their illness, even though physical distance from the IEO would make it difficult for them to refer to our Psycho-oncology Unit. **METHOD:** Between March and October 2008 we organized educational-sessions with the nurses and secretaries of our Breast-Division in order to inform them about the existence of the Helpline (HL), hypothesizing that they were best placed as ideal informers for patients. We distributed a leaflet describing the HL throughout the ward. The HL received 177 calls, recorded in a chart including caller demographics, topics discussed, emotions and cancer-stage. The majority of the contacts live in Lombardy (32.12%), are married (67.27%) and are aged between 31 and 50 (62.42%). All the data were input into an SPSS database for statistical analysis. **RESULTS:** 79% referred to the HL for psychological support. 56% contacted the HL during treatment, 26% during follow-up, 18% at diagnosis or diagnosis of recurrence. 45% desired to be reassured and to express emotions in order to work through their illness psychologically. Main concerns centred on the future (34%) and on surgery issues (13%). A specific construct named DAS and referring to the feeling of being abandoned by the IEO was experienced by 15% of patients overall during treatment (48%). 69% found out about the service thanks to the leaflet, and only 10% through nurses and secretaries. **CONCLUSIONS:** The HL was demonstrated to be not only complementary to our psychological support but also alternative to it since the majority of patients also call during treatments at times when our Unit is available for contact. It is also interesting to note that DAS is more frequent during treatments. Post-diagnosis proved to be a sensitive period and it is important to address it with our efforts in ameliorating psychological support for breast cancer patients. Despite the educational sessions conducted, only 10% of patients were informed about the service by secretaries and nurses. This point must be more

thoroughly explored. **RESEARCH IMPLICATIONS:** It is also relevant to find out other ways of offering psychological support to cancer patients since the psychological distress they perceive may demand several kinds of professional skill depending on the very moment of the illness they are going through. **CLINICAL IMPLICATIONS:** This study is important in order to increase patients' ability to cope with the disease involving telephone psychological support as offered not only by psychologists but also by other members of the team. **ACKNOWLEDGEMENT OF FUNDING:** The authors would like to gratefully acknowledge the Umberto Veronesi Foundation and the IEO Foundation which funded the study.

P1.2.2

Tailored Lifestyle Programs: A 'How to' Guide for Researchers and Health Professionals

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BACKGROUND: Tailored interventions (e.g. tailored pamphlets) are derived from individual assessments and provide information and behaviour change strategies aimed specifically at individuals. In contrast, generic materials (e.g. generic pamphlet) provide more general information without considering individual characteristics. Evidence supports tailored interventions being more effective than non-tailored interventions in encouraging behaviour change. This poster provides a 'how to' guide to tailoring, using the case study of a physical activity (PA) lifestyle program for breast cancer survivors. **METHOD:** Kreuter *et al.*'s (2000) tailoring framework was used to guide the development of a computer-based tailoring program designed to provide iterative feedback to participants about their physical activity behaviour. Case study 'how to' examples are provided for each of the following steps described by Kreuter *et al.*: 1. Analysing the health problem; 2. Developing a program framework; 3. Developing tailored assessments; 4. Designing feedback; 5. Writing tailored messages; 6. Creating tailored algorithms; 7. Automating the tailoring process. **RESULTS:** We identified stage of change, self-efficacy, barriers to PA, social support and PA preferences as the most changeable and/or important determinants of PA. Following the 7 Kreuter steps, we developed an array of evidence-based messages specific to increasing PA in women with breast cancer, based on these important constructs. This process was completed in 4 months and required skills in conducting comprehensive search strategies,

retrieving and critiquing existing literature and theoretical models. Automation of the tailored algorithms was then undertaken by a computer programmer in 2 months at a cost of AUD \$25,000. Examples of the tailored material will be presented. **CONCLUSIONS:** This 'how to' guide demonstrates the feasibility of using the 7 Kreuter steps to tailor interventions in a psycho-oncology setting. Whilst tailored programs are resource intensive and require systematic planning, once they are set up they offer an innovative, sustainable and cost-effective alternative to both distance-based generic support (pamphlets, website etc) and less sustainable but effective on-going face-to-face support (e.g. by psychologists, practitioners etc) offered to cancer survivors. **RESEARCH IMPLICATIONS:** Practical information about how to develop tailored health programs for cancer survivors will help researchers and health professionals plan and evaluate tailored health promotion programs. This is especially relevant as there is a greater push for health programs that are both theory and evidence informed. Tailored print and internet programs also allow program delivery to extend to non-metropolitan populations who have reduced access to psychological and health promotion services. **CLINICAL IMPLICATIONS:** There is a growing body of evidence that healthy lifestyle behaviours, such as regular physical activity, improve the quality of life outcomes of cancer survivors. Tailored interventions offer clinicians a more sustainable way to intervene to improve survivors' long-term compliance with these healthy lifestyle behaviours. The use of these programs in a psycho-oncology setting will ensure that treatment and rehabilitation plans for cancer survivors are sustainable and multi-disciplinary in nature. **ACKNOWLEDGEMENT OF FUNDING:** The main author has received support from the University of Newcastle (Jill Cockburn scholarship) and the Centre for Health Research and Psycho-oncology (UNRSE scholarship).

P1.2.3

Feasibility of Using Touch Screen Technology for Screening Geriatric Patients

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BACKGROUND: Patients older than age 65 in comparison to those younger than 65, have an 11 fold increased incidence of cancer and a 16 fold increase in cancer mortality. The technology of geriatric screening could potentially help identify those older adults who are more vulnerable to complications from cancer treatment. Data will be presented on the feasibility of using touch screen technology in screening for problem-related distress of older adults. **METHOD:** UCSD, an

NCI-designated comprehensive cancer center has implemented a systematic approach for patients to communicate with their healthcare team in real-time regarding psychosocial problems and physical symptoms using touch-screen technology. 1313 outpatients completed the touch screen screening instrument which consists of 42 problem-related distress items. [i] Larger font was used for the elderly population, visual and audio cues were used to signal page changes. Two questions were presented per page and patients entered their responses by either touching the screen or using a stylus to select the corresponding buttons on the screen. [i] Clark KL, Bardwell WA, Arsenault T, R DeTeresa, MJ Loscalzo. Implementing Touch Screen Technology to Enhance Recognition of Distress. *Psycho-Oncology* 2008. RESULTS: The sample of adults age 65 and older consisted of 361 outpatients (47.1% males, 52.9% females). 80% of the sample was Caucasian, 7% Hispanic and the remainder other. 94.1% adults age 65 and older rated ($n = 361$) the touch-screen survey 'easy' or 'very easy' to use. Only 5.8% of the older adults found the touch-screen method 'difficult' or 'very difficult'. The average amount of time it took to complete the survey was significantly longer for older adults 65 and greater (mean = 7.26 minutes) than for the younger adults ages 64 and younger (mean = 5.95), p . CONCLUSIONS: The results suggest that even though it took older patients more time to complete the touch screen, the time taken was well within the expectations for a screening instrument. Additional visual and auditory cues need to be tested to decrease the time it takes for older patients. Using touch screen technology to screen geriatric patients is feasible and only a small number of the geriatric patient cohort (5.8%) found the technology to be a barrier. RESEARCH IMPLICATIONS: Feasibility of a computer based screening instrument has been demonstrated, research applications to evaluate the feasibility of implementing a geriatric assessment using computer methodology among older adults is currently in development at the City Hope. An assessment that is easy to navigate will make a major contribution to the needs of this population. CLINICAL IMPLICATIONS: This technology has clinical implications for evaluating the benefits of integrating geriatric screening as a standard part of medical care for patients in the medical center and in the home. ACKNOWLEDGEMENT OF FUNDING: None.

P1.2.4

Finding a New Balance: A Cancer Rehabilitation Program

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BACKGROUND: Cancer and its treatment are a threatening experience in one's life. It may be associated with long-term consequences. A cancer rehabilitation program may help patients finding a new balance in their life once anticancer treatment has been completed. Due to the impact on quality of life but also on survival rates rehabilitation programs are becoming more important. In the ZNA Middelheim a rehabilitation program was started since 2004. METHOD: The multidisciplinary rehabilitation program consisted of a 12-week program. It was developed for adult cancer patients who finished anticancer treatment with curative intent. The program combines physical training and psychological support. Twice weekly participants participated in sessions to improve their physical abilities by fitness, group sports and hydrotherapy under supervision by physiotherapists. The psychological support included psycho-educative group sessions on several aspects (e.g. fatigue, diet, intimacy, stress and coping) and individual support, if indicated. All psychological sessions are under guidance of psychologists. The outcome was measured by physical tests, by the EORTC QL and FACT questionnaires and by a qualitative analysis. RESULTS: Since January 2004, 228 people participated in the program. Repeated measures showed an improvement in physical ability, an increased quality of life and a decreased fatigue. The program had a satisfaction index of 95 %. Qualitative analysis show that participants regained confidence and tried to pick up work and other interests. CONCLUSIONS: Our results support the integration of a rehabilitation program in the care of cancer patients treated with curative intent. RESEARCH IMPLICATIONS: The results of this clinical study may inspire researchers to study the need of a rehabilitation program as part of a complete anticancer treatment. CLINICAL IMPLICATIONS: The results of this clinical study may inspire clinicians to organise rehabilitation programs so that rehabilitation becomes a possibility for every patient. ACKNOWLEDGEMENT OF FUNDING: None.

P1.2.5

Art Therapy in the Waiting Room: An Experience at an Oncology Ambulatory Care Unit

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BACKGROUND: The following study has the aim to present a differentiated way of carrying out a psychological intervention with patients and followers at the waiting room of an Oncology ambulatory care center. Through Art-therapy of phenomenological fundamentals as well as expressive

materials of artistic nature, it attempts to provide a moment of re-signification, while through the artistic production it allows the disclosure of the 'being', bringing together author and art, as one. **METHOD:** This project took place at the waiting room of Dr. Mario Gatti Municipal Hospital Oncology ambulatory care unit, in Campinas-SP, Brazil. Everyone present could participate, without esthetic pre-judgments or directions. With materials placed on a table (color paintings, canvas, paper, color pens, clay, scrap iron), patients and their followers could use the materials that they wished to produce artistic expressions. Oral interventions were made along with the conversations arisen during the process, correlating them with what was being produced, attempting the self-recognition of each participant in their production as well as the appropriation of the senses present in them. **RESULTS:** This project was carried out for three months on a weekly basis, reaching an average of 10 participants per session. According to the participants, the recourses used provided moments of reflection, well-being, integration and possibilities to rescue values and feelings. The use of Art therapy and expressive plastic materials allowed a new way of exploring subjective contents unreachable at first. The activities allowed the participants to recognize themselves in their productions, favoring the unveiling of their self-essence. **CONCLUSIONS:** The opportunity to provide psychological assistance to oncological patients as well as to their followers through art-therapy, allowed a new way of accessing emotional contents that often are not reachable in traditional frames of psychological work. To express one self through expressive plastic materials brought together a new way of resignification, unveiling through the artistic expression what was closed at first, permitting the appropriation of experiences, feelings, frustrations and desires of each participant, therefore facilitating the elaboration of possible existential conflicts. **RESEARCH IMPLICATIONS:** A full attention to patients with cancer involves caring also for their followers and the difficulties encountered when facing the sickness and its treatments, demanding new means of intervention that are not limited to the psychological assistance in traditional frames. We hope that this project may subside new studies and researches involving the use of expressive resources in the waiting room, attempting to broaden the perspectives of this practice. **CLINICAL IMPLICATIONS:** We believe that the use of Art-therapy as a psychotherapeutic assistance in the waiting room may extend to its participants an improvement in their psychological and existential condition, with the certainty that the production of an artistic work will enable a better self-knowledge and perception of feelings, fears, anguishes, joys, dreams, while opening new possibilities of personal significations.

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P1.2.6

Who Are Confused with Health-Related Information?

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BACKGROUND: Nevertheless abundant health-related information available to the public, many people feel frustrated, confused with too much information, or difficult to find and understand the information. In Japan, Cancer Care Network, including 351 Designated Cancer Care Hospitals (DCCHs) was launched to equalize access to quality of cancer care and information. The purpose of this study is to describe confusion in searching health-related information, and the impact of recognizing cancer facilities on it. **METHOD:** We conducted a self-administered survey in 4 areas selected based on distance from the DCCHs. We randomly or arbitrarily distributed 9213 questionnaires and we analyzed the data of 4501 respondents (response rate: 48.9%). Confusion in searching health-related information was measured by asking whether respondents do not know where to find necessary information, feel contents of health-related information are difficult, and do not know which information they can rely on. Recognizing cancer facilities was measured by asking whether they know 3 main national or local Cancer Care Network facilities. **RESULTS:** The average score of confusion in searching health-related information was 9.5 ± 2.7 (range: 3–15). The scores were significantly high, when they were male, were 20–30's, had lower educational background, and lived in a distance for more than one hour from the DCCHs. Recognizing cancer facilities was significantly related to the score, and the significant relationship between confusion and distance from the DCCHs disappeared when we added it to the model. **CONCLUSIONS:** This study listed characteristics of the individuals who tended to be confused when searching health related information. The result also signified the importance of knowing available social resources to reduce such confusion. **RESEARCH IMPLICATIONS:** This study revealed many people feel confused in dealing with health-related information. This would be the case when they are diagnosed with cancer because cancer-related information is rather more diverse and complicated. We also need to emphasize the impact of health-related information including their social resources available to them and further clarify roles of such information in cancer care. **CLINICAL IMPLICATIONS:** Recognizing cancer facilities alleviated confusion in searching health-related information, and this prevailed the impact of distance to DCCHs on confusion. These results along with

characteristics of those confused with health-related information can be utilized in widely introducing the cancer care networks and social resources in local communities. **ACKNOWLEDGEMENT OF FUNDING:** The survey was conducted as part of 'Research on appropriate delivery of cancer information and support from the viewpoint of cancer patients, their family members, and general public,' supported by the Third Term Comprehensive Control Research for Cancer of the Ministry of Health, Labour and Welfare.

P1.2.7

Pilot Implementation of a Distress Thermometer Based Screen Across a UK Cancer Network: Evidence For Change In Clinical Practice

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BACKGROUND: Although many reports examine accuracy of the DT, few have looked at implementation into clinical practice. We report on a pilot phase of a large scale DT based screening programme (problem list) that examines the influence upon clinical practice for cancer health professionals. **METHOD:** The screen comprised DT, locally adapted and inbuilt audit associated help offered and clinicians judgement. We received 84 returns from 3x hospitals with a mean DT score of 4.5. Using a custom problem list there were 230 problems of which anxiety & family issues were most common. These can be considered individuals with unmet need. **RESULTS:** Clinicians gave help to 54% of those with unmet need but did not respond in 26%. No help was required in 15%. Clinicians were unsure about a diagnosis in 19% of cases and in all of these situations the screen informed clinical judgement. As a proportion of all cases the screen informed clinician judgement in 30% and did not influence clinician judgement in 40%. The patient was well before and after screen in 15.5%. 2 × 2 judgement pre-post screen is illustrated (table). **CONCLUSIONS:** This pilot data suggest a simple screening programme can be implemented network wide. Some evidence suggests that the tool can positively influence clinical practice particularly in cases where the clinicians in unsure about a diagnosis pre-screen. However clinical opinion is only changes in a minority (30%) of cases and help is only offered in about half of those identified. **RESEARCH IMPLICATIONS:** Implementation studies should attempt to examine influence on clinical practice as well as influence on patient outcomes. Further implementation studies with

simple screens are needed. **CLINICAL IMPLICATIONS:** Application of the DT (or similar tool) and problem checklist may be helped by audit of associated help, clinicians judgement and patient outcome. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.2.8

The Establishment and Operation of the Patient Resource and Support Center at the Hadassah Hospital

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BACKGROUND: The encounter with illness in general and cancer specifically confronts patients and families with a new reality. Social workers help patients and families cope with the psychosocial aspects of cancer. Nevertheless, many patients are not aware of their eligibility for benefits and continuing care services. Simultaneously patients and their families are often inundated with information distributed by representatives of private caretaking agencies and manpower companies that both confuse and exacerbate the difficulties of hospitalization. **METHOD:** The Social Work Department of Hadassah has identified a critical need for an accessible and comprehensive service that would provide relevant, updated information on rights, benefits and services by trained personnel. In February 2008, we began a pilot project called the Patient Resource and Support Center at Hadassah Ein Kerem Hospital. Seasoned social workers and a cadre of highly educated and trained volunteers provide information to patients and their families, assist them filling out the necessary forms and, when relevant, make contacts with the representatives of the pertinent community services. **RESULTS:** The Center provides information on a broad range of issues pertaining to hospitalization and rights available upon discharge and during treatments. This information ranges from benefits provided by government and other health-related agencies, to sources of voluntary and professional assistance, and placement in diverse frameworks. The service of the Center s provided free of charge. The Center currently serves more than 100 people per month, with the potential to serve 250–500 people per month. **CONCLUSIONS:** While the demand for the service and the positive feedback confirm our assessment that we are on the right track it is necessary to implement an evaluation process to measure efficiency and effectiveness, and provide objective assessment necessary for program improvements. Furthermore, while the Center currently serves individuals, we have identified a need to increase our accessibility to patients and

to offer further, more detailed information to those who need, through offering group programs and open days. We believe that the project has great potential for replication in other hospitals not only in Israel but internationally. **RESEARCH IMPLICATIONS:** We intend to initiate an evaluative research process at the beginning of the second year of the pilot study. **CLINICAL IMPLICATIONS:** Not yet available. **ACKNOWLEDGEMENT OF FUNDING:** This project is supported by Mashov and Eshel, both non-profit organizations operating in Israel.

P1.2.9

Program for Radiotherapeutic Induction Treatment: Experience of the Psycho-oncology Unit at the University Hospital of Caracas, Venezuela

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BACKGROUND: Due to misconceptions and lack of knowledge of the pending radiotherapeutic treatment, patients usually perceived it as a sign of incurability which added to the anxieties proper of the disease process, may induce risks to acquire emotional and behavioral reactions that may influence their adaptation and quality of life. To deal the matter a psychological support program was designed and implemented for patients and families by the Psycho-oncology Unit to provide emotional and psychoeducational support. **METHOD:** The medical staff provided information about the disease, the radiotherapeutic treatment, its purpose, its implementation, possible side effects, and significance of adherence to treatment, among others. On the other hand, the mental health staff offered emotional support and screened the patients' emotional reactions, and symptoms of psychological disorders, in order to identify the needs of further psychotherapy or psychoeducational support. The results of the program were analyzed by means of a descriptive field study accounting its activities during 2007–2008. **RESULTS:** 236 persons, both patients and families were attended by the program. It was found that the information given had an impact in reducing the fears and anxieties, helping own's feelings control, stimulating confidence toward the health team and improving the perception of efficiency. Thus, normalizing emotional reactions and believes toward treatment and disease and aiding the family companion and contention. Furthermore, it proved to be a useful screening approach for possible psychological distress. A qualitative comparison with previous

years showed that the program improved the patient satisfaction towards the available psychological support. **CONCLUSIONS:** Given the emotional and behavioral effect of the radiotherapeutic treatment, the patients received tools that allowed them to experience the healing process in a more tolerable way, preventing disorders that may difficult patients' emotional adaptation, and consequentially improving quality of life. **RESEARCH IMPLICATIONS:** This program contributes to extend the range of therapeutic and psychological support options available to patients and families, as well as helping the health staff skills in dealing with patients' feelings and contributing to oncologic team integration. It also serves to approach, identify and deal with the patients' psychological needs. **CLINICAL IMPLICATIONS:** This program opens a field of further research to assess the radiotherapeutic treatment impact on psychological reactions, quality of life and the benefits of communication and effective information to help the adaptation in different stages of the disease. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.2.10

An Exploratory Peer-led Project Integrated with Timely Professional Support for Cancer Survivorship in the Community

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BACKGROUND: Getting cancer patients in distress out of bed, take control, and be integrated back into society has been a challenge. Professional counselling, however effective, monitoring progress for some is not easy, and could be costly. The self-help groups, and peer matching available also have their limits in timely individualized support. The purpose of the peer-led project, entitled 'Synergy Home' is to explore if this could offer a new option for quality of life enhancement. **METHOD:** The Home, started in April 2008 at a community cancer support centre in Hong Kong, provides a 13-session weekly calendar of creative arts and craft, dance, singing, nutrition, exercise, and humour, led by peers. Cancer patients and their families are encouraged to drop-in any time, join what they like; or just have tea and biscuits, read, or meditate on their own. Whatever they choose, they are equally welcome, as though they are at home. Everything is free, no enrolment required, and no discrimination. A nurse specialist and a social worker are onsite to provide timely holistic support, whenever needed. **RESULTS:** Ongoing evaluations indicate what the Home impresses the participants most is its 'homey' atmosphere, and its 'positivity'. Simply being there

makes them feel 'very happy'. It is described by cancer patients as a 'zero pressure' and a 'safe' place, where they can 'recharge' themselves, and find their identity again. To Centre professionals, what values most is the opportunity to observe progress, patient interactions, and family dynamics (Many do bring their spouse, parents, in-laws and children); to provide the timely support possible with the help of peers; and a new option for ongoing support, after initial counselling and nursing consultation. **CONCLUSIONS:** The project does appear to be a feasible one integrating peer and professional support, with the interactive involvement of the participants. Besides the descriptive comments, the number of attendance too has been substantial and increasing. After six months, it has already reached over 1700. Except for some basic volunteer expenses for transport, no additional staff has been employed for the project. It has been a matter of optimizing the human resources and facilities available; and therefore seems to be cost-effective. To be sustainable, however, much care is needed in the continual training and support of the cancer peer volunteers. **RESEARCH IMPLICATIONS:** This is a programme-based case description. It has its limitations, particularly, for generalizations; because it has not been designed as a clinical trial. However, from the experience, hypotheses could be generated for a more systematic study on different modes of intervention and its impact on quality of life of cancer survivors, especially during that phase of survivorship after diagnosis and initial cancer treatment, with respect to the different domains of well-being and functioning. **CLINICAL IMPLICATIONS:** A Synergy Home of its kind could be of practical clinical implications. Such a practice mode—integrating peers, active user involvement, and professionals from different disciplines on a daily basis in a homey, positive and egalitarian atmosphere—could provide added value to bridging the continuum of person-centred cancer care. It is a kind of 'half-way house' to prepare certain cancer patients for joining the independent self-helps groups available in the community. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.2.11

Psycho-Oncology Education to Health Staff, Experience of a Radiotherapy and Nuclear Medicine Service in Venezuela

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BACKGROUND: Among psycho-oncologist functions stand out the implementation of academic and training programs for all the oncologic

health staff. Therefore a teaching program was implemented to ensure knowledge in areas such as communication skills, management of difficult situations, psychosocial and supportive care for patients and families to guarantee care quality. It is address for all the personnel including health care and administrative staff and internships. **METHOD:** The program started in 2004 includes activities such as: teaching and coaching radiotherapy and nuclear medicine residents and technicians' students, tutorials to students during their internships and to undergraduate students doing psycho-oncologic research. Among other areas stand out teaching of communication skills, how to break bad news, bereavement, psychological evaluation and mental status examination, psychological factors in cancer patients, emotional support, end of life care, psychiatric disorders and burnout syndrome. The program is analyzed by means of a descriptive field study accounting its activities during 2008. **RESULTS:** The educational activities carried out included: 50 teaching hours and coaching radiotherapy residents as well as technical students; 2560 hours of psychological attendance by internships to patients and families, including an induction treatment program and psychological evaluations, plus 50 hours in case control and supervision activities; 16 hours teaching psychology undergraduate students and 70 hours directing mandatory research of psychology students. The purpose was the personnel would increase care quality for patients and families, including dealing with stressful situations, identify emotional reactions and psychological disorders and to recognize the need of psychological support, all generating an integrated and consolidates multidisciplinary team. **CONCLUSIONS:** Psycho-oncology training of all oncologic health staff and personnel is fundamental in order to guarantee a better quality and humanized care to patients and families. It is also hypothesized that it could contribute improving the staff perceptions and needs toward the available psycho-oncologist support. Moreover it contributes to the integration and consolidation of a well motivated multidisciplinary team. **RESEARCH IMPLICATIONS:** This study points out the need to continue improving and evaluating further the educational programs and strategies. It could also be a reference to other oncologist research teams in need of educational programs. **CLINICAL IMPLICATIONS:** This program shows the significance of having an integrated mental health team with knowledge and skills to help dealing with patients and families emotional reactions and stressful situations. It will also contribute with health staff integration and multidisciplinary team work. **ACKNOWLEDGEMENT OF FUNDING:** Hospital Universitario de Caracas.

P1.2.12

Psycho-Social Attention in the Service of Oncologia of the University Hospital of Caracas

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BACKGROUND: The psychosocial approach of the oncologic patient and its relatives persecutes the increase of the quality of life of these actors. The objective is to describe a model of psycho-social attention in oncologic services of a public institution; to enumerate the activities that are made with the patients and relatives. **METHOD:** The target population is conformed by all the patients who attend oncologic service searching of medical treatment; the sample is constituted by patients and relatives who attend the service the first time, those that ask for psychosocial support and referred by the doctors and other members of the health equipment. **RESULTS:** The patients in a first contact are taken care of by the doctor, the social worker and the psycho oncologist. The activities made by the Social Worker, are focused to the consultant's office and social attention of the patient and its family: interviews and elaboration of socio-economic studies; direction for search of institutional aids; data of attendance to the institution for patients and relatives. The actions executed by the Psycho oncologist are centered in the advising to patients and relatives who attend the center and to the personnel of health that works in the institution; accomplishment of information; evaluation pre-transplants of bony marrow and consultant's office in search of lines of investigation in oncology. The Psycho-social unit has like object: planning and execution of psycho educative activities. **CONCLUSIONS:** Our investigation shows the value of working in multidisciplinary equipment in countries of low resources, because the economic situation becomes a stressor variable that we must take care of and is as well as the good operation of a Psycho-social unit facilitates the increase of the quality of life of patients and relatives. **RESEARCH IMPLICATIONS:** We can suggest to continue with our line of investigation evaluating the effectiveness of the service in its different stages, making comparisons between the phases and thus to be able to evaluate and to optimize the made work. **CLINICAL IMPLICATIONS:** Supported psycho-social to the patient under the figure of a psycho-social unit allows to patients and relatives to have an institutional figure that supports allowing them the improvement of the quality of life, distress, emotional resources and economic resources. **ACKNOWLEDGEMENT OF FUNDING:** Ministerio del Poder Popular para la Salud.

P1.2.14

Anxiety and Depression Levels in Patients Referred for Investigation of Bowel Symptoms, Under a Rapid Referral SystemKate Jenkins, Graham Branagan, Laura Dixie, Helen Chave, Andy Agombar, Nigel North
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BACKGROUND: The incidence levels of Anxiety and Depression in the UK general population are, according to the Office of National Statistics (2000): Mixed anxiety and depression = 8.8%, Depression = 2.6% and Anxiety = 4.4%. The introduction of rapid referral systems in the UK NHS have been hypothesised to increase anxiety, possibly to clinical levels (Al-Shakli, Harcourt, and Kenealy, 2006). Little is known about the effect of the type of investigation on distress. **METHOD:** In October 2008 all patients referred under the 'two-week rule' to the colorectal surgeons at Salisbury District Hospital were sent a HAD scale (Zigmond and Snaith, 1983) with their appointment. Depending on symptomatology patients were sent for Barium Enema (BE), Colonoscopy (CY), Rectal Bleeding clinic (RBC) or Outpatients Clinic (OP), where the consultants collected in the completed scales. These were then scored and analysed by the Psychology Department. Clinical levels of Anxiety or Depression were defined as a score of > 10. All patients with clinical levels of Anxiety or Depression were offered psychological support. **RESULTS:** There were 97 referrals in the pilot period, of which 86 (88.7%) were sent HAD Scales. Replies were received from 56 patients (65.1%). Mean scores for anxiety by group were: BE = 5.95 ($n = 21$), CY = 4.0 ($n = 4$), OP = 6.2 ($n = 24$), RBC = 7.44 ($n = 23$). Mean scores for depression by group were: BE = 3.8, CY = 4.0, OP = 3.9, RBC = 4.0. There were no statistically significant differences, due to low numbers of participants. However, the proportion of patients in the whole cohort with clinical levels of anxiety, depression or both was 13/56 (23.2%). The proportion of patients with clinical levels of anxiety, by group were: BE = 14.3%, CY = 0%, OP = 13.3%, RBC = 37.5%. **CONCLUSIONS:** Levels of anxiety and depression appear to be higher in patients referred to a colorectal clinic under the 'two-week rule' than in the general population. Levels of anxiety are particularly high in patients with rectal bleeding (37.5% Clinical Anxiety), perhaps indicating greater concern about this symptom than others. **RESEARCH IMPLICATIONS:** This pilot has indicated a support need for these patients, with the potential for follow-up throughout their treatment, but the current numbers are small. A larger, long-term project is now planned for 2009 to see if these results are maintained in a larger

population. If this is the case, qualitative follow-up is required to examine why certain investigations are linked to higher anxiety levels. **CLINICAL IMPLICATIONS:** If these proportions are maintained in a larger population there are implications for the levels of support that should be available to these patients, particularly those attending a rectal bleeding clinic. Information needs of patients should be examined to see if pre-attendance anxiety can be kept to a minimum. Training for clinic staff in the detection and management of distress, as well as formal services to refer to if necessary should be made available. **ACKNOWLEDGEMENT OF FUNDING:** This project was contributed to by staff funded by the generosity of the Wessex Cancer Trust.

P1.2.15

The Instrument of the So-called ‘Project Meeting’ in Order to Manage and Optimize the Care of Cancer Patients Discharged From an Internal Medicine Unit

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BACKGROUND: The purpose of this abstract is to report an experience about the modalities- in particular ‘the project meeting’ used by a single Institution to guarantee the best possible post-hospitalization setting of care to the cancer patients admitted in an Internal Medicine Division for acute symptoms. **METHOD:** We have activated a systematically structured multi-professional group dedicated to the set up of the better care setting for cancer patients before their discharge from our Internal Medicine Unit. This team is composed by a chief nurse, two physicians-one of them with specialty in Oncology-, one social worker, two home-nurses, one family doctor and the psychologist. The Team meets the family (mandatory the presence of the caregiver) of the cancer patient who is clinically stable and ready for the hospital discharging and with a personal bio-psychosocial very complex situation. **RESULTS:** First goal is to perform a ‘protect discharge from the Hospital’ for cancer patients. Moreover the possibility to get all the actors around the patient, improve communication and care empowerment. Sharing different points of view, we give an ‘holistic’ response to the needs of the patient and his family. Everyone can find place and time to emphasize the technical and personal contribute to support any single addressed case but also to reload psychological capacity. ‘Project Meeting’ has obtained, in our hands, a decrease of the outliers for single case-mix and lower cancer patients’ re-admission rate in

hospital for acute symptoms. **CONCLUSIONS:** Project Meeting represents for us an efficient tool to manage the complexity of a cancer patient with is discharging from an Internal Medicine Unit. It’s possible to guarantee a continuum between hospital care setting and home care setting and that is extremely important for the patient and his family. Moreover we can force the health-workers, starting from the Project Meeting, to cooperate and communicate with one another. Clinical and non-clinical outcomes can be better with a systematically use of the Project Meeting Tool during the final phase of a favourable hospital pathway. **RESEARCH IMPLICATIONS:** This kind of methodology to upfront the potential complexity of the hospital discharge of cancer patients, after an acute phase of illness, may be useful to optimize the Clinical Governance in Hospital and Home Medicine and to mediate between the need of a short time of hospitalization and a protected discharge. This experience may be also validated for the non-oncologic patients. **CLINICAL IMPLICATIONS:** Project Meeting is the fundamental basis to build a bridge between the Hospital Clinicians and Family Doctors so that it becomes easier to follow the illness experience of cancer patients and their families. In our research outcomes of the Comprehensive Care Team are better than the single retrospective interventions. We are now adopting Project Meeting also in non-cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.2.16

Clinical Practice Guideline for Psychosocial Care in Pediatric Oncology

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BACKGROUND: Due to psychological and social implications of childhood cancer to both patients and their families, psychosocial care has to be an integral part of comprehensive care in pediatric oncology and hematology. As part of the German Society for Pediatric Oncology and Hematology (GPOH) the Psychosocial Working Group PSA-POH has developed a clinical practice guideline to standardize and to improve the quality and effectiveness of psychosocial care. The guideline has been published by awmf. **METHOD:** In the developing process pre-existing international guidelines were taken into account. Evidence of clinical experience and results of research studies were both taken into consideration. The formal requirements of quality management and the

development of guidelines have been carefully observed. Major parts of the guideline meet the requirements of evidence based medicine. Statements and recommendations of the guideline were discussed in a detailed process of consent with a representative group of experts concerning relevant organizations and professionals, patients and parents. **RESULTS:** In the first section of the guideline basic principles of psychosocial care in pediatric oncology are being described, such as family orientation and supportive care. Organisational and structural aspects and the requirements for professional qualifications are explained. In the second section the guideline describes cardinal psychosocial symptoms of childhood cancer and derives indications for basic or specific interventions. The diversity of strain and their demands placed on patients, parents and siblings are the basis for a phase-specific model of psychosocial care. Psychosocial care aims at the improvement of individual resources and to support the families' coping mechanisms. **CONCLUSIONS:** This guideline is the first clinical practice guideline for pediatric oncology in Europe. **RESEARCH IMPLICATIONS:** The German clinical practice guideline for psychosocial care in pediatric oncology offers the first general overview in this field. The guideline opens the possibility for further research as all pediatric oncology centres will be working on the same theoretical basis. **CLINICAL IMPLICATIONS:** The clinical practice guideline will be implemented in all German pediatric oncology centres in the next couple of years, to ensure that all childhood cancer patients and their families receive the best possible psychosocial care. The guideline heightens the awareness of the psychosocial impact of childhood cancer and emphasizes the need of psychosocial care in future as well as the need for further research studies in this field. **ACKNOWLEDGEMENT OF FUNDING:** The development of the guideline was supported by Deutsche Leukämie-Forschungshilfe.

P1.2.17

The Impact of a Four Tier Model of Psychological Support on Referrals to a Specialist Team and Patient Satisfaction

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BACKGROUND: The purpose of this project was to implement and evaluate a Four-Tier model of psychological support for people with cancer and their families, as recommended by the UK National Institute of Health and Clinical Excellence guidance for Supportive and Palliative Care

(NICE, 2004). **METHOD:** The model has been implemented through the provision of a Psychological Support Team to provide assessment and treatment of psychological distress at Levels 3 and 4 of the model. A teaching programme has been developed to educate staff at Level 2 of the model, in the recommended screening and psychoeducation skills. Audits of referrals to the support team have been conducted to assess the impact of the training on referral quality and appropriateness, through a qualitative scoring procedure. Patient satisfaction questionnaires have also been sent to those who attend for assessment and intervention for psychological distress. **RESULTS:** Referrals have increased in quality over the three years that the project has been running, shown by a significant increase in the average score for referrals over time ($p < 0.05$). Patient satisfaction has also increased over time, indicating that the team is effective and acceptable to patients. The proportion of patients describing themselves as satisfied, or very satisfied with the support received from the team has grown from 70% in year 1 to 100% in year 3. **CONCLUSIONS:** The four tier model has been shown to be an effective method of service delivery. Providing training for Level 2 staff in detection and management of distress has led to an increase in the quality and appropriateness of referrals to the Psychological Support Team, indicating a greater level of exploration by Level 2 staff. Patients are also very satisfied with the support they receive from Level 3 and 4 staff. **RESEARCH IMPLICATIONS:** This project has started to develop an evidence base for the model recommended by NICE. The results will be disseminated as widely as possible in order to advocate the implementation of a four tier model in other areas. **CLINICAL IMPLICATIONS:** Results contribute to setting standards of psychological support available to patients, families and staff in cancer services. The teaching means that staff are providing improved psychological support to patients in this hospital, but is also available at a national and international level. The implementation of a dedicated Psychological Support Team means that psychological needs are being assessed and treated as required. **ACKNOWLEDGEMENT OF FUNDING:** This project is only possible due to the generosity of the Wessex Cancer Trust.

P1.2.18

The Two Week Rule for Suspected Colorectal Cancer: Understanding Patients' Experience and the Psychological Impact of this Process

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BACKGROUND: This research aimed to explore the experience and psychological impact on patients who are referred by the two week rule for suspected colorectal cancer. Previous two week cancer studies (e.g. Cornford *et al.*, 2004) and clinical observations suggest that the quickened process elicits psychological morbidity. Studies (e.g. Rai and Kelly, 2006) show only (1 in 10) patients with alarm symptoms will have cancer following investigation by the two week rule. **METHOD:** A qualitative approach was adopted using interpretative phenomenological analysis (IPA). Semi-structured interviews were conducted with a purposive sample of ten patients (two men and eight women) aged between 37 and 78 years old. The interviews were audio taped and transcribed verbatim. The transcripts were analysed using investigator triangulation as a technique to enhance the trustworthiness of the data. **RESULTS:** Four super-ordinate themes emerged from the interview data with a number of sub-themes which highlighted anxiety, uncertainty and the sense of vulnerability associated with the two week rule process. **CONCLUSIONS:** This study sheds light on the unintended consequences of setting waiting time targets, in addition to the distress experienced by patients. Health care services need to support and meet the information needs of people referred by the two week rule in order to reduce the psychological effects of this process. Understanding the individual mediating factors for each patient will enable services to provide the best care for patients and also improve adherence to the referral process and overall satisfaction with services provided. **RESEARCH IMPLICATIONS:** It is clearly important that these two week rule findings are disseminated as widely as possible. It is to be hoped that greater awareness of this issue will stimulate further research, aiming to alleviate the distress associated with accelerated access to investigations and treatment. **CLINICAL IMPLICATIONS:** GP and specialist units should actively support people referred by the two week rule process. Psychological aspects of care management in patients with cancer is a growing area of clinical interest. Therefore, clinical psychologists within cancer services can assist in identifying those who require in depth psychological intervention in the pre-diagnostic stage and post referral. In addition there is a valuable role supervising specialist nurses who assist patients during the two week process. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.2.19

The Development of an Inter Professional Psychosocial Oncology Program

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BACKGROUND: Previous research has identified the types of psychosocial services that are most advantageous to people living with cancer. However, the implementation of these services appears largely dependent on local resources and advocacy. This presentation describes the process and planning strategy for a targeted program used by a tertiary care hospital cancer centre serving 20,000 patients. The program has been designed to serve those with intermediate to high needs. **METHOD:** The Psychosocial Oncology Program (PSOP) is based on comprehensive research, consultation and a financial sustainability analysis developed over a two year period. This included extensive literature review, visits to cancer centres, and discussions with various health care providers. Further consultation was conducted at a retreat that included all The Ottawa Hospital (TOH) health care leaders who already or could potentially provide oncology care. A business case was developed to evaluate the sustainability of the program. Of particular concern was the longer length of hospital stay and the higher number of Emergency visits for oncology patients as compared to other patients. Analysis revealed that many medical crises were precipitated by psychosocial problems, such as caregiver burnout and lack of patient safety in the home environment. **RESULTS:** As a result of the intensive planning and proactive identification of challenges, the program has been successfully implemented. It includes a manager, medical leader, and clerical support. A central intake process for use by health professionals from Psychiatry, Social Work, Psychology, Nutrition Management, Physiotherapy, Occupational Therapy, Speech Language Pathology, and Kinesiology has been a great key to its success. **CONCLUSIONS:** Implementation of the PSOP has been successful. Although evaluation of the program is ongoing, initial data from health professionals and patients suggests that this multi-disciplinary new program is effective and efficient. **RESEARCH IMPLICATIONS:** To ensure long term sustainability, the following issues have been targeted for ongoing evaluation: reduced oncology visits to Emergency, admissions, and length of stay. The program is also in the process of evaluating patient safety and satisfaction. **CLINICAL IMPLICATIONS:** The program's inter professional clinical collaboration is highly effective and efficient in delivering patient centred care. The professionals delivering the care appreciate the collegiality involved in this model of shared care delivery. **ACKNOWLEDGEMENT OF FUNDING:** The Ottawa Hospital Cancer Centre.

P1.2.20**Screening for Distress and Psychosocial Needs Among Cancer Outpatients: Quebec's Experience**

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BACKGROUND: Distress in cancer patients is highly prevalent and needs to be monitored and addressed (Bultz and Carlson, 2005). Experts from cancer control programs (Cancer Journey Action Group/CPAC, NCCN) advocate for the proposition that emotional distress become the sixth vital sign to be routinely screened (Bultz and Holland, 2006). The purpose of this presentation is to describe the approach of our team to implement systematic distress screening within a supraregional oncology service. **METHOD:** The steps undertaken by our team were to: (1) select, translate and adapt a validated distress screening tool, (2) coordinate our local efforts with those of the Cancer Journey Action Group/Canadian Partnership Against Cancer in order to develop a common item base, (3) plan an implementation strategy according to NCCN guidelines and suiting the characteristics of our clinical team, and (4) train the pivot oncology nurses who pioneered the implementation of systematic distress screening. **RESULTS:** This presentation will introduce the distress toolkit elaborated by our team, which shares a common gold standard with other Canadian cancer centers. This toolkit includes the distress thermometer, along with a problem checklist and the Edmonton Symptom Assessment System (ESAS). As a starting point, it was determined to systematically screen outpatients of all cancer sites shortly after diagnosis, at the time when pivot oncology nurses are undertaking their initial interview with patients. **CONCLUSIONS:** To be in line with a patient-centered care vision adopted by national/local cancer control programs, screening for distress truly becomes an issue to be addressed. Nonetheless, such a practice change requires the elaboration of careful and pragmatic steps to be successfully implemented within a busy oncology service. This presentation will describe how this process is actually taking place within our clinic. **RESEARCH IMPLICATIONS:** Along with an evaluative study that will emphasize pivot oncology nurses' experience related to this practice change, two clinical studies will document distress course through the care continuum and patients' satisfaction toward distress management within two specific cancer sites. **CLINICAL IMPLICATIONS:** Implementation of systematic distress screening was an opportunity for promoting

psychosocial and spiritual needs recognition within our medical oncology service, as well as an opportunity for our psychosocial team to strengthen as a group and clarify their mechanisms of action. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Journey Action Group/Canadian Partnership Against Cancer.

P1.2.21**Comparison of Psychosocial Aspects in the Cancer Treatment in Cancer Centre and Non-Cancer Centre Hospitals in Patients with Breast or Colorectal Cancer in Saxony**

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BACKGROUND: In centres such as the Comprehensive Cancer Centres, the expertise for the treatment of defined cancer locations (e.g. breast cancer) is pooled. This fact is linked with the desire to provide best medical care to cancer patients. However recent research findings do not sufficiently clarify the differences in patient outcomes between centre care and non-centre care. In analyzing this issue we refer first to the region of Saxony. **METHOD:** The study design is a retrospective approach with a cross-sectional survey. Data are collected with a patient questionnaire. Research questions of this study are: (1) which effects does the medical treatment have to the psychosocial and emotional situation of the patients; (2) how is the patients view on health-related quality of life and quality of care; (3) the extent to which participation in medical decision-making is possible and (4) how the patients are satisfied with the results of the treatment. For the comparison already existing data from 394 breast cancer patients and 291 colon cancer patients can be used. In the actual sample there will be included 480 patients with breast cancer in UICC stage I-IV and 500 patients with colorectal cancer UICC stage I-IV. **RESULTS:** In addition to the collection of epidemiological and medical data of patients there will be recorded data on the treatment and psycho-oncological care situation (results quality and patient satisfaction, with the scale Hamburger Questionnaire on the sojourn in the hospital, HFK), to psychosocial stressors (HADS), health-related quality of life (EORTC QLQ-C30), to patient participation and the doctor-patient relationship (CPS, TIP) and practical implications, such as decision-making criteria and pathways for the treatment in the centres (marketing aspect). **CONCLUSIONS:** It is considered that the data will help to make conclusions regarding to the future organization of psychosocial care. Furthermore answers are expected to the questions, which benefits patients can have in the centre or in

the non-centre and which problems can arise. **RESEARCH IMPLICATIONS:** The study results should be helpful in the design and implementation of future organ centres (e.g. lung or prostate centres) and in the development of psycho-oncological treatment guidelines. This can be the initial point of appropriate interventions to improve the quality of care. **CLINICAL IMPLICATIONS:** The data will be sustained to improve the care of patients with breast or colorectal cancer. For example the systematic patient evaluation of the centres can be integrated in the certification (and recertification) guidelines. **ACKNOWLEDGEMENT OF FUNDING:** Funded by the Roland-Ernst-Foundation for Health Care, Dresden.

P1.2.22

Ensuring the Patient Voice is Heard in Cancer Control Action Plans: A Leadership Imperative for Psychosocial Oncology

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BACKGROUND: Funding has been made available for five years to implement the Canadian Strategy on Cancer Control, through the auspices of the Canadian Partnership Against Cancer. One of the eight action groups charged with specific mandates is the Cancer Journey Action Group. Its mandate is to provide leadership to change the focus of the cancer system so that patient, survivor and family member needs are better served. **METHOD:** This presentation will highlight the overall plans for the Action Group is its move toward creating a person-centered cancer system. The emphasis will be on our intentional efforts to ensure the patient perspective (voice) is part of all work. **RESULTS:** We have made intentional efforts to incorporate the patient/survivor perspective in our planning processes for a national cancer control strategy. We have made use of qualitative and quantitative methods to gather data and actively involved representatives in panels, committees, and task teams. Throughout the work there has been a commitment to find out what patients think constitutes a person-centered approach and not rely solely on viewpoints of health care professionals. **CONCLUSIONS:** To truly achieve the goal to have a person-centered cancer system, it is imperative to have the patient (consumer) voice evident and informing the deliberations. Without intentional and clear actions this involvement will not happen. **RESEARCH IMPLICATIONS:** Innovative ways need to be implemented and evaluated to ensure patient input and involvement in cancer control planning. **CLINICAL IMPLICATIONS:** This work presents an excellent opportunity to identify what patients

think is important in their care and thus make relevant improvements in care delivery processes. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer.

P1.2.23

Effect Model of Empathic Communication in the Clinical Encounter: Implications for Quality of Care in Oncology

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BACKGROUND: To establish the view that clinician empathy (CE) is a core professional skill with profound therapeutic potential, a substantial theoretical- and evidence-based understanding of CE in research, education and clinical practice is still needed. Therefore, the aim of the present investigation is to analyze an important element of the 'pharmacology' (Balint) of CE: its 'specific effectiveness' in the clinical encounter. **METHOD:** By reviewing prior empirical studies of CE, we developed the 'Effect model of empathic communication in the clinical encounter', which describes the 'specific effectiveness' of CE. **RESULTS:** We developed the 'Effect model of empathic communication in the clinical encounter' (see Figure 1 in: Neumann et al., 2009. *Analyzing the 'nature' and 'specific effectiveness' of clinical empathy: A theoretical overview and contribution towards a theory-based research agenda. Patient Education & Counseling*, doi:10.1016/j.pec.2008.11.013), which describes how an empathically communicating clinician can achieve improved patient outcomes. Against the background of Mercer and Reynolds' (2002) definition of CE, we assume that an empathic communicating clinician can achieve various positive cognitive/action-oriented effects (see Figure 1) as well as affective-oriented effects (see Figure 1) on the clinician and patient level. These can in turn lead to short, intermediate (e.g. trust, compliance, satisfaction) and/or long-term outcomes (e.g. health status, psychological morbidity, self-management). The model describes in detail the effect mechanisms of CE, which are especially important in cancer care (see Figure 1). **CONCLUSIONS:** In terms of applied health services research, the objective of our model is trying to give a clear and

exemplary demonstration of the specific positive effects that CE can have on patients and the patient-clinician relationship. This model shows that being empathic is both, a precondition for socio-emotional patient outcomes in clinical care (see Figure 1, affective-oriented effects) and a precondition for taking the appropriate scientific steps in the clinical domain i.e., anamnesis, diagnosis, education, information and therapy (see Figure 1, cognitive/action-oriented effects). These positive effects of CE are especially required in cancer care, because of the enormous physical and psychological sufferings cancer patients are confronted with. **RESEARCH IMPLICATIONS:** Against this background, a first step in future research should be for various disciplines to discuss, improve and expand upon this model on the theory level. Advanced qualitative methods should be used to conduct an initial validation of the model from the perspective of patients (with different kinds of diseases) and clinicians (from multiple professions and specialties). In a second step, research should quantitatively evaluate the validated model in experimental and prospective study designs. **CLINICAL IMPLICATIONS:** This model shows that CE is a fundamental determinant of quality in medical care because it enables the clinician to fulfill key medical tasks more accurately, thereby leading to enhanced health outcomes. Therefore, the 'Effect model empathic communication in the clinical encounter' can be used for educating and training physicians, nurses and psycho-oncologists in empathy. **ACKNOWLEDGEMENT OF FUNDING:** We are grateful to the Else Kröner-Fresenius Foundation for providing Dr. Melanie Neumann with moral and financial support during the course of this study (grant number P43/05//A33/05/F0).

P1.2.24

Evaluating the Quality of Psycho-Oncological Care in Certified Breast Centers in Germany

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BACKGROUND: In Germany, 'Certified Breast Centers' (CBCs) are required by current national guidelines to offer psycho-oncological support during all stages of breast cancer treatment. Up to now, however, research on the quality of the structure and process of psycho-oncological care in these centers has been rare. Therefore, we set out to analyze these aspects of psycho-oncological care as provided in those CBCs that fulfil the standards of the German Cancer Society and the certifying agency, OnkoZert. **METHOD:** Starting in August 2008, 218 locations (clinics) forming 174 CBCs were mailed a questionnaire that asked them to rate various structure- and process-related features

of psycho-oncological care as provided by their institution. Additionally, patients of 140 randomly selected locations (out of 218) were asked to answer a questionnaire addressing, e.g., the information they had received on available psycho-oncological support and how satisfied they were with the psycho-oncological support they might have encountered. Both questionnaires had been developed by the investigators based on available guidelines for psycho-oncological care and using feed-back from clinically experienced psycho-oncologists. **RESULTS:** While the patient survey has not been completed yet ($N = 850$ patients recruited so far), at the institutional level responses from 146 locations were finally available for data analysis (67% response rate). 29% of these locations provide psycho-oncological support solely through staff directly affiliated to them, 15% use a consultation-liaison model, 10% provide support exclusively through psycho-oncologists from private practice, and the remaining 46% employ some combination of these approaches. 48% use standardized tests to identify patients needing psycho-oncological support occasionally. A majority (85%) belief that becoming a CBC has helped them improve the quality of psycho-oncological care. **CONCLUSIONS:** As far as the data available here at the institutional level are concerned, it appears that this study is the first to provide a detailed and comprehensive overview of structural and process-related features of the quality of psycho-oncological care as currently implemented in CBCs in Germany. Obviously, the process of certification of breast centers has helped establish psycho-oncological care for breast cancer patients at an at least satisfactory level. At the same time, data not presented here due to space limitations show that there also is the need for further improvement in delivering psycho-oncological care for breast cancer patients. **RESEARCH IMPLICATIONS:** This study represents a first step in evaluating the quality of psycho-oncological care in CBCs in Germany in greater detail. Future research should recognize the advantages that may result from collecting data both at the institutional and individual (patient) level as is being intended here. Aside from refining some of the indicators used in the present study future research should focus on factors that determine inter-institutional differences in the quality of psycho-oncological care. **CLINICAL IMPLICATIONS:** The results presented here allow practitioners and quality assurance managers at the various locations to identify weaknesses in the psycho-oncological care of their breast cancer patients. Thus, they will help to further improve the quality of psycho-oncological services in CBCs. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the German Cancer Society.

P1.2.26**Vision, Principles and Recommendations for Integrative Oncology in Canada**

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BACKGROUND: Despite increased interest in integrative oncology by health professionals, many questions remain unanswered such as the meaning of integrative care, the conditions that should be met for integration and the readiness of the cancer care system to move in this direction. The purpose of this presentation is to report on the consensus established at the first Canadian interdisciplinary invitational workshop about the definition, vision, principles and research priorities for integrative oncology (IO) in Canada. **METHOD:** The CIHR funded workshop was held in Toronto (Canada) in November 2008 to examine the nature of Integrative oncology and the implications of this vision for practice (guidelines) and research (e.g. developing an evidence base for IO). It involved 32 participants with a variety of backgrounds (researchers, clinicians including psycho-oncology professionals, CAM practitioners, policy makers, cancer care managers, funders, survivors) from diverse Canadian and US institutions, provincial cancer agencies and NGOs. Following key readings distributed in advance and several podium presentations designed to provide an environmental scan about current research, practices and models, group exercises were structured around prominent themes and a consensus building process throughout the meeting led to agreed-upon recommendations. **RESULTS:** The overview of the current state of practice and research highlighted the lack of consensus on the vision and principles for IO and a range of models were deemed promising but unsatisfactory either by lack of scientific evidence or because many therapies, despite of their individual demonstrated efficacy, end up too often at the fringe of conventional oncology care. Moreover disciplinary language barriers also create artificial divides. This open and respectful dialogue led to a consensus around the vision, principles and the articulation of key recommendations for IO in Canada. For example interprofessional oncology training was identified as a way to enhance this integration. **CONCLUSIONS:** Such an interdisciplinary, inter-professional encounter was extremely valuable and helped to better understand some of the current barriers and new directions for overcoming these obstacles in the realm of cancer research and

practice. The report of this invited workshop is being prepared for publication. A detailed account of the recommendations will be provided. **RESEARCH IMPLICATIONS:** Research should focus on the effectiveness of integrative synergistic models for cancer care in addition to the individual evaluation of therapies. Whole systems research methods need to be adapted to oncology and package of interventions synergistically tested. **CLINICAL IMPLICATIONS:** A core interdisciplinary team of researchers and clinicians emerged to move forward the integrative oncology research agenda in Canada and examine the utility of developing practice guidelines in Integrative Oncology. **ACKNOWLEDGEMENT OF FUNDING:** Funding was received from the Institute for Cancer Research of the Canadian institutes for Health Research and the Hecht and Lotte Foundation. The Cancer and CAM research team is part of the Sociobehavioural Cancer Research Network of the Canadian Centre for behavioural research and Program Evaluation, University of Waterloo and funded by the Canadian Cancer Society.

P1.3.1**Psychological Status of Cancer Patients in Relation to Immune System**

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BACKGROUND: It is known that the conflict among Es, Super-Es and Ego not only causes of the psychological disturbance but also it could negatively influence the immune system. The importance of sexuality in the psychological life has been shown by Freud but he was unable to explain the mechanism responsible for the association between sexual repression and cancer. Now it is possible to hypothesize that the sexual sensitivity may influence cancer development. **METHOD:** We have investigated the sexual profile in cancer patients in relation to the immune system. The study included 50 consecutive cancer patients (M/F:27/23; median age: 60 years; range: 28–70), 21 of whom showed distant organ metastases. The patients had a clinical interview and were submitted to the Rorschach's test. The immune status was analyzed by measuring lymphocyte subset and serum levels of IL-2 and IL-10. The results were statistically analyzed by the chi-square test. **RESULTS:** The response to Rorschach's test documented an inhibition of the sexual profile in 41/50 patients, without significant differences with respect to the histotype or the extension of tumour. Patients with normal sexual identity showed a significantly higher number of total lymphocytes, T lymphocytes, T helper lymphocytes and NK cells with

respect to the patients with sexual suppression, whereas no difference was in T cytotoxic lymphocyte mean number. IL-2 and IL-10 mean serum concentrations were lower and higher in patients with altered than in those with normal response to Rorschach's test, even though only the difference IL-10 values was statistically significant. **CONCLUSIONS:** This preliminary study, carried out to analyze the psychological status of cancer patients in relation to immune conditions, would suggest that neoplastic disease is characterized by a suppression of sexual profile and that this is associated with immunosuppression. **RESEARCH IMPLICATIONS:** Further studies, by evaluating other immune parameters and not only the number but also the functional status of lymphocyte subpopulations, are required to better define the relation between anticancer immunity and psychological status of patients. **CLINICAL IMPLICATIONS:** This study, by showing a possible relation between sexual profile and immune function, suggest that the clinical investigation of psychological status should be included among the usual examinations carried out to evaluate the status of the biological response to cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.2

The Effect of Chemotherapy in Elderly Gastric Cancer Patients

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BACKGROUND: The incidence of gastric cancer in elderly people is increasing due to thorough diagnostic work up and increasing longevity. However, the study about the efficacy and toxicity in the elderly patients has been limited because of poor enrolment of elderly patients in clinical trial. We conducted the retrospective study to compare efficacy (response rate, progression survival and progression free survival) and toxicity between elderly patients older than 65 years and young patients. **METHOD:** Patients with metastatic or relapsed advanced gastric cancer patients were enrolled. Total 66 patients were analyzed. The number of elderly patients over 65 years was 25 and the one of young patients was 41. 21.2% of total patients were elderly patients older than 65 years. The chemotherapy regimen was mFOLFOX-6 comprised of Oxaliplatin 85 mg/m² iv day 1, 5-FU 400 mg/m² iv day 1, 5-FU 1500 mg/m² day 1, 2 plus Leucovorin 75 mg/m² day 1, 2 continuous infusion. Tumor response was evaluated using RECIST. Toxicity was graded according to National Cancer Institute common terminology

criteria for adverse events. **RESULTS:** The response rate didn't show difference between elderly group and young one. The RR of elderly group was 44% and the one of young group was 43.9%. The median PFS in elderly group was similar to young group (4.9 vs. 6 months). The median OS in elderly group did not differ compared to young one (13.7 vs. 14 months). The incidence of grade 3, 4 neutropenia is similar in both groups. The incidence of grade 3, 4 non-hematologic toxicity such as nausea/vomiting, mucositis didn't show difference. Performance status is only significant predictive factor for OS and PFS. **CONCLUSIONS:** The effect of chemotherapy in elderly patients was not inferior to young counterparts with respect to response rate, overall survival and progression free survival. Toxicities of chemotherapy were tolerable and manageable in both groups. Performance status rather than age itself was main prognostic factor for evaluation of efficacy of chemotherapy. **RESEARCH IMPLICATIONS:** Age alone should not be a limiting factor for decision making of chemotherapy. More important factors could be PS, comorbid medical conditions, social and family support, cognitive function, so called comprehensive geriatric assessment (CGA). Validation of CGA tool should be done. Well designed clinical trials targeted for both elderly frail and elderly healthy patients can show the insight for better care of elderly cancer patients. **CLINICAL IMPLICATIONS:** Not only cancer factors such as pathology and stage, but also patient's factors should be considered in elderly cancer patients. ECOG performance status is not enough for comprehensive geriatric assessments. Clinicians should consider several factors such as functional status, cognitive abilities, emotional conditions, nutritional status, comorbid conditions, social and environmental situations. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.3

Psychosocial Variables That Influence the Decision to Attend Genetic Counseling for Hereditary Tumour of the Breast and/or Ovaries: A Comparison of Two Italian Samples

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BACKGROUND: The purposes of this study were to compare psychosocial variables of an Italian sample that withdrew from genetic counselling with those of another sample that decided to continue it and to evaluate factors associated with the withdrawal of genetic counselling. **METHOD:** We compared psychosocial variables of 112 subjects (G1) of 106 subjects (G2). Both groups freely requested a first genetic informative consultation: the first one asked

for a second visit and for the family tree drawn up while the second group never asked for it. All subjects were affected by breast and/or ovarian cancer (G1 = 63; G2 = 43) or were healthy but had at least 1 first-degree-relative affected by breast and/or ovarian cancer (G1 = 49; G2 = 63). **RESULTS:** Among the considered variables (medical-demographics, anxiety and depression, personality characteristics, family cohesion and adaptability) the independent factors, shown by the multivariate analysis, were the number of children and of affected relatives and the Ipomania level. As a matter of fact subjects with a higher number of children (o.r.1.724; $p = 0.017$; CI = 1.101–2.700), a higher number of affected relatives (o.r.1.301; $p = 0.000$; CI = 1.145–1.479), and with a higher score in the Ipomania scale (o.r.1.070; $p = 0.004$; CI = 1.022–1.121) represented those who probably continued the genetic counselling. **CONCLUSIONS:** These findings could suggest that the need to protect their children may have motivated subjects to ask more about their actual genetic and cancer risk; moreover we could assume that having a higher number of affected relatives may have influenced subjects risk perception and consequently their compliance with counselling process. Furthermore a greater Psycho-Physical energy (Ipomania) may have facilitated subjects to look for further information. **RESEARCH IMPLICATIONS:** Results from this study underline the importance of trait personality characteristics (that is an unusual variables in genetic counselling literature) in decision making process of subjects in attending genetic counseling for hereditary breast and/or ovarian cancer. **CLINICAL IMPLICATIONS:** Based on our findings we could assume that a greater knowledge of psychosocial variables connected with the decision making process of subject in genetic counselling could help counselling team to set up new or improved interventions, especially for those subjects at higher risk of drop out. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.4

Analysis of Psychiatric Consultations in a Cancer Hospital

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BACKGROUND: This study evaluated the characteristics of consultations in a cancer hospital to contribute better practice in psychiatric consultation. **METHOD:** We reviewed the psychiatric consultation records of patients admitted to Chonnam National University Hwasun Hospital between

May 1, 2004 and April 30, 2007. The hospital, which opened on May 1, 2004, specializes in treating cancer patients. We evaluated the demographic characteristics of the patients who were seen in consultation and those who refused a psychiatric consultation, the reason for the consultation, and the psychiatric diagnosis. **RESULTS:** There were 642 psychiatric consultations. The most common reasons for a consultation were a change in consciousness (30.6%) and depression (16.8%). The patients were most frequently diagnosed with delirium (39.6%) or depressive disorder (34.3%). Delirium was more frequent in males, whereas depressive disorders were more frequent in females ($p = 0.000$). Patients in a medical department were more often diagnosed with delirium and depressive disorder, whereas patients in a surgical department most often had anxiety disorders ($p = 0.024$). Moreover, the patients who refused a consultation had depression more often than delirium ($p = 0.042$). **CONCLUSIONS:** The most frequent psychiatric diagnosis made in a consultation was delirium. Delirium was more frequent in males, whereas depressive and anxiety disorders were more frequent in females. Moreover, there were differences in the most common psychiatric diagnosis according to whether the patient was admitted to a medical or surgical service. Consultations were refused less often in patients with delirium, perhaps because the symptoms appear to be serious. By contrast, symptoms of depression are obscured by those of cancer, and many people associate depression with cancer. As a result, most of those who refused consultations had been diagnosed with depression. **RESEARCH IMPLICATIONS:** The reason for the differences in the prevalence of psychiatric diagnoses between medical and surgical departments is not clear. It may be related to the characteristics of the patients or those of the doctors. More research is needed to answer this question. In addition, the reason for refusing psychiatric consultations needs more research. **CLINICAL IMPLICATIONS:** Delirium and depression were the most common psychiatric problems seen in the cancer patients. Since these can lead to serious problems, such as violent behavior, refusal of treatment, and suicidal behavior, an immediate assessment and symptom management are very important. In addition, on-going follow-up is recommended. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.5

Ambivalent Need for Information in Patients with Cancer

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BACKGROUND: The evaluation of cancer patient needs, especially during hospitalization is a useful clinical tool for the identification and understanding of those areas of care that need to be improved with specific patients and in general by the staff. **METHOD:** In the Oncology Department of Careggi Hospital in Firenze we proposed to 571 inpatients the original version (including 25 items) of Needs Evaluation Questionnaire (NEQ), a self-report instrument that gives an overview of the principal needs of patients with respect to the state of health (Tamburini *et al.*, 2000, 2005); it was filled in by 341 patients. NEQ included four items which explore the need of 'more' information about diagnosis (item 1), future condition (item 2), clinical exams (item 3), treatments (item 4). On the contrary, item 9 is about the need to receive 'less' information on illness (diagnosis, treatments, evolution). **RESULTS:** We observed that 11% of patients (37 out of 341) replied 'yes' to item 1 and/or 2,3,4 and 'yes' to item 9; patients manifesting incoherence had no statistically significant (χ^2 analysis) differences from the others regarding age, sex distribution and distress according to Psychological Distress Inventory (PDI) and Hospital Anxiety Depression Scale (HADS). Analysing all the answers to NEQ items, patients manifesting incoherence on information willingness, also expressed a significantly higher (χ^2) need for speaking to a psychologist (but not to a spiritual advisor or to people who have similar experience), for feeling more useful within family, for feeling less abandoned, and need to be less involved in therapeutic decisions. **CONCLUSIONS:** The fact that such a high percentage of patients (11%) expressed both the need for 'more' information and the need for 'less' information was totally unexpected considering only difficulty of comprehension typical of negative questions and could suggest the presence of incoherence, conflict or ambivalence on this point. **RESEARCH IMPLICATIONS:** At the moment we are carrying on a qualitative phase of the study through clinical semi structured interviews focused on information in patients expressing apparent ambivalence on this topic in NEQ questionnaire. **CLINICAL IMPLICATIONS:** Research and discussion about ambivalent need of information in patients with cancer could provide clinicians with useful tools to approach, understand and respect the complex and ambivalent inner psychological world of their patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.6

Motivation of Children with Oncological Diseases and Ways of Their Rehabilitation

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BACKGROUND: The research into motivation and needs of 6–10-year-old children with oncological diseases was aimed at defining ways of their psychological rehabilitation. Main group (30 people with oncological diseases, 1.9 years as an average remission period) and control group were surveyed. **METHOD:** 'Defining study motivation' (D.Elkonin, L. Venger); 'Unfinished sentences' (J. M. Sachs, S. Levy); 'Short Apperception Test' (E. Kris) and other methods were used, including SPSS 13.0. **RESULTS:** The main group proved different from the control group in the following spheres: Study motivation: social and estimative motives dominate over cognitive and ludic ones. Communication with peers: social motives are underdeveloped (particularly, tendency for cooperation and tolerance); reflecting on communication they tend to express negative emotions. Motivating self-assessment: greater awareness of their own personal qualities, skills, preferences and habits, dietary habits and needs for new experience and entertainment; orientation on their own appearance as a motivating factor; Behavioural motives: more frequent mention of avoiding punishment, mentioning such topics as pursuit and isolation; increased anxiety; avoiding thinking about the future. **CONCLUSIONS:** Disease-related living conditions influence the development of children's motivation and needs. Changes in everyday activities (inevitable concentration on treatment, on themselves and their immediate family surrounding, focus on today's difficulties and needs neglecting the future) inhibit development of social communication skills and cognitive motivation. The increased level of anxiety as result of stressful situation caused by constant fear of the sudden relapse of the disease and dubious relationships within the family in case when disease- and treatment-related issues are not discussed overtly. The uncertain disease development explains uncertainty about the future and prevents the formation of future-oriented motivation. **RESEARCH IMPLICATIONS:** The result of research allows to uncover the mechanism of personality's development and the sphere of its motivation and needs for primary school age children with oncological diseases. **CLINICAL IMPLICATIONS:** There appears to be several ways in psychological rehabilitation of primary school-aged children with oncological diseases: development of cognitive study motivation, motivated communication with peers, alongside with accumulation of instruments for this interaction. Teaching overt communication to families. The increased anxiety, lack of positive 'Self-concept' require psychological support. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.7

Why Do People Fear Cancer?

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BACKGROUND: Many of us are afraid of getting cancer. It might be impossible to entirely overcome fears. However, cancer fears can be an obstacle for people to take appropriate actions in facing cancer from prevention to treatment. Little research has been conducted to directly assess reasons of cancer fears although we fears cancer from various reasons. By knowing them, we will be able to address and alleviate cancer fears. **METHOD:** We conducted a self-administered survey among 9200 residents in 4 areas selected based on distance from the designated cancer hospitals. Before the survey, we conducted 7 group interviews with people and casual key informant interviews to identify items of possible cancer fear reasons appropriate for survey participants. Eighteen items were included to be asked only among those who reported they fear cancer. We conducted factor analysis to group the items and further explored possible patterns of selected reasons and factors. **RESULTS:** Four-thousand-five-hundred-one (48.9% of response rate) responded to the survey. About 90% ($n = 3679$) reported they fear cancer. Among the 18 perceived reasons, the most frequently reported was 'continuous concerns over recurrences' (58.7%). We identified 7 factors through factor analyses; suffering accompanying cancer, lack of support, social impacts, possibility of getting cancer, fatality of cancer, and concerns over recurrence. Variances of the factors ranged from 3.0 and 7.7%. About a half chose items across 4 (23.8%) or 5 (23.2%) factors. **CONCLUSIONS:** Most respondents reported cancer fears. The results showed reasons for cancer fears vary widely. Seven factors were identified based on statistics and face validity with consensus among the research team. The selected reasons crossed several factors including different natures and quality. **RESEARCH IMPLICATIONS:** The study sample, limited to particular areas of Japan, was the major limitation. This study showed people fear cancer for various reasons and proposed their relationships. Further research on types of and associations among them with regard to individuals' characteristics would help us develop health education messages to alleviate cancer fears. **CLINICAL IMPLICATIONS:** We should address reasons for cancer fears in efforts of alleviating cancer fears. Such efforts might include educational or infrastructural approaches. For instance, educating people about palliative care coming all along with cancer treatments might be useful for perceptions of pains accompanying

cancer whereas perceived lack of support might involve interventions to social structures. **ACKNOWLEDGEMENT OF FUNDING:** The survey was conducted as part of 'Research on appropriate delivery of cancer information and support from the viewpoint of cancer patients, their family members, and general public (Tomoko Takayama, PhD, Principal Investigator),' supported by the Third Term Comprehensive Control Research for Cancer of the Ministry of Health, Labour and Welfare.

P1.3.8

Self-Concept in the Danish HNPCC Cohort

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BACKGROUND: Hereditary nonpolyposis colorectal cancer (HNPCC) is a major cause of hereditary colorectal cancer. A growing number of individuals live with knowledge of increased risk of cancer and participate in surveillance programmes. Denmark has a population of 5 million and holds a national HNPCC register, within which 168 families (approximately 500 individuals) with HNPCC-predisposing germline mutations have been identified. The purpose was to evaluate self-concept in a population-based Danish HNPCC cohort. **METHOD:** The HNPCC self-concept scale has been developed and validated by Esplen and coworkers. It is based on 20 statements scored from 1 to 8 (minimum total score 20 and maximum 140). A Danish version of the scale was sent out on a population basis to 266 mutations carriers in eastern Denmark. Information was obtained from 213 (80%) individuals with a mean age of 47 (18–85) years. This cohort contained 123 (58%) women and 94 (44%) individuals affected by cancer. **RESULTS:** The mean total self-concept score was 55.3 ($N = 156$) with a considerable variation (standard deviation 24.0). The subscale for stigma and vulnerability had a mean score of 35.7 and the anxiety subscale a mean score of 21.3. Neither the total score nor the subscale scores correlated with age, sex or previous cancer. Among the individual themes, the vast majority, 72–76%, reported feeling hopeful about the future and able to deal with the test result, but worries about bowel changes were reported by 40% and more than half (54%) were afraid of cancer when undergoing surveillance. **CONCLUSIONS:** This study will be extended to cover the entire Danish HNPCC cohort. Our preliminary data demonstrate a wide

range of scores and indicate that commonly used demographic data do not allow identification of individuals with low self-concept. **RESEARCH IMPLICATIONS:** The self-concept scale, originally developed in Canada, has been tested in a European population with similar results as in Canada. Further studies will investigate whether individuals with low self-concept benefit from psychosocial support. **CLINICAL IMPLICATIONS:** Evaluation of self-concept constitutes a potential approach for the identification of individuals in need of extended psychosocial support after genetic testing for HNPCC. **ACKNOWLEDGEMENT OF FUNDING:** None applicable.

P1.3.9

Psychiatry and Cancer: Our Experience So Far in a Tertiary Care Oncology Centre in India

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BACKGROUND: An almost 50% prevalence of psychiatric disorders is seen in cancer patients, according to most studies in developed countries in the area of mental health service provision. Amongst studies done in developing countries, settings and methodologies differ. The purpose of this study is to examine the demography, referral patterns, reasons for psychiatric consultation, psychiatric diagnoses and types of interventions used, in a pure oncology tertiary care centre in India. **METHOD:** A retrospective analysis, of all new referrals, inpatient and outpatient, to the psychiatric unit of an oncology tertiary care hospital, over a 22 month period was carried out. A proforma was designed to note demographic variables, referral methods, psychiatric diagnoses (by clinical interview and using International Classification of Diseases version 10) and management. Presence of pre-existing psychiatric illness was looked for in the patient case records in a 12 month period. Relevant statistical analysis was done using Statistical Package for Social Sciences version 14 for descriptive statistics. **RESULTS:** About 60% of all patients referred were males and 54% were outpatient referrals. Maximum inpatient referrals were from Surgical Oncology. Outpatient referrals were most commonly from Radiation Oncology. Approximately 67% patients had a psychiatric diagnosis, mainly Adjustment Disorder (about 20%) and Organic Mental Disorder (about 17%). Psychological interventions were used most commonly (63% approx). There was a history of pre-existent psychiatric illness in almost 17% of patients seen in the period of one year, mainly psychotic disorders, depressive disorders and substance abuse. **CONCLUSIONS:** There is high psychiatric morbidity (more than 50% as reported

in previous studies) in oncology patients referred to psychiatric services in a tertiary care cancer centre in India. About 17% of patient had a pre-existent major psychiatric illness, which meant more intensive and frequent monitoring of mental state. Therefore, mental health service provision and development, as well as research are significant aspects of patient care in oncology settings in developing countries. **RESEARCH IMPLICATIONS:** Identification of psychiatric morbidity in different groups of cancer patients, based on cancer type & location, gender, socio-cultural context and psychopharmacological approaches used need to be studied further. The impact of different types of psychotherapies used should be addressed too in future research. **CLINICAL IMPLICATIONS:** The impact of interventions, both psychological and psychopharmacological, in cancer patients needs to be looked at, so that these can be incorporated in the overall care and treatment protocols and better models of service provision can be devised for this vulnerable group. It is also important to be aware of any pre-existing psychiatric illness in this group of patients, so that appropriate care can be taken during cancer treatment modalities and later. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.10

Teaching Teachers on Loss in the Family

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BACKGROUND: Dignity, loss and grief are, among others, things that may make you vulnerable in life and this may be why we rarely discuss them with children. In order to change this routine, we organized an educational program for elementary school teachers helping them to successfully integrate the topics of dignity, solidarity, loss and grief in their work with children. **METHOD:** We designed our program to cover the largest possible terrain of the psychology and pedagogy of loss. The program was announced in two big Hungarian towns (Budapest and Debrecen) for elementary school teachers. We held meetings once a month for a year with thematically compiled lectures, which will be detailed in the presentation. The lectures were followed by case discussions led by a psychologist. Altogether, 97 teachers from 17 schools in the two towns participated in the programs. **RESULTS:** The teachers welcomed our pilot program with enthusiasm and their active participation enabled an exchange of experience and putting theoretical knowledge into practice. A good example of this is, the following our program,

each participating school organized special programs for the discussion of the issues of loss and help in everyday situations. **CONCLUSIONS:** The teachers' enthusiasm and participation is in itself a proof that the topics we raised are among those that naturally come up in the educational setting regularly. Shaping children's values and viewpoints is not the sole responsibility of the family, school plays an exceptional role, too. The success of our program clearly shows that schools gladly accept this challenge and are ready to draw on external resources to develop their methods. **RESEARCH IMPLICATIONS:** We may enhance the efficiency of our educational program by exploring the development of children's view of death with controlled research. The experience of our one-year pilot program may serve as a basis for the design of such research. **CLINICAL IMPLICATIONS:** From the perspective of health promotion it is essential not to consider the important issues of life, including death and loss, a taboo, not even with children. It is vital for them to have the opportunity of joint discussion and thinking with reliable adults, since this is what prepares them for the healthy coping with the issues of loss as well as the respect for dignity. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.11

A Pan-Canadian Partnership to Develop an Adult Psychosocial-Supportive Care Guideline Using Adaptation Methodology

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BACKGROUND: This poster presentation will provide a detailed overview of the development, and results of an external review of the Pan-Canadian Guideline for the Psychosocial Care of the Adult Cancer Patient. This work is a collaborative project of the Canadian Partnership Against Cancer (CPAC)—Cancer Journey Action Group (Guidelines and Standards Workgroup) and Cancer Guideline Action Group (Adaptation Working Group), and the Canadian Association of Psychosocial Oncology (CAPO)—Clinical Advisory Committee. **METHOD:** Following the AGREE methodology, an expert panel of interdisciplinary psychosocial health professionals representative of a diverse set of perspectives such as research methodology, geography, locus of practice, and program type reviewed evidence embedded in existing clinical guidelines, systematic reviews, trials and comparison studies. The panel then developed recommendations for the

comprehensive assessment of 'whole person' psychosocial health care needs of the adult cancer patient in the Canadian context. An extensive review process of these recommendations was disseminated to psychosocial clinicians and organizational leaders in the field to obtain feedback to refine the guideline prior to dissemination. **RESULTS:** Results of the guideline development work and the subsequent review process to obtain feedback on the draft guideline will be reported. The recommendations, which include the parameters, timing, delivery and impact of comprehensive psychosocial assessment, will be detailed. Initial dissemination activities and responses to dissemination will also be highlighted. **CONCLUSIONS:** This is the first CPAC—CAPO collaboration for the development of a pan-Canadian guideline to guide the comprehensive psychosocial care of the adult cancer patient. The resulting recommendations and dissemination strategies will align closely with other ongoing work related distress screening, psychosocial professional education, access to information and services, and outcomes research. **RESEARCH IMPLICATIONS:** The new pan-Canadian guideline outlines opportunities for further research in relation to each recommendation. These include the need for systematic analysis of the timing, parameters, delivery and impacts of comprehensive assessment and care. **CLINICAL IMPLICATIONS:** The personal and social implications of unmet psychosocial need across the spectrum of the cancer journey are well documented. Patients, families, care providers, administrators and policy makers require evidenced-based, evidence-informed recommendations to ensure the provision of timely, effective and sustainable interventions. Development of such recommendations requires approaches that are collaborative, comprehensive and rigorous as demonstrated in the development and dissemination of the pan-Canadian recommendations. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.12

Training the Next Generation of Researchers in Psychosocial Oncology: Research Priorities and Future Directions

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BACKGROUND: PORT (Psychosocial Oncology Research Training) is a strategic training initiative in health research that has been in operation for nearly six years. This program seeks to build research capacity through the training of promising Canadian and international graduate students across a variety of disciplines. The ultimate goal of PORT is to develop a knowledge base that will serve to enhance psychosocial adjustment for

patients and families facing cancer. **METHOD:** To date, nearly 40 PORT Trainees have been offered sustained mentorship, financial support, internships, and networking opportunities from 27 renowned researchers based at participating universities. Research training focuses on knowledge development, design of psychosocial interventions with a focus on feasibility, implementation, evaluation, and transfer. Trainees and mentors alike come from a variety of disciplines such as nursing, psychology, philosophy, management, nutrition, kinesiology and dentistry. Core activities include a graduate level 13-week, 3-hour weekly seminar taking place simultaneously in real-time via videoconferencing. In addition, Trainees participate in the annual PORT workshop and periodic Virtual Interactive Brainstorming Sessions (VIBS) and complete an internship in a location that complements their ongoing research activities. **RESULTS:** Samples of innovative studies conducted by PORT Trainees include the role of physical activity on stress perceptions and quality of life among breast cancer survivors using a daily diary approach, the impact of hormonal therapy on mood and cognition among men with prostate cancer, the use of humour and interactivity in newly developed websites to promote healthier eating habits among youth, the exploration of cancer-related information-seeking patterns among individuals newly diagnosed. In addition, Trainees have been documenting the role of multimedia oncology interactive navigation tools in enhancing patient-provider communication, decision-making, competence and autonomy. **CONCLUSIONS:** Through its diverse academic activities PORT serves to promote evidence-based practice and knowledge uptake among all stakeholders involved—researchers, clinicians, community resources, volunteer organizations and government. Future PORT developments includes the inclusion of nontraditional fields (e.g., journalism, medical geography, architecture) as well as the inclusion of three additional Canadian Universities and international involvement with Australia, India and Brazil. **RESEARCH IMPLICATIONS:** PORT is an exemplar of research training that is transdisciplinary, multimethods, and truly responsive to the needs of cancer survivors. **CLINICAL IMPLICATIONS:** This training program serves as a repository of various sources of evidence for clinicians who are committed to delivering effective psychosocial interventions. **ACKNOWLEDGEMENT OF FUNDING:** PORT is funded primarily by the Canadian Institutes of Health Research (CIHR)—Institute of Cancer Research (ICR) and the National Cancer Institute of Canada (NCIC). Additional funds are provided by the CURE Foundation and the Newton Foundation.

P1.3.13

Effect of Worry and Monitoring Processing Style on Cognitive and Affective Responses to Genetic Risk Information

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BACKGROUND: Genetic testing for disease susceptibility is available for cancer conditions. Interpretation of genetic risk information is not straightforward and varies greatly among individuals due to the complex nature of this information. Interpretation may further be influenced by certain cognitive and affective factors relating to individual representations of disease held by the individual. Using an experimental paradigm incorporating hypothetical scenarios, we evaluated the role of pre-manipulation worry and monitoring processing style as predictors and moderators of responses to genetic risk information. **METHOD:** In a 9 (disease risk increments) × 4 (disease type) randomized experimental design healthy individuals ($N = 752$) were recruited from Australia, New Zealand, and the UK to participate in an online study. Pre- and post-scenario assessments were completed including monitoring style, risk encodings, disease worry, genetic testing interest and perceived benefits and consequences. Scenarios presented information about an individual with a family history of disease and in whom a genetic mutation was discovered. Genetic disease risk varied in 10% increments from 20–100% with individuals assigned to one of four disease type conditions: diabetes, heart disease, colon cancer or lung cancer. **RESULTS:** Regression analyses were used to evaluate main effects and interaction effects of worry and monitoring style effects on risk encodings, risk-related affect, genetic testing interest, and perceived benefits and consequences of undergoing genetic testing. Individuals with high worry and high monitoring style demonstrated higher disease risk encodings, greater anticipated negative affect and distress outcomes, and greater intention to get tested/screened. Pre-manipulation worry moderated the effects of the disease risk certainty experimental manipulation on risk encodings and intentions to undergo diagnostic exams. Low worriers demonstrated the greatest sensitivity to changing risk increments. Monitoring processing style did not demonstrate a moderating effect. **CONCLUSIONS:** Pre-manipulation worry and monitoring style were found to directly influence cognitive and affective responses to genetic risk information. The greater the worry and tendency to adopt a high monitoring processing style, the higher the perceived disease risk and

belief in adverse outcomes following testing, and the interest in genetic testing. Individuals with low worry pre-scenario demonstrated a strong linear response to changing disease certainty, compared with high worry individuals whose responses varied to a lesser extent. In particular, for low worry individuals, high disease certainty was associated with very high levels of perceived risk and future screening intent. **RESEARCH IMPLICATIONS:** Study participants demonstrated differential sensitivity to disease risk certainty increments according to their level of pre-manipulation worry. High worry individuals demonstrate a high level of testing interest irrespective of the disease certainty level, suggesting that these individuals may inappropriately consider undertake genetic testing. Further investigations are needed to understand reasons underlying the apparent differences in sensitivity to risk increments of high and low worry individuals. **CLINICAL IMPLICATIONS:** These results highlight the importance of affective variables as a determinant of decision making regarding genetic testing participation and disease risk perception. High levels of perceived risk and testing interest demonstrated by high worry individuals, irrespective of disease certainty, suggests that these individuals may over-subscribe to genetic testing services. In contrast, to enhance participation of low worry individuals, interventions stressing the ability of genetic testing to provide more accurate disease certainty information should prove beneficial. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.14

Search for Behavioral Measures for Post-Traumatic Growth: A Study on Volunteering and Not-volunteering Breast Cancer Patients

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BACKGROUND: The aim of the study was to assess whether cancer patients who take up voluntary work with newly diagnosed cancer patients report higher post-traumatic growth (PTG) than non-volunteering patients and to assess cognitive and psychological antecedents of PTG. **METHOD:** Participants were 128 breast cancer patients diagnosed at least three years prior to the study, aged 22–97. They were divided into two groups: 68 women volunteering at a voluntary association for newly diagnosed breast cancer patients, affiliated with the Israel Cancer Association ($n = 68$) and women who did not volunteer at all ($n = 40$). Women answered the posttraumatic growth questionnaire, cognitive processing and emotional expression and processing questionnaires and social support questionnaire. **RESULTS:** Findings indicated high levels of

self-reported PTG among participants in both groups ($M = 3.33$, $SD = 0.90$), but volunteers showed no significant difference from non-volunteers in levels of PTG. Cognitive processing and emotional processing were highly and positively associated with posttraumatic growth. This result was not found for emotional expression and social support. Multiple regression analyses revealed that demographic, disease-related and study variables explained 21% of the variance in posttraumatic growth. **CONCLUSIONS:** The absence of relationships between volunteering and self-reported PTG points to the complexity of the PTG construct. Self report of PTG could be a coping strategy, not necessarily an enduring change. **RESEARCH IMPLICATIONS:** This is one of the first studies to measure PTG using behavioral outcomes. Further study of behavioral expressions of PTG is needed. **CLINICAL IMPLICATIONS:** The findings suggest that psychotherapy with cancer patients should focus on cognitive and emotional processes, in order to promote post traumatic growth in patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.15

Psycho-Oncology Consultation for the Era of Genetic Medicine: Multidisciplinary Approaches and Training Needed for the Care of Patients and Families Undergoing Cancer Genetic Testing

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BACKGROUND: The era of personalized medicine is dawning with the advent of treatments targeted to the genetic status of individual patients. Genetic testing will become an increasingly integrated element of medical care. Psycho-oncologists will be important members of the teams (including geneticists, genetic counselors and nurses and oncologists) which will guide such care. Anticipating and treating emotional stresses, interpersonal dilemmas, ethical concerns, and family communication issues which arise in this context necessitates new training modules. **METHOD:** Clinical case examples and research findings on utilization of genetic technology for a variety of genetic predisposition syndromes and uptake of recommendations for cancer prevention in mutation carriers will illustrate the close, multi-disciplinary collaboration necessary to successfully treat patients with hereditary concerns. We will illustrate the importance of shared language and conceptual understanding, easy access to referral for psychological, genetic counseling or specialty consultation. We will discuss the importance of understanding long-term psychological effects of family communication related

to genetic testing for hereditary cancers and of tolerance for differences among family members' choices related to screening and risk-reduction options. **RESULTS:** Personalized medicine pre-supposes acceptance of genetic testing and of the targeted medical treatments which are the long-awaited goals of the Human Genome Project and related international efforts. Psychological factors have been shown in the past decade or so to strongly affect uptake of genetic testing, family communication about genetic predisposition and adherence to recommended enhanced screening and risk-reduction strategies by mutation carriers. Family experience of cancer and perceived risk often prove more influential than objective risk estimates in guiding patient decision making. **CONCLUSIONS:** Training is needed for psychological researchers and psycho-oncology clinicians working in collaboration with genetic professionals in the development of effective interventions to enhance acceptance of genetic medicine among increasingly diverse at-risk populations. Work with medical anthropologists and sociologists may also be needed to understand the cultural implications of hereditary disease. Modules should be developed reflecting essential core competencies to work in genetic medicine, interpersonal and identity issues impacted by knowledge of genetic status, and related ethical dilemmas which confront genetic practitioners. Collaboration with genetic professionals offers potentially satisfying roles for psychological professionals working in new areas of translational medicine. **RESEARCH IMPLICATIONS:** The impact of genetic knowledge and genetic medicine on human identity and well-being in coming decades will be far-reaching. Understanding factors leading to optimal medical and psychological outcomes of genetic education, testing, and treatment will be of paramount importance. As the genetics of common diseases are integrated into clinical practice, research can guide development of teaching aids to help patients understand increasingly complex genetic factors and appropriately utilize genetic prevention strategies and, ultimately, therapies. **CLINICAL IMPLICATIONS:** Practice models must anticipate care of multiple generations of families affected by knowledge of hereditary cancer predisposition. Creativity is needed to meet the emotional needs of genetics patients, as telephone models of genetic counseling are increasingly used and care of distant family members is included in the treatment model. Also interventions are needed to help children and young adults in the next generation of at-risk families integrate and cope with lifelong knowledge of hereditary predisposition. **ACKNOWLEDGEMENT OF FUNDING:** Related work was supported by the Ethical, Legal, and Social Implications Program of the U.S. National Human Genome Research Institute and the Department of Defense.

P1.3.16

The Endocrine and Immunological Effects of Reflexology in Women with Early Breast Cancer: A Randomised Controlled Trial

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BACKGROUND: Increasingly, in the United Kingdom, women with early breast cancer are turning to complementary interventions such as reflexology to help them to cope with the diagnosis and treatment. We have carried out an RCT to evaluate the effects of reflexology and scalp massage and reported that these interventions improved mood and quality of life. This presentation reports the definitive endocrine and immunological results. **METHOD:** 183 women with early breast cancer were recruited 6 weeks post-surgery. They were randomised to self-initiated support (SIS), SIS plus foot reflexology, or SIS plus scalp massage (a control for extra social and physical contact given to reflexology patients). Peripheral blood mononuclear cells (PBMC) and serum were isolated 6 weeks post-surgery (baseline), 18 and 24 weeks. Flow cytometry was undertaken to determine: PBMC phenotyping, percentage of CD4⁺ and CD8⁺ Th1 and Th2 type cells, NK and LAK activity. Cortisol, prolactin and growth hormone levels were determined in serum by ELISA, and corresponding receptors on PBMC by flow cytometry. **RESULTS:** At the primary end point (week 24), the percentage of T cells and more specifically the T helper subset (CD4⁺) expressing IL4 (Th2 cytokine), decreased significantly in the massage group compared with the SIS group. This was accompanied by an increase in the percentage of T cytotoxic cells (CD8⁺) expressing IFN γ (Th1 cytokine) in the massage group. CD25⁺ cells were higher in the massage group compared with SIS at week 24. No significant between-group differences were found for NK and LAK cell cytotoxicity, serum levels of cortisol, prolactin and growth hormone, or their corresponding receptors. **CONCLUSIONS:** This study presents further evidence for the effects of stress-reducing interventions on host defences. The fact that the drop in CD4⁺ Th2 cells was mirrored by an increase in the CD8⁺ subset, supports an antagonistic relationship between these components. The results, however, need to be interpreted in the light of the associated quality of life findings, namely a very low rate of psychological and psychiatric morbidity in the comparison group (SIS alone). **RESEARCH IMPLICATIONS:** This study presents further evidence for the effects of stress-reducing interventions on host defences. The fact that the

drop in CD4⁺ Th2-like cells was mirrored by an increase in the CD8⁺ Th1-like cells, supports an antagonistic relationship between these components. The results, however, need to be interpreted in the light of the associated quality of life findings, namely a very low rate of psychological and psychiatric morbidity in the comparison group (SIS alone). **CLINICAL IMPLICATIONS:** Reflexology and scalp massage, given according to a standardised protocol, improve key aspects of quality of life. In addition, a number of significant alterations in host defences were demonstrated with scalp massage, although the effects on clinical outcome require to be evaluated. The benefits of reflexology and massage to women with early breast cancer should be justified, therefore, in terms of the impact on quality of life. **ACKNOWLEDGEMENT OF FUNDING:** Health Technology Assessment Programme and Hull and East Yorkshire Hospitals NHS Trust (Endowments).

P1.3.17

Increasing Screening Needs More Than Just Good Communication—Does a Training Programme in Psychological Assessment Skills Increase the Level of Screening for Distress in a General Hospital?

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BACKGROUND: Research shows that healthcare professionals are often poor at detecting psychological distress. Communication skills training alone does not always improve this detection. A training package was required to train staff in the detection and management of psychological disorders and distress. The UK National Institute for Health and Clinical Excellence suggests patients are screened for distress at four time points during their cancer journey; diagnosis, during treatment, at the end of treatment and at recurrence. **METHOD:** A four half-day programme was developed after an extensive review of the evidence base. The sessions cover listening skills, screening for distress, detection of specific disorders and interventions appropriate for healthcare staff. Staff are given confidence questionnaires at pre, post and 6 month follow-up, measuring nine domains on a Likert Scale where 1 = not confident and 10 = very confident (e.g. how confident do you feel using specific screening tools). Screening levels are measured through audit of medical records. 150 records per year of patients who had been treated in the previous 12 months for Breast, Colorectal or Urology cancers were randomly selected. Any evidence of screening for psychological distress

was noted and coded according to the timepoint in the cancer journey. Patient satisfaction surveys were also conducted. **RESULTS:** The data shows a significant improvement in staff confidence across all domains measured ($N = 255$, $p = 0.0001$). The domain relating to confidence in screening rose from an average of 3.61 pre course to 7.48 post course, maintained at 7.39 at 6 month follow-up (1 = not confident, 10 = very confident). Audits show an increase in screening for psychological distress over the three years, as more staff attend the training. Over the same time period, patient satisfaction with psychological support from hospital staff has also increased. **CONCLUSIONS:** Whilst the results have limitations, we can conclude that this course significantly improves staff confidence in dealing with psychological distress, with specific confidence in screening being the most improved domain. It can be hypothesised that this may have contributed to an increase in screening for psychological distress. Results suggest that patients feel more supported by hospital staff over the same time frame, which could be as a result of having a more holistic assessment and better psychological support, thanks to increased staff confidence. **RESEARCH IMPLICATIONS:** This study provides a useful basis from which further research can be developed. For example, it may be that levels of screening in hospitals where staff have received training but do not have a specific Psychological Support Team to refer to may differ from these results. Qualitative data could also be gathered from staff about which specific elements they felt helped them to increase screening. **CLINICAL IMPLICATIONS:** Training staff in specific skills of detection and management of psychological distress would seem to help them feel more confident to screen patients for distress throughout their cancer journey. This may help patients to access the appropriate support for their needs as well as helping staff to feel they are providing holistic care. Patients themselves feel better supported psychologically when this model is in place. **ACKNOWLEDGEMENT OF FUNDING:** This project would not have been possible without the generous support of The Wessex Cancer Trust.

P1.3.18

Patients' Experiences with Newly Diagnosed Sarcomas: A Qualitative Study

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BACKGROUND: Sarcoma patients are a highly vulnerable group at high risk to develop severe

symptom distress. The sarcoma population is typically young and requires aggressive chemotherapy and invasive surgical treatments both of which have been associated with heightened distress. The literature reflects major deficiencies in addressing the needs and concerns of this patient population. The purpose of our study was to develop a comprehensive description of patients' experiences with the diagnosis of sarcoma. **METHOD:** Eleven newly diagnosed sarcoma patients, age-range 20 to 62 years, receiving chemotherapy at a major Cancer Center in the Northeastern United States were recruited. Semi-structured interviews were audio-recorded during the first chemotherapy cycle. Interviewers asked participants to describe their experiences with the diagnosis of sarcoma. Initially, a broad-band question was asked, 'What has it been like for you dealing with your diagnosis of sarcoma?' Content analysis with inductive coding was used to code the transcribed interview data. Categories were reviewed in a final stage of analysis in which categories were further organized into larger groupings called domains. **RESULTS:** The coded interview data yielded nine domains: 'Dealing with Initial Reaction', 'Coping with It', 'Experiencing Symptoms', 'Losing Independence', 'Experiencing Emotions', 'Facing Changes', 'Affecting Family Relationships', 'Impacting Children', and 'Needing Support'. The dominant experiences of the participants focused on coming to terms with the disruption of the disease in their lives, attempting to deal with the physical, psychosocial, and functional disease-related changes, searching for support, and coping with the impact of the disease on family life. **CONCLUSIONS:** The findings of this study advance knowledge by furthering our understanding of the unique challenges that patients newly diagnosed with sarcoma face. The results indicate that patients diagnosed with sarcomas experience significant life disruption, struggle with psychosocial, physical, and functional distress, need direct personal support, and require guidance for support of their children and families. **RESEARCH IMPLICATIONS:** The results of this qualitative study provide a rich and comprehensive description of patients' experiences with the diagnosis of sarcoma. Study findings can serve as a foundation for future research in several ways such as: 1) to quantify sources and levels of distress; 2) to identify adjustment patterns and trajectories; and 3) to develop tailored, evidence-based psycho-educational interventions to effectively deliver support to this highly vulnerable population. **CLINICAL IMPLICATIONS:** Clinical practice implications include the need for comprehensive assessment of patients' psychosocial, physical, and functional status within the dimensions of the study domains. Specifically, focused assessment is needed of patients' early reaction and adjustment to the diagnosis, level of

emotional distress, coping style, physical symptoms, functional limitations, need for support, and impact on family and children. **ACKNOWLEDGEMENT OF FUNDING:** Joan Karnell Cancer Center Pennsylvania Hospital Philadelphia, PA.

P1.3.19

Quality of Life and Coping Strategies of Cancer Patients in a Multi-disciplinary Pain Clinic

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BACKGROUND: The present study was conducted in a Pain Clinic comprising a multi-disciplinary integrative approach with interventions at all levels of the cancer patient's bio- psychosocial existence and incorporating a treatment team of anaesthesiologists, neurologists, clinical psychologists and registered nurses. The study aimed to determine how the Coping Strategies of a sample of cancer patients being treated at the Pain Clinic may influence their Health-Related Quality of Life. **METHOD:** The sample consisted of 37 cancer patients treated at the Pain Clinic comprising a multi-disciplinary team of anaesthesiologists, neurologists, clinical psychologists and nurses. In accordance with the established objectives, the following instruments were chosen; FACT-G, version 4 (Functional Assessment of Cancer Therapy—General), (Cella *et al.*, 1993); The Mini-Mental Adjustment to Cancer Scale-MiniMAC, (Watson *et al.*, 1988) and The Coping With Health Injuries and Problems Scale—CHIP (Endler and Parker, 1998). These instruments combined provided integral comprehension of the coping strategies used by these cancer patients and how they ultimately influence their psychosocial adjustment and adaptation to the disease. **RESULTS:** The FACT-G scale indicated higher levels of Social/Family Well-Being (mean score 59.5%) indicating that the use of social/family support could be another coping strategy to alleviate the crisis situation. Lower scores were obtained for Emotional Physical and Functional Well-Being (mean scores: 53.0%, 48.8%, 36.1% respectively). Results obtained on the CHIP scale indicated higher levels of Instrumental, Distraction and Palliative Coping Strategies. Regarding the MiniMAC scale, coping strategies most utilized, were Fatalism, Fighting Spirit and Cognitive Avoidance. Patients manifesting lower levels of distress demonstrated higher levels of Quality of Life and Well-being. Palliative and Emotional Coping Strategies were predominant with patients manifesting higher levels of distress. **CONCLUSIONS:** This study demonstrated that instrumental, distraction and palliative coping strategies are common in cancer patients experiencing pain. Considering that chronic pain is a complex multidimensional experience, a multi-

disciplinary treatment approach directed at the cancer patient and his/her family will be most effective to improve the functional-well being of these patients (reported as low in the current sample), ultimately enhancing other domains of well-being, such as the physical, emotional and social well-being. By enhancing these domains, decreasing psychosocial distress and ultimately promoting self-efficacy, a better quality of life will be viable to these patients, their families and their health care providers. **RESEARCH IMPLICATIONS:** The relatively small size of the sample is a recognized limitation. Additionally, considering that coping is not a static one-shot process, researchers should adopt longitudinal designs to more fully explore the dynamic, evolving nature of coping with cancer. Finally, a qualitative study exploring these patients' subjective meanings and experience of cancer would further enhance the overall understanding of patients' coping processes and how these affect their quality of life and psychosocial adaptation. **CLINICAL IMPLICATIONS:** The Health Psychologist's role in the pain management team is crucial to help Cancer Patients optimally manage their crises situation, ultimately stimulating a 'fighting spirit' attitude throughout the course of the disease and reducing levels of 'fatalism' and 'cognitive avoidance' commonly associated with mal-adaptive forms of coping with Cancer. Ultimately, a multidisciplinary treatment approach increases the cancer patient's ability to manage their symptoms successfully, providing them with a more successful psychosocial adaptation to the disease. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.20

Cancer Patient Navigation: Creating a National Agenda

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BACKGROUND: Funding has been made available for five years to implement the Canadian Strategy on Cancer Control, through the auspices of the Canadian Partnership Against Cancer. One of the eight action groups charged with specific mandates is the Cancer Journey Action Group. Its mandate is to provide leadership to change the focus of the cancer system so that patient, survivor and family member needs are better served. **METHOD:** This presentation will highlight the overall plans for the Action Group is its move toward creating a person-centered cancer system, with a specific emphasis on navigation as a system intervention. **RESULTS:** One of the key

strategy plans to assist in achieving the vision of a person-centered care delivery is Patient Navigation. This intervention can increase timely access to the full range of supportive care services required by patients. Professional led, peer led, and virtual approaches to navigation have been initiated across the country. **CONCLUSIONS:** Cancer and its treatment have more than a physical impact. There are psychosocial, spiritual and practical consequences. Patients and families need access to a wide range of service. Navigation through the complex cancer system is imperative to improve the patient experience. **RESEARCH IMPLICATIONS:** Research and evaluation on patient navigation is required to determine best models for particular settings. **CLINICAL IMPLICATIONS:** This work presents an excellent opportunity to influence the quality of psychosocial/supportive care. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer.

P1.3.21

Determinants of Adaptation in Bone and Soft Tissue Cancer: The Need for Integrative Interventions

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BACKGROUND: However several studies have demonstrated the physical and functional sequels of bone and soft tissue cancer as well as the vulnerability of patients for the development of psychosocial difficulties, there is a lack of literature concerning the factors that might affect their emotional adjustment and quality of life (QoL). The purpose of our study was to examine the determinant role of functional, physical and psychosocial factors on sarcoma patient's adaptation in different phases of disease. **METHOD:** Between October 2007 and December 2008, 137 patients diagnosed with bone or soft tissue malignant tumours, over 16 years, were recruited from three Portuguese Cancer Care Units. 52 patients were assessed after diagnosis and before the beginning of treatments (diagnostic phase), 39 during chemotherapy and/or radiotherapy (treatment phase) and 78 after the end of treatments (follow-up phase), during the routine visits to their oncologist, both in inpatient and outpatient clinics, using a cross-sectional design. Subjects were informed about the purpose of the research and consented to participate. The measures used in this study included: QLQ C-30, MOS-SSS and HADS. **RESULTS:** To analyse the determinants of sarcoma patient's adaptation in the different phases of disease, multiple regression models controlling for demographic variables were computed.

In diagnostic phase, anxiety [$F(2,31) = 21.86$], p . **CONCLUSIONS:** Our results show that emotional adjustment and quality of life of sarcoma patients are multidetermined by functional, physical and psychosocial factors. Furthermore, the determinant role of these factors on adaptation depends on the phase of disease patients are and on the outcome measures considered. The impact of bone and soft tissue cancer and its treatments on emotional adjustment and quality of life is mediated by several factors, and this mediating role should be examined on the different phases of disease, for different mediators and for different outcome measures. **RESEARCH IMPLICATIONS:** Besides physical, functional and psychosocial factors, researchers should also look for disease-related variables and how they can affect patient's adaptation. In addition, the contribution of the different types of social support for patient's emotional adjustment and QoL, in the different phases of disease, should be further investigated. Finally, when researchers analyse the mediators of the psychosocial impact of cancer and on QoL, they must attend to the contextual and demographic variables. **CLINICAL IMPLICATIONS:** The present study evidence the breadth of issues involved in understanding the emotional adjustment and QoL of sarcoma patients. In this sense, in clinical practice it is important to recognise the contribution of different disciplines to address the psychosocial problems of cancer patients, as well as the need for integrative interventions aimed at improve their adaptation. Such interventions should consider the phase of disease in order to target the relevant issues for that particular period. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.3.22

Meaning of Tumors in Elderly: Results on Factors Influencing the Different Perception on 153 Patients Suffering from Malignancies

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BACKGROUND: The cancer regardless of its curability, is perceived as a disease different from other known and represents an existential shocking, often aggravated by information, often biased, that make the disease the perception individual and collective, continue to join meanings of diversity, physical and mental suffering, incurable and inevitable death. **METHOD:** Through an anonymous questionnaire on 153 pts with malignant neoplasm (average age 71.8 years, 68 M+85 F) has been given to the source of information, the level of general knowledge and the meaning attributed to the term of malignant neoplasm and any reasons for which were different from each other diseases.

For each patient were evaluated: the source of information, gender (M/F), marital status, age, educational level and MMSE. The findings were subjected to statistical analysis (MLR, ANOVA and KT). **RESULTS:** Before the diagnosis, the main source of information was the doctor (46%) media (27%), relative (12%) friend (2%). Overall, the sample examined, the malignant neoplasm was considered different from other diseases known as: cured (35%), and hardly curable determining suffering and death (63%) and only 13%, treatable and curable. Pessimism or optimism in the perception of the diversity of malignant disease than the others, which affect some parameters: women seem to be more pessimistic than men(p). **CONCLUSIONS:** The positive analysis of the KT(0.05) indicates that with increasing age of the pts increases the perception that the malignant tumor, is incurable. In relation the level of education (school) the most pessimistic are the pts with lower(from 0 to 4 years) and those with higher (from 13 to 17 years) ($p < 0.05$). **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** None. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.1

Quality of Life and Sense of Coherence in Women with early Breast Cancer

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BACKGROUND: Findings from studies on various disease-specific groups of patients support an influence of the patients' sense of coherence (SOC) on their quality of life (QoL). The purpose of the present study was to investigate the relationship between the SOC and the QoL in early stage breast cancer patients. **METHOD:** The study included 100 female patients with cT1-T2/N0-N1/M0 stages of breast cancer. During the period of 4–12 days after breast surgery, the study participants filled in the under mentioned questionnaires: EORTC QLQ—C30, EORTC QLQ—BR23 questionnaires and the Antonovsky's Sense of Coherence Scale (SOC-13). QOL of respondents after breast conserving treatment (BCT) and mastectomy in relation to SOC have been compared. **RESULTS:** Patients after BCT with a lower SOC score reported significantly more fatigue and pain as well as they were significantly more affected in their emotional functioning and had more systemic therapy side effects and breast and arm symptoms than patients with higher SOC score. Patients after mastectomy who had lower SOC score were significantly more affected in physical, emotional, cognitive and social functioning, they had more

financial difficulties and reported more systemic therapy side effects, fatigue, appetite loss and more problems with the body image and future perspective in comparison with patients who had higher SOC score. **CONCLUSIONS:** A strong sense of coherence is related with a better quality of life in women with early stage breast cancer. **RESEARCH IMPLICATIONS:** This study on breast cancer supports the results from other disease-specific patients' studies. **CLINICAL IMPLICATIONS:** Our findings suggest that strengthening of SOC could be a resource to improve the breast cancer patients' QoL. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.2

Fatigue and Psychological Strain in Couples Three Years after Cancer

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BACKGROUND: Cancer-related fatigue is a concept of growing importance but is lacking clarity. This study investigates the impact of fatigue on cancer patients and their intimate partners. **METHOD:** By April 2009, 60 patients (with any type and stage of cancer) and their partners will have been assessed 3 years after diagnosis. Each partner is being asked to complete a pre-tested, mailed, self-reporting questionnaire that includes standardised measures of fatigue, anxiety, depression, post-traumatic stress and relationship satisfaction. Medical control variables include physical performance, stage of the disease, pain experienced and treatment factors. Correlations between fatigue, psychological strains and dyadic satisfaction will be investigated. **RESULTS:** Data collection will be completed by April 2009. Current return rate of questionnaires is 85%. A considerable part of the research sample is expected to appear substantially burdened with either fatigue or psychological strains. Fatigue, depression, anxiety and post traumatic stress are expected to be related to lower dyadic satisfaction, while it is anticipated that fatigue will intersect only in limited ways with depression, anxiety and posttraumatic stress symptoms. **CONCLUSIONS:** Results are expected to enlarge our knowledge about cancer-related fatigue as a distinct concept. We are likely to conclude that fatigue is a major concern for cancer patients even three years after diagnosis; that it negatively impacts the couple relationship; and that it thus should be included as a diagnostic item in the forthcoming edition of the International Classification of Diseases (ICD-11). **RESEARCH IMPLI-**

CATIONS: Fatigue may be included in ICD-11; hence more facts and a deeper understanding of the concept are required. Further long-term research into the role fatigue plays for cancer patients is required, particularly regarding the influence of fatigue on the mental health of cancer patients and their intimate partners. **CLINICAL IMPLICATIONS:** Biopsychosocial cancer treatment should take patients' fatigue and emotional conditions into consideration even three years after diagnosis. **ACKNOWLEDGEMENT OF FUNDING:** Krebsliga Aargau, Aarau/Switzerland; Swiss Cancer League (NPK-01432-08-03).

P1.4.3

Adaptation Profiles in Cancer Patients

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BACKGROUND: Research in Psycho-Oncology try to study the best profile of adaptation to cancer patients in relation to health outcomes: emotional responses and adjustment in different areas of Quality of Life. **Aims:** To identify the different Psychosocial variables (threat perception and coping strategies) used by different groups of women with breast cancer and adaptation process results. **METHOD:** 123 women with breast cancer (89 in hospital and 34 in association) were interviewed. We used the Illness Social Comparison Scale (Terol, M.C., Pons, N., Neipp, M.C., Rodríguez-Marín, J., Buunk, B., Martín-Aragón, M., y Sánchez, P., 2007); Coping Scale (CEA, Rodríguez-Marín *et al.*, 1992) including different strategies; Anxiety and Depression Scale (HAD, Lopez-Roig, 2007) and Psychosocial Adjustment to Illness Scale (Neipp, 2005). **RESULTS:** We found two different adaptation groups of patients with breast cancer. One of them showed an optimal level of adaptation and low anxiety and depression. The other group were formed by women using more frequently downward-identify social comparison ($M = 80.73 \pm 20.35$; $p \leq .000$), higher level of threat perception and less frequently used of Positive Thinking. This group presented worse adaptation profile with high level of anxiety ($M = 52.38 \pm 19.31$; $p \leq .000$) and depression. **CONCLUSIONS:** Different dimensions of social comparison and coping strategies facilitate patient's adaptation to their illness situation. It would be interesting to study these profiles of adaptation as a prevention and/or intervention strategy for cancer patients with important difficulties in their process adaptation. **RESEARCH IMPLICATIONS:** To apply this kind of research in groups in cancer patients through different diagnosis and stages of disease. **CLINICAL IMPLICATIONS:** To apply

different intervention programmes using the best strategies of social comparison and coping to prevent difficulties of adaptation process or promote skills for a better adjustment. **ACKNOWLEDGEMENT OF FUNDING:** This research titled 'Social comparison coping and health outcomes and adaptation' were financed by Health Research Funding in Spain (F.I.S.S.: Fondo de Investigaciones Sanitarias. Exp: PI021085; 2003–2006).

P1.4.4

Gestational Trophoblastic Disease—Quality of Life, Depression and Anxiety in Brazilian Patients

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BACKGROUND: Gestational Trophoblastic Disease (GTD) is an anomaly with interrelated disorders, such as hydatidiform mole and gestational trophoblastic neoplasm. Patients must be submitted to surgical procedures and blood tests for early detection of invasive or metastatic disease. They have to cope with their grief from gestational loss, and sometimes chemotherapy. GTD produces emotional consequences such as fear, anxiety, depression, sexual problems and reduction in quality of life. Psychological evaluation and intervention are essential for these patients. **METHOD:** To assess the emotional disturbances associated with the disease, 17 patients diagnosed in the last 6 months with GTD in a public university hospital from the interior of São Paulo State, Brazil, were evaluated. The HADS (Zigmond and Snaith, 1983) and the WHOQOL-Bref (The Whoqol Group, 1998) were used to evaluate the depression and anxiety symptoms and the quality of life aspects. A semi structured interview was conducted in order to ascertain other emotional aspects such as treatment expectations, fears, sexual life, social support and disease comprehension. Following analysis, patients were referred to a support group conducted by a psychologist. **RESULTS:** Patients average age was 25.6 (SD = 6.98); five were single and 12 married; their levels of education varied from 4 to 12 years of study; 12 had successful previous pregnancies; 15 were unemployed. Anxiety level was elevated for 12 patients; depression level was elevated for 3 patients. Compared with the general population, these patients had reduced quality of life in the domains of 'Physical Health', 'Psychological' and 'Environment'. All patients had an abnormal reaction to diagnosis. Twelve patients did not understand the disease and feared its consequences for future pregnancies, in spite of having positive expectations about treat-

ment. **CONCLUSIONS:** The preliminary data showed that this sample of Brazilian patients required appropriate medical and psychological counselling and guidance, starting at diagnosis, in order to better deal with the disease. The importance of breaking the bad news in an appropriate manner became evident. The related psychological problems must be addressed; appropriate family support must be granted and sexual orientation has to be provided. The health team must help patients to face reality, cope with the associated stress and approach the future positively, which will promote better adherence to treatment and allow the couple to certainly gain a better quality of life. **RESEARCH IMPLICATIONS:** The majority of studies in GTD focus on the disease's physical aspects and few publications point out the associated emotional aspects. This study shows that the psychological components of GTD are crucial, emphasising the need for further studies describing the emotional aspects associated with molar pregnancy and advocating multidisciplinary assistance to patients. In order to obtain a greater generalization of these data, our centre has continued to enrol more patients in the process. **CLINICAL IMPLICATIONS:** Patients are being assisted psychologically; after receiving a diagnosis that their pregnancy is actually a disease, they tend to face several emotional reactions. Psychological intervention has to deal with elevated anxiety level and help patients to deal with the grief of the loss. In some of these cases, depression must be addressed, due to its devastating consequences. An interdisciplinary intervention, including medical counselling and psychological support is absolutely necessary with GTD patients. **ACKNOWLEDGEMENT OF FUNDING:** FAEPA.

P1.4.5

Correlations Between Distress and Cognitive Performance in the Course of Allogeneic Haematological Stem-cell Transplantation (HSCT): Results of a Multicenter Trial

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BACKGROUND: It is widely discussed if and to which extent patients undergoing chemotherapy and HSCT experience decline in their cognitive abilities. Earlier studies mainly conducted with breast cancer patients show marked deficits after treatment, recent prospective studies suggest performance near to baseline-levels or improvements in the long run after HSCT. This large-scale multicenter study prospectively aimed to identify variables potentially influencing cognitive performance in the course of this demanding treatment. **METHOD:** $N = 102$ patients with haematological malignancies could be tested at admission (T0), 100 days (T1) and one year (T2) after allogeneic HSCT with the German version of the Distress Thermometer (DT, Mehnert *et al.*, 2006), the Cancer and Treatment Distress Scale (CTXD, Syrjala, 2005) in its German adaptation and a comprehensive neuropsychological test-battery covering the domains of attention, memory, executive and psycho-motor function. **RESULTS:** The mean age of participants was 48 years, 61% were male and the main diagnosis was AML (41%). At all three points in time half of the patients showed significant distress (DT cutoff 5). Treatment-related distress declined significantly over time (total score, subscales uncertainty, family strain, health burden). Global cognitive performance did not significantly change over time: approximately 79% (T0), 70% (T1) and 78% (T2) of the patients showed neuropsychological deficits ($z \leq 1.4$). Global and health-related distress correlated significantly with psycho-motor abilities before treatment, whereas treatment-related distress was increased correlated with attention deficits 100 days after HSCT. **CONCLUSIONS:** Given the fact that no significant cognitive decline could be observed in the course of HSCT, influences of health- and treatment-related distress deserve special attention. Distress could be a central moderator of cognitive performance during extremely challenging treatment procedures like HSCT. **RESEARCH IMPLICATIONS:** As research on cognitive change in haematological patients with HSCT conducted so far rarely include psychosocial or disease- and treatment-related distress, further prospective studies controlling for distress as a potential confounder of cognitive function are required. This would allow to clarify the nature and severity of distress and its impact on the course of cognitive performance in transplanted patients. **CLINICAL IMPLICATIONS:** Routine screening for distress is recommended to identify and treat hematological patients with elevated levels of distress prior and following HSCT. Patients with clinically significant distress should be referred for psychosocial care. Next to reducing psychosocial and treatment-related burden, treatment of distress might improve patients' cognitive function. **ACKNOWLEDGEMENT OF FUNDING:** This

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P1.4.6

Taste Alterations in Cancer Patients Receiving Chemotherapy: A Neglected Issue?

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BACKGROUND: Taste alterations can frequently be observed in oncological patients undergoing chemotherapy in the daily clinical practice and patients report them being among the most troublesome side-effects. Nevertheless they are poorly investigated and it is largely unknown how patients respond to them. The aims of the present study are to examine the prevalence and severity of taste alterations and their impact on Quality of Life (QoL) in oncological out-patients receiving chemotherapy. **METHOD:** Cancer patients, who were receiving chemotherapy at the out-patient units of the Departments of Internal Medicine, Kufstein County Hospital and Academic Hospital Natters, were consecutively included in the longitudinal study. Inclusion criteria were German speaking, expected survival time of more than six months and informed consent. At each visit the patients were asked to fill in a well-known QoL inventory, the EORTC QLQ-C30, including two validated items taken from the EORTC item bank concerning taste alterations. QoL as well as clinical and sociodemographic data were computerized collected with the help of a specially design software, the 'Computer based Health Evaluation System—CHES'. **RESULTS:** 103 oncological patients were included in the study (25.2% breast cancer 24.3% lung cancer; 53.4% female, age 58.6 ± 18.4). QoL (including taste alterations) was assessed 4.8 times on average per patient. 76.3% of the patients reported taste alterations in the course of chemotherapy (41.3% mild, 20.0% moderate, 15.0% severe). Taste alterations were significantly associated with a reduction in QoL and an increase of symptoms such as fatigue, sleep disturbances and pain. There was no correlation between severity of changes in taste and the duration of chemotherapy. **CONCLUSIONS:** Taste alterations are very common in patients undergoing chemotherapy and considerably affect patients' QoL. Due to their high prevalence it can be presumed that they play an important role when it comes to food aversions, reduction in food intake and nutritional deficits, which are major issues in cancer care. **RESEARCH IMPLICATIONS:** Further

research on nature and mechanisms of taste alterations and their consequences is needed. Analyses examining the impact of the type of chemotherapy on taste alterations across different types of cancer are currently performed and will be presented. **CLINICAL IMPLICATIONS:** Taste alterations need more attention in oncological practice and should be seen in relation to reduced food intake. Adequate interventions for improving symptom management and QoL need to be developed. **ACKNOWLEDGEMENT OF FUNDING:** The research project was partially funded by the Austrian National Bank.

P1.4.7

The Impact of Breast Cancer on the Quality of Life of Young Women and Their Partners Depending on the Treatment in the Period Concerned

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BACKGROUND: The aim of the study was to analyze the quality of life of young women (<45 years) with non-metastatic breast cancer and their partners, who are often their closest support. We wanted to evaluate the problems and needs of this young population affected by the illness and the repercussions on the couple, during the various courses of treatment and afterwards. No instrument exists for measuring the quality of life of this specific population. **METHOD:** Young patients (less than 45 years at the time of diagnosis) with non-metastatic breast cancer and living with a partner were targeted. Sixty-nine couples were interviewed between February 2007 and June 2008 according to the treatment received: chemotherapy, Herceptin, hormonotherapy or follow-up. Couples were interviewed separately by a psychologist, using nondirecting individual talks. The interviews were recorded and analysed by a qualitative method. After the first analysis, we invited the couples to participate in 2 workshops in order to validate the results and draw up a questionnaire. **RESULTS:** 1) Global population: Participants reported on 8 dimensions of their quality of life during treatment and follow-up: psychological, physical, family, social, couple, sexuality, domestic, professional, economic. 2) Patients vs partners: Comparisons between patients and partners highlighted differences for 5 dimensions. Patients referred more to psychological, physical, professional, social, family aspects than

partners. 3) Treatment groups: Very few differences were found between the 4 groups except that (1) chemotherapy and Herceptin patients referred more to physical dimension than the group under follow-up and (2) the partners recalled more professional, social and domestic aspects at the beginning of their wives' treatment. **CONCLUSIONS:** We established a specific multidimensional profile to this population group with 8 relevant areas: psychological, physical, family, social, couple and sexuality, domestic, professional and economic. These dimensions were affected for both patients and their partners during and even after the treatments. A particular and specific tool in the form of a questionnaire was then created. The next quantitative study will be to validate these questionnaires. **RESEARCH IMPLICATIONS:** This study confirms that today, we should have not only one unidimensional approach, but rather a systemic, dynamic approach to patient care in which the social and family environments play a crucial role. Two questionnaires on the quality of life of patients and their partners will be developed taking into account 8 dimensions studied in this specific population and will thus help to focus on such an approach. **CLINICAL IMPLICATIONS:** In the light of these results, clinicians should take into much more account the quality of life of their breast cancer patients as well as their partners, because the disease can have some unexpected repercussions in their lives during both treatments and follow-up. The ultimate aim of this approach is to become aware of the women, men and couples who would need particular support and assistance in the face of this disease. **ACKNOWLEDGEMENT OF FUNDING:** We would like to thank INCa (Institut National du Cancer), La Ligue Nationale contre le Cancer and the Novartis, Roche, Sanofi-Aventis laboratories for their financial support.

P1.4.8

Temperament and Character Traits Associated with Health-related Quality of Life in Cancer Patients

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BACKGROUND: Patients with cancer have an impairment in quality of life; measures of Health-Related Quality of Life (HRQoL) have been reported to have a significant predictive value for patient survival and hospitalization. Little is

known about the role of personality traits in HRQoL; therefore the main aim of the present study is to evaluate temperament and character aspects related with HRQoL in cancer patients. **METHOD:** 240 inpatients from three different Italian Oncology departments (Ancona, Perugia, Messina) filled in the Temperament Character Inventory (TCI-R140; Cloninger *et al.*, 1986, 1993, 2008), the SF-36 questionnaire assessing HRQoL and the Hospital Anxiety and Depression Scale (HADS) evaluating anxiety and depression during hospitalization. TCI evaluates four temperament traits (Harm Avoidance, Novelty Seeking, Reward Dependence, Persistence) and three character traits (Self-Directedness, Cooperativeness, Self-Transcendence). Each trait consists of several facets (25 in total). SF-36 includes nine scales: Physical Functioning, Role-Physical Limitation, Bodily Pain, General Health, Vitality, Social Functioning, Role-Emotion Limitation, Mental Health, Reported Health Transition. Collected data underwent statistical analysis using Pearson correlation coefficient. **RESULTS:** All SF-36 scales, except Bodily Pain and Reported Health Transition, were related to one or more personality traits or facets. For example Mental Health was associated with Persistence (stable despite frustration and fatigue) ($r = 0.19$), Empathy ($r = 0.18$), Helpfulness ($r = 0.16$), Self-Transcendence ($r = 0.15$), Spiritual Acceptance ($r = 0.19$). Social Functioning was related to warm and lasting social relationships ($r = 0.12$), support and protection seeking but also Responsibility ($r = 0.13$) and Purposefulness ($r = 0.19$). On the other hand some temperament traits influenced different SF-36 scales. For example individuals high in harm avoidance who tend to be cautious, fearful, timid, discouraged, insecure, pessimistic have shown lower scores in several SF-36 scales such as Physical Functioning, Role-Physical Limitation ($r = 0.19$), General Health ($r = 0.26$), Vitality ($r = 0.31$), Social Functioning ($r = 0.22$), Role-Emotion Limitation ($r = 0.20$), Mental Health ($r = 0.33$). **CONCLUSIONS:** The present study demonstrates the existence of several and specific relations between HRQoL and Temperament and Character traits and facets assessed using TCI questionnaire based on Cloninger's model of personality (TCI). **RESEARCH IMPLICATIONS:** Future research could be aimed at better understanding how personality traits are linked with HRQoL in cancer patients and at distinguishing those character traits influencing HRQoL suitable of modifications through psychological and psycho-social interventions. **CLINICAL IMPLICATIONS:** The knowledge of which personality traits are associated with lower HRQoL could enhance the identification of at-risk patients and suggest the development of specific interventions. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.9

A German Multicentric Follow-up Study on Quality of Life of Patients with Localized Prostate Carcinoma: A Comparison Between Open and Minimal-Invasive Surgery

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BACKGROUND: Patients with localized prostate cancer have several treatment options. The most common method is a radical prostatectomy. This surgery can be conducted using an open retropubic (RRPE) or a minimal-invasive endoscopic extraperitoneal (EERPE) approach. The objective of this study is to compare both methods regarding the patients' quality of life. The study has been started in October 2007 and will be finished by the end of September 2010. **METHOD:** The multicentric follow-up study has been carried out in six centres in Germany. Patients are asked to fill in a questionnaire one day before as well as three, six and 12 months after surgery. So far, we can present data for baseline (T1), three (T2) and six month (T3) after surgery. Instruments to measure different dimensions of quality of life (continence, sexuality, psychic distress) employed in this study are amongst others EORTC QLQ-PR25 (related to prostate cancer) and HADS (to measure anxiety and depression). **RESULTS:** Both patient groups (EERPE, RRPE) reported changes in quality of life three and six month after surgery. The analysis of HADS shows a significant reduction of 'Anxiety' from T1 to T2 for both RRPE and EERPE. The analysis of EORTC QLQ-PR25 shows a significant growth of bowel symptoms from T1 to T2 but also a significant reduction from T2 to T3 for both methods. On the 'Sexual Functioning' scale there is a significant reduction for both methods from T1 to T2 and no improvement from T2 to T3. **CONCLUSIONS:** First results show similar trends in the development of post surgical quality of life for both RRPE and EERPE. Thus, post-surgical quality of life of patients with localized prostate carcinoma seems to be hardly effected by the kind of surgery (open vs. minimal-invasive). Since the study has not been finished yet, the presented results must not be overestimated. **RESEARCH IMPLICATIONS:** Further research on a larger sample size will show whether these results can be approved. Moreover, the analysis of data from one year after surgery (T4) will indicate whether there are any significant differences in quality of life between open and minimal-invasive surgery in the long run. **CLINICAL IMPLICATIONS:** When enlightening a patient about the consequences of surgery, physicians should consider the patients pre-surgical anxiety as well as post-surgical impairments of sexuality and continence. Whereas continence is improving from three to six

months after surgery, no improvements concerning virility can be expected six month after surgery. **ACKNOWLEDGEMENT OF FUNDING:** The study is funded by 'Deutsche Krebshilfe e.V.' (German Cancer Aid).

P1.4.10

Cancer Support Group Participation and Quality of Life of Filipino Cancer Survivors

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BACKGROUND: A number of cancer support groups have been established in the Philippines to provide emotional, educational, and spiritual support to cancer survivors and consequently help improve quality of life. The objective of this study is to describe the quality of life of Filipino cancer survivors who are active members of a support group as measured by their physical, psychological, social, and spiritual well-being. **METHOD:** A total of 42 cancer survivors from 9 different cancer support groups participated in the study. The Quality of Life –Cancer Survivor Scale (QOL-CS) and a brief background form were administered to the participants. **RESULTS:** Among the four QOL dimensions, spiritual well being dimension was rated as the highest ($M = 8.55$, $SD = 0.87$) followed by physical well being ($M = 7.52$, $SD = 1.66$) social well being ($M = 5.85$, $SD = 1.79$) and psychological well being ($M = 5.64$, $SD = 1.68$). Overall QOL scores of participants was moderate ($M = 6.54$, $SD = 1.68$). Psychological well being dimension has the strongest relationship with overall QOL ($r = .95$, $p < .01$). Scoring of QOL-CS is based on a scale of 0 = worst outcome to 10 = best outcome. **CONCLUSIONS:** Results of this study illustrate the strength cancer support groups in the Philippines. It highlighted the role of support groups in the spiritual healing of beleaguered cancer survivors particularly among women. The extent to which spirituality is sought or achieved together with other survivors who share the same struggles and agony also reveals an interesting character of support groups in the Philippines. **RESEARCH IMPLICATIONS:** A research implication of this study is that it would lead to a more in-depth understanding of the efficacy of cancer support groups in improving well being of individuals diagnosed with cancer. In the Philippines, there have been a number of cancer support groups which have been established. However, there are very few studies which evaluate quality of life outcomes gained from participation. **CLINICAL IMPLICATIONS:** The challenge being posed by this study is how support groups could address the psychological needs of cancer survivors and how they could engage professionals like local psychologists to assist them in this domain. Group

counselling and family therapy support programs may be interventions that could help enhance quality of life of Filipino cancer survivors. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.11

Impact of Chronic Graft Versus Host Disease on Quality of Life in Long-Term Survivors of Allogenic Haematopoietic Transplantation

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BACKGROUND: In haematooncology there has been growing awareness of the importance of quality of life (QOL) assessment. Acute as well as chronic GvHD are more common after PBSCT compared to BMT and both are associated with impairments of QOL. Study aim was to assess the impact of chronic graft versus host disease on QOL in long-term survivors of allogenic haematopoietic transplantation. **METHOD:** QOL in survivors of allogenic haematopoietic transplantation (diagnoses: AML, ALL, CLL, CML and MM) was assessed with the quality of life questionnaires EORTC QLQ-C30 and QLQ-HDC29. Questionnaires were sent to the patients via mail. Inclusion criteria were informed consent, age >18 years, fluency in German and time since transplantation >6 months. **RESULTS:** A number of 100 patients (45% female; age 46.2 ± 14.7) was included in the study. Of these 44% had undergone bone marrow transplantation and 56% had received PBSC. Mean time since transplantation was 95.4 months ($SD 75.5$). Chronic graft versus host disease (GvHD) was present in 14% of the patients and 23% received immunosuppressants at the assessment time point. Compared to patients without chronic GvHD or only previous GvHD patients with ongoing chronic GvHD showed significant impairments with regard to physical functioning (difference -13.9 points), role functioning (-34.8), global QOL (-21.5), fatigue (25.6), dyspnoea (35.5), gastrointestinal side effects (24.1), body image scale (19.0), skin problems (26.9), regular drugs (41.9) and worries/anxiety scale (25.7). **CONCLUSIONS:** Our results show the severe consequences of chronic GvHD on various aspects of quality of life, including patients' functioning and symptom burden. **RESEARCH IMPLICATIONS:** Further research should focus on investigating the impact of different treatment and

prevention strategies for GvHD on patients' QOL. **CLINICAL IMPLICATIONS:** The study highlights the vital importance of QOL monitoring in patients undergoing allogeneic haematopoietic transplantation. This is especially true for patients suffering from chronic GvHD. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.12

Suffering Modalities in Patients with Solid and Liquid Tumours

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BACKGROUND: Our aim is to identify particular modalities of suffering in patients with different cancer diagnoses (liquid and solid tumours) in order to develop prevention programmes and specific interventions. **METHOD:** 167 sequential cancer patients admitted in a general university hospital, with an average age of 55.65, 55.1% were female, 44.9% had liquid tumour and 55.1% solid tumour, were observed by a psycho-oncology team (NIPSO). The major medical diagnoses were haematological malignancies and digestive cancer. Patients were psychologically assessed by means of SG/NIPSO—global suffering, RVDS¹DE—disease existential reactions (Barbosa, 2006), and a socio-demographic and clinical questionnaire. **RESULTS:** We found significant statistical differences between the two groups. Solid tumour group exhibited higher physical and emotional discomfort, and also, higher existential despair, mainly in dejection and displeasure dimensions. By means of multiple regression analyses, we found that in the two groups, the dimension emotional discomfort had a greater influence in global suffering. In what concerns existential despair, in the solid tumour group, the sub dimension detachment had a significant influence, stressing the depressive component of the disease. While, in the liquid tumour group the sub dimension dejection had the greater influence. **CONCLUSIONS:** Oncologic disease implies many significant threats and losses in the life of the patients. In the solid tumour group we found a detachment modality leading to social isolation. An in the liquid tumour group we found a dejection modality that may lead to depressive symptomatology. **RESEARCH IMPLICATIONS:** The emotional impairment is high on the two tumour groups, stressing the importance of emotions on the oncologic disease. **CLINICAL IMPLICATIONS:** And a need to implement preventive and psychosocial intervention programmes. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.13

Computer-based Quality of Life monitoring in Lung Cancer Patients Receiving Chemotherapy

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BACKGROUND: Lung cancer is one of the most common cancer in women as well as in men. Since survival rates for lung cancer patients are low, improvement of patients' quality of life (QOL) is essential. Routine assessment of QOL contributes to adequate symptom management which is crucial for reducing the strong negative impact of the disease and its treatment on patients well-being. **METHOD:** Aim of this project was the implementation of QOL-monitoring and the investigation of the impact of various clinical and sociodemographic variables on the course of QOL. Lung cancer patients receiving chemotherapy at the Department of Internal Medicine, Kufstein County Hospital, were consecutively included in the longitudinal study. Inclusion criteria were a diagnosis of lung cancer, German speaking and expected survival time > 3 months. At each visit the patients were asked to fill in a computerized version of the EORTC QLQ-C30 and two additional questions concerning taste alterations. Data collection was computer-based using the Computer-Based Health Evaluation System (CHES). **RESULTS:** 63 of 65 eligible lung cancer patients (31.7% female, age 64.1 ± 11.4) were included. QOL was assessed 5.5 times on average per patient. For longitudinal analyses data from 32 patients at three assessment time points were available (baseline, one- and two-month-follow-up). Over time there was a significant improvement in Role Functioning ($p = 0.002$) and Pain ($p = 0.041$). Deteriorations were found for Emotional Functioning ($p < 0.001$) and Financial Impact ($p = 0.008$) as well as for Constipation ($p = 0.008$) and Taste problems (0.037). Furthermore women showed a significantly higher level of pain ($p = 0.002$) at baseline, but not on the later assessment time points. **CONCLUSIONS:** The high inclusion rate indicates that computer-based QOL-monitoring is feasible in lung cancer patients. Furthermore, QOL-monitoring proved to be essential for gaining information on the different course of symptom burden as well as functioning. **RESEARCH IMPLICATIONS:** Our findings suggest that different aspects of QOL do not change over time uniformly. Further research, should focus on detailed analyses of variables influencing the course of particular aspects of QOL. **CLINICAL IMPLICATIONS:** The implementation of computer-based QOL-monitoring in lung cancer

patients has proven to be feasible and provides important information on a patient's condition. Thus, it has the potential of changing individual medical care. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.14

Quality of Life and Illness Reaction in Patients with Relapsing Cerebral Cancers

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BACKGROUND: Aim of this study was to evaluate psychological reactions of patients who have to deal again with a cerebral cancer, because of a relapse. The levels of stress, anxiousness, depression and the quality of life were examined. Besides the possible presence of correlation between subjective wellbeing perception and medical functional indicators was considered. The relation between information about diagnosis and psychological variables was also investigated. **METHOD:** From February 2007 to September 2008 a battery of psycho diagnostic tests was administered to 50 patients with a cerebral cancer relapse, treated in the Neuro-oncology Department of a neuroscience Hospital in Milan. The psycho diagnostic battery included: Hospital Anxiety and Depression Scale (HADS); Psychological Distress Inventory (PDI); Functional Assessment of Chronic Therapy (FACT-Brain). The Karnofsky index was considered as performance score related to global clinical status. Before tests, patients were interviewed and an anamnesis form was filled. The group-sample included only patients with a MMSE score equal to or higher than 24. **RESULTS:** Only a minority of patients showed serious anxiety and depression. The majority of them showed a level of symptoms from light to moderate, with some difficulties in managing emotions and social relationships. Also quality of life, evaluated by using a specific tool for the cerebral cancers, turned out to be normal, in the majority of cases. A light correlation was detected between KPS and total score of FACT-B, as well as between information about diagnosis and patients' anxiety perception; on the contrary the other variables didn't show any kind of significant correlations. **CONCLUSIONS:** Even if only a minority of patients showed anxiety or depression symptoms, this study reveals that stress, anxiety and depression frequently appear, at the same time, during the period of distress. Moreover, a low level of correlation seems to suggest how the subjective perception of the quality of life is far from the evaluation of the status of sickness as defined by the doctor. Furthermore, only a slightly significant

correlation between the level of information about diagnosis and patient perception of anxiety was found. However, information on diagnosis often was not correlated with awareness of disease. **RESEARCH IMPLICATIONS:** As a matter of fact, cognitive and behavioural changes characterizing patients having a cerebral cancer diagnosis are correlated to a complex interaction of sickness-treatments and influences related to individual patients' characteristics. In order to help patients face sickness, it seems important to understand and to individuate the weight of each of these components, paying attention to methods of measurement of psychological variables, often controversial, even more for cerebral cancer patients. **CLINICAL IMPLICATIONS:** A diagnosis of cancer destroys everybody's usual life and often happens that some feeling come out, such as isolation, anger, missing of force and helplessness, usually related to economic problems. This study underlines the importance to integrate physical treatments with social and psychological help in taking care about patients as a whole and with the aim of establishing a good doctor-patient relationship. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.15

It's Not What You Ask, But How You Ask It. Needs Disclosure by Familial Carers of Cancer Patients

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BACKGROUND: One in three people in the UK develop cancer in their lifetime. Illness trajectory varies according to tumour site and grade, as do symptoms, treatment needs and level of care required. Informal carers (family members and friends) provide the majority of support for cancer patients, saving the government millions of pounds each year, yet there is a dearth of research assessing their emotional and practical needs and potential burdens and barriers to care-giving. **METHOD:** The aims of this study were to identify cancer carer needs using a mixed methods approach, and to then develop a clinically relevant needs assessment tool so that the unmet needs of caregivers of cancer patients could be formally identified. A focus group and semi-structured interviews were undertaken with 6 familial carers of cancer patients and 55 carers completed a pilot needs assessment tool comprising 84 items. **RESULTS:** The survey revealed carers most commonly reported needs (>70%) were related to health care professionals being sensitive to the feelings of both patients and their family; and to be given clear and appropriately timed information about the specific

diagnosis, treatments and prognosis. The least reported needs were being treated differently by their peers since becoming a carer, feelings of guilt and the need to see a psychologist/counsellor (<6%). However, in the qualitative data all participants focused on the need for access to a psychologist; reported feelings of guilt and of being treated differently since the patient was diagnosed. **CONCLUSIONS:** The needs of carers of cancer patients are many and designing a needs assessment tool to pick up on all needs poses difficulties due to the heterogeneity of the illness. Information needs and the ability of health care professionals to empathize with both the patient and carer are clearly important needs for carers as shown by both the quantitative and qualitative data. However the observed differences in willingness to disclose needs using the two methodologies highlights the importance of mixed methods research in instrument design. **RESEARCH IMPLICATIONS:** This study demonstrates the importance of qualitative and quantitative research being complementary rather than competing if one is to achieve a holistic appreciation of carer (and patient) need. Moreover it emphasises the need for researchers to be sensitive to the linguistic framework in which carers operate and feel willing to disclose information, and the appropriateness of direct questions concerning psychological needs. **CLINICAL IMPLICATIONS:** Clinicians interested in utilising needs assessment tools for patients and carers may find this research beneficial in raising sensitive issues that may not otherwise be broached through the use of domain-specific prompts in lay language. There is also clinical utility to this study in terms of the development of a portable, hand-held, user-friendly tool assessing carer need that may work in tandem with a measure assessing patient need from the point of diagnosis. **ACKNOWLEDGEMENT OF FUNDING:** This research formed part of a 2 year grant funded by the Welsh Office for Research & Development (WORD) and Conwy & Denbighshire NHS Trust.

P1.4.16

Shiatsu: Support and Rehabilitation of Oncological Patients

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BACKGROUND: Within the psycho-oncology unit of 'Italian National Institute for Tumors—Pascale Foundation', an experimental research project has been started which is based on shiatsu therapy, with the aim of testing shiatsu's potential in the psycho-physic rehabilitation of oncological patients. Shiatsu therapy is a form of manipulation exercised with the thumbs and the hand's palm. It

consists in pressuring the skin with the aim of correcting internal dysfunctions, and improving and preserving the patient's health. **METHOD:** In every session, working on the meridian system, in the prognosis reasoning and in the stimulation practice, we unite body and brain and the human being to his environment. The path for women who have undergone breast surgery and are able to walk and are self-sufficient contemplates a cycle of 8 Shiatsu sessions, one every week, for 60 minutes each. To evaluate the effects, beside the control group, there are tests to estimate the levels of anxiety, of depression, and of the quality of life, before and after the treatment (S.T.A.I. State Trait-Anxiety Inventory, Hamilton Scale For Depression, FACT B). **RESULTS:** 192 shiatsu treatment sessions have been performed, with parallel psychological sessions, for 24 patients. First results show remarkable improvements in various areas: breathing, muscular-articular rigidity, physical and psychical asthenia, gastrointestinal symptoms (constipation), quality of sleep, anxiety level, depression. With reference to monitoring tests, the quality of life of the patients before and after the treatment has increased by 12%; the depression has fallen by 6%; and the state anxiety has fallen by 13%. 'My sleep has improved, and also my way of evaluating things, I am more relaxed, headache and pain have diminished'. **CONCLUSIONS:** Working on the *disharmonic circulation of Qi-Vital Energy* which affects these patients, we have been able to confirm that Shiatsu represents a supporting element which facilitates recovery at a general level, and therefore improves the patient's quality of life. Body has its own memory, and is a map which 'records' emotional backgrounds. For this kind of patients, thorax is the area of the body which has been affected by the illness and which underwent surgical treatment. The negligence, thoracic oppression and uneven breathing are all symptoms belonging to the same clinical picture. **RESEARCH IMPLICATIONS:** The experimental research project represented a way of conjugating eastern and western methods in treating health problems. Breast, and also womb and ovary carcinoma, creates a fracture in a woman's identity. The hypothesis is to make available a support and recovery model aiming at potentiating an integration between the physical, emotional and psychical dimensions through the interaction and the integration between shiatsu therapy and psychotherapy. **CLINICAL IMPLICATIONS:** Shiatsu therapy has been shown a valid tool to accompany the patient towards the acquisition of a new lifestyle, after the upsetting caused by the illness. Patients testimonials: 'I feel more flexible and open, without contractions, I have improved my posture, have no problems in getting asleep, palpitations have ceased, I eat better'. 'I am sleeping well, feel better, less sad and smile more often, I

have decided to work part time without feeling guilty'. **ACKNOWLEDGEMENT OF FUNDING:** S. Masunaga (2002): Zen per immagini. Esercizi dei meridiani per una vita sana (Ed. Mediterranee); S. Masunaga e Ohashi (2002): Zen Shiatsu (Ed. Mediterranee); F. De Falco (1997) Psicologia in Oncologia; F. De Falco A. Cuomo (2006) Dalla malattia in poi.....il tempo restituito

P1.4.17

Gender Differences in Sexual Function in Adolescent and Young Adult Survivors of Pediatric Bone Cancer

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BACKGROUND: Previous research examining long term health outcomes in survivors of pediatric bone cancer has demonstrated that men report higher health related quality of life compared with women. There are also suggestions that bone cancer survivors struggle with sexual function, most likely due to difficulties in body image due to surgery. This study examined gender differences in sexual function in survivors of pediatric bone cancer and the role of surgical intervention, self worth and depressive symptomatology. **METHOD:** Participants ($N = 28$, 14 males) ages ranged from 18 to 32 years (Mean age at diagnosis = 11.6 years). In terms of surgical intervention, 53.6% ($N = 15$) had allograft fusion, 21.4% ($N = 6$) had Van Ness rotationplasty, and 14.3% ($N = 4$) had endoprostheses. Participants completed a measure of gender specific sexual function (Brief Sexual Function Questionnaire for Men, BSFQ-M, Reynolds *et al.*, 1988; or the Brief Interview of Sexual Function for Women, BISF-W, Taylor *et al.*, 1994), global self worth (Harter Adult Self-Perception Profile; Messer & Harter, 1986) and depression symptoms (Center for Epidemiologic Studies Depression Scale, CES-D; Radloff, 1977). For comparison purposes only equivalent items on the BSFQ-M and BISF-W were used. **RESULTS:** At the time of assessment 71.4% of women were in a sexual relationship, compared with 85.7% of men. Mann Whitney U tests were conducted to examine gender differences. Men scored significantly higher on total sexual function than women ($z = -1.976$, $p < .05$). Men also scored significantly higher than women on questions of sexual drive/desire ($z = -3.059$, $p < .01$), sexual thoughts, dreams or fantasies ($z = -2.345$, $p < .05$), pleasure from sexual experience ($z = -2.031$, $p < .05$), and perceived partner sexual satisfaction ($z = -2.051$, $p < .05$). No significant differences were found for depression, self worth, or perceptions of physical

appearance. There were also no significant correlations between total sexual function scores and self worth, physical appearance, depression, and surgical intervention. **CONCLUSIONS:** This study has expanded knowledge of health outcomes in long term survivors of bone cancer and demonstrated that women struggle more than men with respect to sexual function. **RESEARCH IMPLICATIONS:** Results from this study suggest that adult men survivors of pediatric bone cancers have better sexual function compared with women. However, the reasons for these differences remain unclear. This study may be underpowered to fully differentiate any differences between men and women. Alternatively, the differences may due to other difficulties not examined in this study. Further research to confirm the results and to determine why these differences exist is needed. **CLINICAL IMPLICATIONS:** These results suggest that sexual function of long term childhood bone cancer survivors is an important component in their overall quality of life and can guide interventions addressing sexual function difficulties among these survivors. They also suggest that women should be a focus for such interventions. **ACKNOWLEDGEMENT OF FUNDING:** This project was generously funded by the Canadian Institutes of Health Research (CIHR), the Pediatric Oncology Group of Ontario (POGO) and the SickKids Foundation.

P1.4.18

Randomized Trial of a Combined Treatment Compared with Drug Treatment for Depressed Oncologic Patients: Outcomes at 1 Year

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BACKGROUND: Combined treatments for oncologic depressed patients seem the most effective option. The measurement of quality of life in cancer patients acquires an increasing interest in the current psycho oncology. The quality of life is directly related to psychological well-being and psychiatric treatment for depression can improve some aspects related to it. The aim is to compare the improvement of the quality of life in depressed cancer patients treated with two different strategies of intervention. **METHOD:** 1026 patients with colon, breast and lung cancer not metastasized were selected to complete the Hospital Anxiety and Depression Scale (HADS). Those who scored over 8 in HADS-D were interviewed to confirm the diagnosis using the Semi-structured Clinical Interview for DSM-IV (SCID). 150 (14,61%) of the subjects confirmed the diagnosis of major depressive disorder. 39 patients were randomized to the combined therapy group. 33 patients were included in usual care group. 78 (52%) declined

treatment or were excluded for various reasons. **RESULTS:** Depression scores are reduced in both groups after one year. Although differences were not statistically significant between intervention groups, combined treatment showed a bigger reduction of symptoms on every assessment (after treatment, at 6 months and after one year). In comparing the two treatment groups in the different variables of EORT QLQ C-30, we found the following results on every assessment: Statistically significant differences ($p < 0.01$) were found in all functional variables (physical, social, emotional, cognitive and role). However, in symptomatic variables (fatigue, nausea, dyspnoea, insomnia, appetite loss, constipation, diarrhoea, financial difficulties) found no significant differences except in the variable 'pain' ($p = 0.04$). Global health status differences were not significant. **CONCLUSIONS:** Drugs plus psychotherapeutic intervention seem to be more effective than drug treatment alone for improving specific areas of quality of life, and depressive symptoms measured by HADs depression scale. **RESEARCH IMPLICATIONS:** The patients were diagnosed properly major depression, that means the findings could be generalizable to patients experiencing clinically significant symptomatology. **CLINICAL IMPLICATIONS:** The intervention has been found superior to a control condition, and shows good potential for dissemination, generally acceptable to patients and relatively easy to implement in terms of professional time or resources. **ACKNOWLEDGEMENT OF FUNDING:** This study is part of the FIS 05/0737 and 05/2062 Investigation Projects.

P1.4.20

Can We Measure Empowerment in Cancer Patients? Developing a Patient Empowerment Scale

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BACKGROUND: The Patient Empowerment Scale (PES) was developed to measure empowerment as an individual construct. It is postulated that the concept of empowerment differs from the concept of coping. Empowerment implies the ability to proactively take control of a situation and utilise elements which enable empowerment to occur. The identification of markers for empowerment was obtained by exploring and defining the patient's use of support strategies and tailored resources. **METHOD:** The scale was validated using the Rasch Extended Model. An extensive literature review and a series of in-depth interviews of Shared Care Model participants were completed in order to formulate the Patient Empowerment Scale. The 28 item pilot scale was analysed using the RUMM program and statements which did

not fit the model well were deleted from the final version of the scale. Other statements which were close in location and meaning were coalesced. This process resulted in a final 15 item Patient Empowerment Scale which was again validated using the Rasch Extended Model (RUMM program). **RESULTS:** The final Patient Empowerment Scale (PES) consisted of 15 items which included the original items that performed well in the pilot scale analyses. Two data sets provided a sample ($N = 210$) to ensure stable estimates of items and person-locations. The RUMM 2020 program was used for the analysis. Findings indicated that the fit of items was acceptable and thus that the set of items forms a valid, unidimensional scale. The Person Separation Index of 0.78 indicated an acceptable degree of reliability. The Patient Empowerment Scale was shown to be a reliable measure of empowerment and fitted the model well. **CONCLUSIONS:** The research confirmed that it is feasible to measure empowerment as a separate quality of life indicator. Furthermore, that empowerment is linked to motivation and self-efficacy beliefs. The research also demonstrated that there are a number of core areas which are fundamental to regaining control and increasing empowerment for patients. These core areas are linked to support mechanisms, willingness to adapt and to access resources tailored to meet their needs. Patient empowerment emerged as a key aspect of enhanced quality of life regardless of prognosis and improved psychological outlook. **RESEARCH IMPLICATIONS:** The nebulousness of the concept of empowerment implies that a validated instrument to assess empowerment level of a patient would progress the understanding of empowerment beyond the perception of an intangible state of mind. Future research involves administering the PES across time points during the cancer patient's illness trajectory and in conjunction with other quality of life measures to fully establish reliability of the scale. **CLINICAL IMPLICATIONS:** The main objective of the PES was that it be used in a clinical setting. It is intended that the self-complete questionnaire be used without the assistance of a health professional. Raw scores indicate level of empowerment for a particular patient. Use of relevant support systems and resources impact on patient ability to regain control over the illness and is useful for clinicians to be aware of level of patient perceived empowerment. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.21 **The Impact of Disease Progression on Health-Related Quality of Life of Long-Term Cancer Survivors**

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BACKGROUND: The absolute number of cancer survivors experiencing disease progression is increasing with the number of cancer survivors. However, little is known whether disease progression (DP) affects health-related quality of life (HRQL) of long-term cancer survivors. We aimed therefore to compare the HRQL of DP and disease-free (DF) survivors up to 15 years after initial diagnosis. **METHOD:** 232 cancer survivors with DP identified through the Eindhoven Cancer Registry were matched with 232 disease-free (DF) survivors of similar demographic and clinical characteristics. Patients completed generic- (SF-36) and cancer-specific (QOL-CS) HRQL questionnaires 5–15 years after diagnosis. **RESULTS:** Compared with DF survivors, DP survivors exhibited significantly lower scores on all SF-36 and QOL-CS (except spiritual well-being) dimensions. DF survivors had better HRQL than the normative population on all SF-36 dimensions. Among DP survivors, those with short survival (< 5 years) had significantly poorer HRQL scores on all dimensions except bodily pain than the normative population. Comparatively, the long survival (>5 years) DP group had better HRQL than the short DP group but poorer HRQL than the normative population. In multivariate analyses, disease progression and disease-free survival time were independently associated with aspects of HRQL in cancer survivors. **CONCLUSIONS:** DP cancer survivors have poorer long-term HRQL compared with DF survivors. However, there is suggestion that HRQL does improve over time. **RESEARCH IMPLICATIONS:** Future prospective studies with a larger group of DP survivors followed over a longer period could investigate if our current results are reflective of ‘survival of the fittest’ or that HRQL does improve with time following disease progression. Also of interest will be the identification of predictors of better HRQL among DP survivors. **CLINICAL IMPLICATIONS:** The absolute number of cancer survivors experiencing DP will increase in correspondence with the increase in cancer survivors. Although our hypothesis that patients with DP have poorer HRQL than DF survivors was supported, our results also suggest that time can attenuate the distress of experiencing DP. Therefore, besides interventions to prevent DP, psycho-educational programs designed with an understanding of patients’ attributions of recurrence could help in patients’ self-management of illness- and treatment-related symptoms should disease progression occur. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.22

Development of the Japanese Version of the Schedule for Meaning in Life Evaluation (SMiLE)

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BACKGROUND: Meaning in Life (MiL) has become a central core concept in palliative care. However, no proper instrument exists to assess its idiographic nature. The ‘Schedule for Meaning in Life Evaluation’ (SMiLE), an individualized instrument for the assessment of MiL, was developed in Germany and validated in English and French. The Japanese version of SMiLE has been developed and its feasibility and the acceptability were evaluated. The reliability and validity of the SMiLE were also tested. **METHOD:** SMiLE requests the respondents to list 3–7 areas providing MiL first, and rate the current level of importance and satisfaction with each area. The feasibility and acceptability were evaluated by a self-designed questionnaire, while reliability with test-retest method. Convergent validity was tested with the Purpose in Life Test (PIL), the Self-Transcendence Scale (STS) and global MiL satisfaction (MiL_NRS). In the first trial, 166 university students first completed SMiLE, PIL and the feasibility questions, and SMiLE and STS 7 days later. 505 adults filled-in SMiLE, STS and PIL in the second trial. The 3rd trial is ongoing for cancer patients. **RESULTS:** Indices of total weighting (IoW), total satisfaction (IoS) and total weighted satisfaction (IoWS) were calculated as in the original version. 1st trial: The rates of the feasibility and the acceptability of SMiLE were good. Test-retest reliability of the IoS, IoW and IoWS were 0.75, 0.59 and 0.72 respectively ($p < 0.01$). The correlation coefficients between Mil_NRS-IoWS, Mil_NRS-PIL, Mil_NRS-STS, PIL-IoWS and STS-IoWS were 0.51 (1st time), 0.65 (2nd time), 0.74, 0.56, 0.51 and 0.37 respectively ($p < 0.01$). 2nd trial: The correlation coefficients between Mil_NRS-IoWS, Mil_NRS-PIL, Mil_NRS-STS, PIL-IoWS and STS-IoWS were 0.51, 0.65, 0.46, 0.47 and 0.36 respectively ($p < 0.01$). **CONCLUSIONS:** Japanese data indicate a good feasibility and acceptability of SMiLE. The scores for the reliability and the validity of SMiLE were quite equivalent to the German data. The mean values relating to MiL were different from German data though the number of the 2nd trial was limited. **RESEARCH IMPLICATIONS:** Japanese version will open possibilities for cross-cultural studies on MiL between the West and the East. **CLINICAL IMPLICATIONS:** SMiLE helps the Japanese clinicians to know and assess the patients’ need for MiL, and could be a useful tool to open communication between patients and clinicians about MiL. **ACKNOWLEDGEMENT OF FUNDING:** Kyoto Gakuen University supported this research.

P1.4.23

Type D Personality Negatively Affects Health Related Quality of Life Among Melanoma Patients

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BACKGROUND: The Type D personality construct (the conjoint effects of negative affectivity and social inhibition) is predictive of adverse clinical outcomes and psychological distress in cardiac patients but has hardly been studied in cancer. The aim of this study was to investigate the prevalence of Type D among melanoma survivors and to obtain insight into the independent effects of Type D on health related quality of life (HRQOL) and health care utilisation among melanoma patients. **METHOD:** We used the population-based Eindhoven Cancer Registry to selected all patients diagnosed with melanoma between 1998 and 2008 from 3 large regional hospitals. In total, 699 patients, alive in January 2008, received a questionnaire (Type D Personality Scale (DS-14); Impact of Cancer questionnaire (IOC); and SF-36) and 80% responded ($n = 562$). In the analysis of covariance, appropriate controls for factors known to affect HRQOL were employed. **RESULTS:** 22% of patients ($n = 125$) were classified as Type D. Melanoma patients with Type D personality were more likely to have comorbid conditions than those without Type D ($p < 0.0001$). Furthermore, Type D patients reported clinically significant worse scores on all SF-36 scales (all $ps < 0.0001$) compared to patients without Type D and this was also found for all IOC subscales except for 'Psychological: Positive Self-Evaluation' en 'Existential: Positive Outlook' which showed no differences. No differences were found between patients with and without Type D in the number of visits to a general practitioner (85% vs. 83%) and medical specialist (84% vs. 81%) (past 12 months). **CONCLUSIONS:** HRQOL was worse among melanoma patients with a Type D personality in comparison to those without this personality type. This finding forms an important contribution to the limited information available on the influence of Type D personality on HRQOL in the growing group of melanoma patients. **RESEARCH IMPLICATIONS:** It is known from the literature that Type D personality can have a major impact on HRQOL among cardiac patients. This is the first study that shows the same effect in cancer patients.

Due to its major impact on HRQOL, Type D personality is an important factor to assess in cancer patients. **CLINICAL IMPLICATIONS:** Type D is an important psychosocial factor that deserves attention during treatment and follow-up of cancer patients. As there is currently a lot of attention on how to provide follow-up care and to which patients, screening for Type D personality might be a new way of selecting patients for more intense after care. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.24

Psychological Distress and Hospitalization Needs in Cancer Inpatients: The Role of Clinical and Socio-Demographic Factors

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BACKGROUND: The diagnosis of cancer marks an immediate passage from a condition of health to one characterized by uncertainty, threat of death, and changes; type, severity and duration of the disease together with gender and age, may play a role in determining the reactions to the diagnosis. In the present research, both psychological distress and needs were assessed in a large sample of hospitalized cancer patients and studied according to several clinical and socio-demographic variables. **METHOD:** Five-hundred and forty consecutive adult patients from the same Cancer Institute in North-east Italy were involved in the research; they were all either in the diagnostic phase (within a month of diagnosis) or in a therapeutic phase (3–6 months from diagnosis). Participants were requested to fill out both a distress (i.e., the Hospital Anxiety and Depression Scale) and needs' (i.e., Needs Evaluation Questionnaire) self-reported measures the day after their hospitalization. **RESULTS:** Both in the diagnostic and therapeutic phase, anxiety and depression were symptomatic for 50% and 45% of the study sample, respectively. No consistent differences in number of informative needs were observed between diagnosis and therapy (78.3% of patients with at least one need vs. 79.6%; $p = 0.70$), relational needs increased slightly (40.3% vs. 43.4; $p = 0.45$), assistance/care needs increased although not significantly (9.7% vs. 14.2%; $p = 0.11$), psycho-emotional support tended to decrease (47.4 vs. 44.8; $p = 0.54$) and material needs increased (45.6% vs. 51.2%; $p = 0.18$). Median number of needs was 1 except for informative needs (median = 3). However gender based- and age based-differences were obtained both in distress levels and needs. **CONCLUSIONS:** Because little changes were recorded progressing from the diagnostic to the therapeutic phase both in distress levels and needs, the present data seem to highlight the importance of an

early screening for these dimensions. Furthermore socio-demographic variables can help in identifying those inpatients more vulnerable from a psychosocial perspective. **RESEARCH IMPLICATIONS:** Because the present data were obtained from a large sample of Italian patients, they have cross-cultural relevance. Furthermore, our data encourage researchers to pursue the relationship between distress and needs. **CLINICAL IMPLICATIONS:** The present research describes patients' needs and distress levels according to a variety of clinical and socio-demographic variables, offering health workers (clinicians, nurses, psychologists) useful information both to improve the hospitalization quality and to identify those patients who would benefit the most from a psycho-emotional support intervention. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.25

Inconvenience and Malaise Level of Oncologic Patients One Week Until Chemotherapy

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BACKGROUND: The purpose of the present paper is to depict physical and psychological problems of the oncologic patients that occur little before chemotherapy. Another ambition of this paper is to examine the life attitude of oncologic patients relatively to chemotherapy. **METHOD:** To achieve the ambitions of this paper the scientific team used a national questionnaire, named Antonowsky, which was completed by hundred and twenty (120) clinical cases of oncologic patients. The survey took place in the Hospital of Oncology 'Ag. Anargiroi'. **RESULTS:** Oncologic patients tend to feel intense malaise/inconvenience, due to the fact they are afraid of the illness—cancer and its outcome (cure—treatment—death). Malaise/inconvenience emerge within other problems distressing the personal—sexual, family, occupational and social life of a patient. These problems, usually, seem to appear more intense than the illness itself. **CONCLUSIONS:** In conclusion, malaise/inconvenience levels of oncologic patients have great concern on their life quality. Life quality is multidimensional and has physical, social and psychological extension. **RESEARCH IMPLICATIONS:** The oncologic patient's distress levels via chemotherapy, especially little days before, may present us with more and new programmes and services these patients need through the process they are forced to get through. **CLINICAL IMPLICATIONS:** The measurements of malaise/inconvenience

levels offer to the health staff the opportunity to have knowledge relatively to fulfillment and function of the patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.26

Life Quality of Patients Suffering From Cancer

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BACKGROUND: The purpose of the present paper is to illustrate the improvement in the life quality of oncologic patients. The main concern is to examine and analyze the causes and the determinants, which worsen up the daily life of a cancer patient. **METHOD:** The sample utilized for the purpose of the paper was composed with hundred and twenty (120) clinical cases, who completed a national questionnaire. The questionnaire, used by the scientific team, is named 'Distress Management' and it is planned from Hoffman B.M., Zevon M.A., D' Arrigo M.C. and Cecchini T.B. The survey took place in the Hospital of Oncology 'Ag. Anargiroi'. **RESULTS:** The life quality of oncologic patients has been observed empirically by all the health professions and by many pharmaceutical industries. Through these observations, it is acceptable not only that the life quality of surviving is as important as its duration, but also that it is a major issue for the psychosocial cure of oncologic patients. **CONCLUSIONS:** The perspective of life quality in Oncology meant to be sequel of social transformations. It composes one of the basic issues in Psychosocial Oncology and refers within all phases and stages of cancer, beginning from primary diagnosis followed by treatment, cure or death. The results of our research illustrated that the distress management is in high level and thus the fear of death is more intense for the oncologic patients. On the other side, the progress of the chemotherapeutical treatment has improved the quality of life. **RESEARCH IMPLICATIONS:** The information presented may have a great role to occur through all the programmes and services providing either at the present or new ones, to oncologic patients. **CLINICAL IMPLICATIONS:** Through all the processes and stages cancer patients come, all clinicians are called to stand for them and have a vital role by their side, supporting their life quality. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.27

Quality of Life, Mental Representations and Adjustment to Disease in Patients with Choroidal Melanoma

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BACKGROUND: Choroidal melanoma (CM) is the most common primary intraocular malignant cancer in adults. Patients with CM can be treated by a number of modalities with different consequences. The main is the conservation or not of the eye. Mortality rate is around 50% 10 years after treatment. Few prospective studies measuring the impact of the different treatments (proton beam irradiation or iodine plaques versus enucleation) on patient's quality of life and psychological adaptation are sometimes divergent. **METHOD:** In this prospective study, patients treated for CM at Curie Institute in Paris (France) are evaluated four times: T0: before treatment, T1: 1 month after treatment, T2: 6 months after treatment, T3: 12 months after treatment. Self-questionnaires: Quality of life (EORTC-QLQ-C30 + QLQ-OPT-30), adjustment to cancer (MAC-44), anxiety and depression (STAI-B, HADS), Fear of Cancer Recurrence (FCR) are administrated at the each moment of the study. Semi-directive interviews are conducted before and 12 months after treatment. Group's comparison is performed by analysis of variance. **RESULTS:** From October 2007 to October 2008 an active file of 84 patients has been constituted; the overall participation rate is 91%. Response rate is 78% at T1 and 83% at T2. We are presently conducting T3's interviews. Results of the two preliminary states of our study (T0 and T1) will be presented. **CONCLUSIONS:** Our hypothesis is that mental representations of the disease and the treatment before treatment influences the QOL and the coping strategies after treatment. Our study explores new aspects of long-term impact of choroidal melanoma short-time treatments on the QOL. **RESEARCH IMPLICATIONS:** This study contributes to a better comprehension and evaluation of the QOL in this specific population of patients with CM and to the development of specific instruments to measure it. Our study aims to determine factors, which contribute to the emergence of psychological or psychiatric disorders and inform about patient's adjustment strategies, before and after treatment. **CLINICAL IMPLICATIONS:** We hope that our results will contribute to a better comprehension of patient's difficulties through

different periods of their treatment by medical staff in ophthalmology. It should help physicians to take decisions about treatment choice taking into account patient's preferences and psychopathological characteristic. This work will also contribute to identify criteria of indication to psychological interventions, depending on patient's comprehension of medical information, disease representations and coping modalities of CM treated patients. **ACKNOWLEDGEMENT OF FUNDING:** Ligue Nationale Contre le Cancer (France).

P1.4.28

Cultural Attitudes on Illness Awareness and Health-Related Quality of Life (HRQL) of Cancer Patients Under Chemotherapy

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BACKGROUND: Although illness awareness is a topic of interest in terminal cancer patients little is known about the impact of disease knowledge on HRQL of cancer patients undergoing chemotherapy. Purpose of this study was to explore cancer patients' HRQL in respect to disease awareness as this was assessed from their relatives' report. **METHOD:** 122 cancer patients undergoing chemotherapy in our department (49 men) of mean age 56.6 completed the validated SF-36 health survey by personal interview. The SF-36 survey contains eight scales measuring physical functioning (PF), role physical (RP), bodily pain (BP), general health perception (GH), vitality (VT), social functioning (SF), role emotional (RE), and mental health (MH), with higher scores (0–100 range) reflecting better-perceived health. Physical Component Summary (PCS) and Mental Component Summary (MCS) describe the overall physical and mental health. Data analysis was performed with SPSS while statistical analysis was performed with Mann Whitney's U test. **RESULTS:** Table 1 summarizes the results of our study. 55% of cancer patients were not aware of their disease while in 12% this could not be assessed. **CONCLUSIONS:** Although not aware patients seem to share better HRQL, statistical significance was reached only in case of AGH while there was a trend for RP. It seems that the exact knowledge of the disease status did not affect seriously cancer patients' HRQL.

Patients	PF	RP	BP	GH	VT	SF	RE	MH	PCS	MCS
Pt. Aware	68.7*	24.6	62.0	50.8	56.5	63.6	57.7	62.9	39.5	46.0
Pt. Not aware	62.0	40.0	62.0	64.5	62.8	71.8	65.0	69.6	41.4	49.2
<i>p</i>	0.40	0.052	0.98	0.0006	0.20	0.25	0.35	0.13	0.45	0.15

*Mean score is described.

RESEARCH IMPLICATIONS: Larger prospective studies are necessary to disentangle the impact of this cultural attitude on cancer patients' HRQL. The exact reason of this phenomenon should be further explored on physicians' intentions, family's impediment and patient's will. **CLINICAL IMPLICATIONS:** Physicians' attitudes concerning information to cancer patients should be reconsidered. Improvement of physician-patient communication should be improved while family support should be incorporated in the medical care. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.29

Effects of a Multidisciplinary Continence Management Training For Men with Prostate Cancer After Radical Retropubic Prostatectomy on Continence, Quality of Life and Impact of Incontinence: A Randomized, Controlled Trial in a Rehabilitation Clinic

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BACKGROUND: To explore to which extent men profit in their continence, quality of life and impact of incontinence after a radical retropubic prostatectomy from a multidisciplinary continence management training during stationary rehabilitation. There is some evidence that patients benefit from pelvic muscle floor training in their continence and that this might have a positive effect on their quality of life as well. But reviewers ask for more studies to examine these effects. **METHOD:** We included all eligible patients of our rehabilitation clinic between 2005 and 2007. We conducted a randomized controlled trial with two intervention groups. Both groups received a multidisciplinary continence training, first group ($n = 87$) in a standard version, second group ($n = 72$) with an additional tool 'BB+ trainer' to improve the perception of the pelvic muscle floor. The standard training consists mainly of physiotherapeutic training, psychological groups and urological information.

Primary outcomes were continence (pad test, number of pads and questionnaire), quality of life (EORTC questionnaires) and impact of incontinence (questionnaire) up to six months after the treatment. **RESULTS:** Mean age was 64 years; most of the participants were married and pensioned. Most of them had a localized prostate cancer. Both groups improved significantly and to a relevant extent (effect ratios of 0.5–0.8) during the three weeks of treatment, after 6 months they further improved significantly with an effect ratio of more than 1. More than 70% claimed to be continent at that time. Quality of life and impact of incontinence are highly correlated with incontinence. There are some differences between both intervention groups referring to the time course. **CONCLUSIONS:** There is strong interaction between incontinence, the impact of incontinence and quality of life. Multidisciplinary continence management training shows strong effects on both of them. Participants told us that it was very relieving to talk about problems, to get in contact with other men concerned and to get help from professionals of different disciplines. Therefore it is advisable to offer men such a treatment in a specialized rehabilitation clinic after prostatectomy with incontinence symptoms. **RESEARCH IMPLICATIONS:** Published research studies concentrate on the development of continence after prostatectomy, comparing the effects of different physiotherapeutic interventions or treatment vs. no treatment. This study shows that it is worthwhile to include psychosocial factors as well, because there might be some differences between the pure extent of incontinence and the impact of this incontinence on daily functioning and quality of life. Therefore more multidisciplinary studies are needed to determine all essential implications. **CLINICAL IMPLICATIONS:** Continence management training should consist of not only physiotherapeutic but also psychological and urological components because there is a strong demand for a multidisciplinary perspective. Men typically minimize their dismay, so it might be necessary to start with very basic information, physiotherapeutic training, urological advice and to offer more intensive psychological therapy later on. **ACKNOWLEDGEMENT OF FUNDING:** Sponsored by vffr, number 88.

P1.4.30

Quality of Life as Predictor of Survival: A Prospective Study on Patients Treated with Combined Surgery and Radiotherapy for Advanced Oral and Oropharyngeal Cancer

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BACKGROUND: The purpose is to investigate the prognostic significance of health-related quality of life (HRQOL) at baseline and 6 months after microvascular reconstructive surgery and radiotherapy with regard to survival in 80 patients with advanced oral or oropharyngeal cancer. **METHOD:** Multivariate Cox regression analyses of overall and disease specific survival were performed including sociodemographic (age, gender, marital status, comorbidity), and clinical (tumour stage and site, surgical margins, metastasis) parameters, and HRQOL (EORTC QLQ-C30 global quality of life scale). **RESULTS:** At baseline, younger age and having a partner were predictors of disease-specific survival, and younger age was associated with overall survival. At 6 months posttreatment, disease-specific and overall survival was only associated with (deterioration of) global HRQOL (HR: 0.96; 95% CI: 0.94–0.99). Global HRQOL after treatment was mainly influenced by emotional functioning. **CONCLUSIONS:** Deterioration of global HRQOL after treatment is an independent predictor of survival in patients with advanced oral or oropharyngeal cancer. **RESEARCH IMPLICATIONS:** Future studies are needed to disentangle the relation between HRQOL and survival and possible confounders, such as sociodemographic and tumour- and treatment-related parameters, comorbidity (e.g., depression and anxiety), and lifestyle. **CLINICAL IMPLICATIONS:** Information regarding HRQOL may contribute to a more precise prognosis in HNC patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.31

Women's Comments on Their Breast Cancer and Treatment Experiences: 5 Years On

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BACKGROUND: Spontaneously proffered comments and letters were submitted by women returning QL booklets in a UK trial of adjuvant radiotherapy for early breast cancer (START trial) up to 2 years; detailed review of these comments highlighted the importance of contextual factors and life events or health problems unrelated to their breast cancer. This 5 yr study extends the review of proffered comments on co-morbidity that could impinge on patients' QL later on in follow-up. **METHOD:** An analysis of comments from 470 (25%) patients in the QL sub study sample at 2 years following radiotherapy identified 9 themes, including co-morbidities, life events and psychological problems. These were collated and categorised for further exploration. At the 5 year follow-up point all patients were invited to make comments in their QL assessment. These have been collated and the former categories were reviewed and extended to accommodate any new themes, using constant comparative methodology, as before. This analysis will focus on reporting of co-morbidity. **RESULTS:** At 5 years follow-up, 1040 (60.2%) patients have written comments. The mean age (range) of patients writing comments was 62.4 yr (32–92) and 61.2 yr (33–88) for those that did not. 75% of the patients who wrote comments between baseline and 2 yrs submitted further comments at 5 yrs. No difference was observed in the psychological status of the women who wrote comments at 5 yr compared to those that did not. To date, 16 new categories have been formed and analysis is ongoing. Those reporting co-morbidity are being identified for further exploration of their QL. **CONCLUSIONS:** Although patient self-assessments are an accepted part of the outcome evaluation of clinical trials of breast cancer therapy, they are not designed to take account of the context of peoples' life stage or life events, yet these may influence quality of life in survivorship. Women seem very willing to report this valuable additional information suggesting they consider it relevant. **RESEARCH IMPLICATIONS:** The interim analysis suggests that contextual information is relevant to the interpretation of QL and if confirmed in the larger sample at 5 years, may indicate a need for this information to be captured in future clinical trials with older patients and longer-term follow-up. **CLINICAL IMPLICATIONS:** Factors other than breast cancer and its treatment may determine QL in a significant subgroup of disease-free women at 5 years. These

factors need to be better understood so that appropriate pathways can be identified for all aspects of health and social care in cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK, MRC, DoH.

P1.4.32

Existential Issues of Life and Death: Finding Meaning in Life with Cancer

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BACKGROUND: For many patients, cancer experiences are distressing, painful, and difficult to understand. How they find meaning in their experiences may impact on how they deal with their illness and, more generally, how they understand their lives. The purpose of this research was to develop a typology of how cancer patients differentially attribute meaning to their cancer experiences and to issues of life and death. **METHOD:** 15 unpublished, interview narratives and 3 published, biographical narratives (de Beauvoir, 1983; Noll, 1989; Middlebrook, 1998) were analyzed using a form of thematic analysis known as interpretative phenomenological analysis (IPA), which is used to investigate participants' personal and social worlds (Smith and Osborn, 2003). I took an existential phenomenological approach to my reading of the narratives and my understanding of the meaning-making process, within which one assumes that meaning is something interpretively created by individuals in order to make sense of their experiences and their lives (van Kaam, 1966; Hoeller, 1990). **RESULTS:** Although all the participants expressed similar existential issues (e.g., concern for time, spirituality, and the meaning of life and death), interpretations differed between the narratives (e.g., participants discretely related spirituality to God, nature, or archetypes) and within the narratives (e.g., Noll alternatively construed death as something natural, malevolent, incomprehensible, peaceful, and meaningless). **CONCLUSIONS:** How patients write and talk about their illness reveals important insights into how they struggle to understand their life, death, and cancer experiences. The meanings attributed to cancer experiences and existential concerns affect patients' ability to cope with their illness tremendously, and in different ways. **RESEARCH IMPLICATIONS:** Constructing meaning is an important part of cancer patients' psychosocial care; however, the process of constructing meaning in the context of cancer is not yet clearly understood within the research literature. It is pertinent to conduct more research within this context to better understand the meaning-making process and its importance for coping with chronic illness. **CLINICAL IMPLICATIONS:** The

suggested typology of ways how cancer patients make sense of life with cancer can be beneficial for health professionals, caregivers, relatives, and cancer patients alike, offering a range of, and choice between, interpretations. Building on this suggested typology, meaning-centered interventions (e.g., in support groups) may help improve the quality of care cancer patients receive. **ACKNOWLEDGEMENT OF FUNDING:** Saskatchewan Health Research Foundation.

P1.4.34

The Psychological Impact of the Diagnosis and Treatment of DCIS

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BACKGROUND: Psychological studies of the effect of DCIS and its treatment are lacking and it is unclear whether or not the psychological impact of DCIS is equivalent to that of invasive breast cancer. The diagnosis of DCIS has increased with mammographic screening but it is unclear if post-operative RT is necessary for all women. A randomised controlled trial was opened in 2004 to investigate this with integral Quality of life (QOL) evaluation. **METHOD:** Patients completed QOL questionnaires including the HADS (Hospital Anxiety and Depression Scale), IES (Impact of Events Scale) and BIS (Body Image Scale) before randomisation to post operative RT or no RT, and then at 6, 12 and 24 months follow up. Non-parametric tests were applied and a p -value of $p = 0.01$ was used for significance to allow for multiple testing. Patients scoring over 26 on the IES indicated moderate to severe intrusive and avoidance thoughts. **RESULTS:** Due to early closure of the trial, only 54 patients were recruited to the QOL study but compliance was $>98\%$ at 6 & 12m, 90% at 24m. There was an improvement in IES morbidity from a baseline rate of 28% (CI $16-40\%$) to 24m rate of 12% (CI $0-25\%$) A transient increase in body image concerns occurred at 6m relative to baseline. No significant changes in HADS scores were observed over time. There was no difference in any QOL domains between the RT and the no RT group at any time point but sample size limited the power to find differences. **CONCLUSIONS:** Findings are tentative with this limited sample but data from other non randomised studies of DCIS suggest similar outcomes using comparable measures. If confirmed, women could be reassured that post-op RT did not impair QOL. **RESEARCH IMPLICATIONS:** Further research is needed in this area. We hope to confirm

our HADS and IES results through collaboration with US investigators in a larger prospective study of women, half of whom have received post-operative RT treatment for their DCIS. **CLINICAL IMPLICATIONS:** Treating teams need to be aware of the psychological impact of DCIS and offer appropriate support and referral where needed. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK.

P1.4.35

The Effect of Gender and Age on the Extent of Met and Unmet Needs Reported by Cancer Patients

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BACKGROUND: Unmet needs impact directly on patient satisfaction, use of healthcare services and quality of life. In cancer populations needs associated with the disease and associated treatments are common but exploration of individual variation in expressed need is rare. Gender and age differences in symptom reporting and use of healthcare have been reported, we ask here whether gender and age also influence the extent of met and unmet need reported by cancer patients. **METHOD:** The aims of this study were to identify cancer patient needs using a survey methodology. 110 cancer patients completed a postal needs assessment questionnaire (CaNAT) assessing across 8 need domains: emotional, informational, practical, interpersonal, experiential, symptom-control related, treatment-related, and services related. Needs items were scored in terms of being present/absent, their level of salience, and whether they were considered to be met or unmet. Patients represented diagnosis with urological, colorectal, breast, gynaecological, haematological, lung, and head & neck cancers. **RESULTS:** The mean number of needs endorsed was 27 (max 80), with a significant gender difference (females endorsed a greater number) and a significant association with age (older patients endorsed fewer needs). In terms of the perceived current saliency of need, females reported greater needs saliency than males and older patients report less salient needs than younger patients. In terms of the current needs being 'met' there was no gender difference, however a significant age effect remained (older patients considered their needs to be less met). **CONCLUSIONS:** Whilst identifying cancer patient needs to be common, often generic across cancer site, and commonly unmet (reported previously, IPOS 2006), we also identified demographic influences on reported needs. This has important implications for patient care and potentially, psychosocial

intervention. **RESEARCH IMPLICATIONS:** Cancer patient needs are currently being assessed longitudinally in relation to mood and QoL. If age and gender effects are found to persist longitudinally then we have good evidence on which to propose age and gender appropriate services. In addition the CaNAT items are to be factor analysed in order to develop a psychometrically sound assessment tool that addresses core needs and additionally has site-specific and potentially age and gender specific items. **CLINICAL IMPLICATIONS:** A needs assessment tool, available to health and social care practitioners from the point of diagnosis onwards in the cancer 'journey' may be beneficial to practice and to the tailoring of service provision. The CaNAT enables the raising of sensitive issues that may not otherwise be broached by providing domain-specific prompts in lay language. Further clinical utility is to be had in terms of providing a portable, hand-held, user-friendly, assessment tool. **ACKNOWLEDGEMENT OF FUNDING:** This research was co-funded by a two year grant from the Welsh Office for Research and Development and the Conwy and Denbighshire NHS Trust.

P1.4.36

Body Image Disturbance and the Impact on Adjustment Post Surgery Amongst Colorectal Cancer Patients

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BACKGROUND: Body image disturbance has been found to be a significant difficulty for patients with various forms of cancer. This is particularly true of cancers where surgery changes one's appearance, such as in the formation of a stoma in colorectal cancer. This study aims to investigate predictors of body image disturbance in colorectal cancer and the impact of body image disturbance on psychopathology following surgery. **METHOD:** Patients with a primary diagnosis of colorectal cancer were recruited prior to surgery and completed a range of questionnaires associated with body image and pre-existing levels of psychopathology. Patients will be followed up three months after surgery to determine whether body image disturbance predicts adjustment following surgery. **RESULTS:** Results will be analysed using multiple regression to determine which factors prior to surgery predict body image disturbance following surgery. Further, whether body image disturbance predicts psychological adjustment will be reported. **CONCLUSIONS:** It is predicted that body image disturbance will be determined by the

degree of investment in appearance and that body image disturbance will predict poorer quality of life and higher levels of anxiety and depression following surgery. The prospective nature of this research will allow an assessment of change in subjective body image following surgery. **RESEARCH IMPLICATIONS:** The current study aims to address methodological problems in the existing literature. This study will be the first to test the psycho-oncology model of body image (White, 2000) in colorectal cancer. **CLINICAL IMPLICATIONS:** Early identification of distress is key to assist patients in adjustment to consequences of the medical treatment for their illness. This study aims to determine which factors prior to surgery predict those patients who will develop body image disturbance. If body image disturbance predicts adjustment, as the literature suggests, then early identification of those at risk of body image disturbance has the potential to predict those who will become distressed following stomal surgery. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.37

Clarifying Expectations for Breast Reconstruction: Development of a New Patient Assessment Tool

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BACKGROUND: The overriding goal of post-mastectomy breast reconstruction is to restore body image and satisfy patient expectations. Measuring individual patient expectations would allow surgeons to identify patients who have unrealistic expectations, and subsequently to address their issues preoperatively through focused pre-surgical education. The purpose of our study is to develop a patient-reported questionnaire to measure individual patient expectations for breast reconstruction. **METHOD:** In-depth, open-ended interviews were conducted with 44 women undergoing breast reconstruction. The interviews were recorded, transcribed, and analyzed thematically. A conceptual model was developed based on the major themes in the coded interview text. Within each conceptual domain, sub-themes were used to organize statements generated from the patient interviews into items and scales. **RESULTS:** Patient interviews revealed that expectations for breast reconstruction fall into four main domains: breast appearance and outcome, physical well-being,

psychosocial well-being, and the process of care. These 4 domains formed the core of a conceptual model of patient expectations for breast reconstruction surgery. Sub-themes generated within each domain were used to organize statements taken verbatim from patient interviews. Sub-themes and statements were used to create items and scales, which formed the foundation of the new assessment tool. **CONCLUSIONS:** Patient expectations for the results of breast reconstruction are complex and encompass not only breast appearance but physical and psychological well-being, as well as the process of care. **RESEARCH IMPLICATIONS:** This study is an essential step in the quest to improve patient satisfaction with the results of breast reconstruction. This new assessment tool will now be field-tested and validated. A formalized appreciation of preoperative expectations will initiate further research into the link between expectations, satisfaction and quality of life for breast cancer survivors. **CLINICAL IMPLICATIONS:** The assessment tool we are developing will provide patients with a means to specifically indicate what they anticipate from surgery and surgeons with a tool to guide discussions about realistic and unrealistic expectations for each individual patient. The use of our measure in clinical practice could facilitate improved dialogue, shared medical decision-making and patient education. **ACKNOWLEDGEMENT OF FUNDING:** This project is being funded by the National Institute of Health in Bethesda, MD, USA.

P1.4.38

Psycho-Oncological Approach with Appropriate Evaluation and Treatment of Distress, Increasing the Quality of Life in Cancer Patients, in Romania, in Bucharest

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BACKGROUND: Purpose: A better assessment of anxiety, depression 'total pain' of cancer patients followed by an appropriate and complex treatment both oncological and psychological trying to optimize the Quality of Life. **METHOD:** Symptoms scores measured for assessment and monitoring depression by BECK questionnaire, anxiety by ASQ questionnaire and Quality of Life by BPI—Brief Pain Inventory and 'total pain' by ESAS—Edmonton Symptom Assessment Scale. **RESULTS:** A number of 30 outpatients with different type of cancer in different stages have been evaluated also in the beginning of treatment and as long it was necessary and in the end of treatment. They have been treated by an oncologist-psychologist team for

decreasing depression, anxiety and pain and optimized the Quality of Life. **CONCLUSIONS:** We want to mention that despite we don't have a Romanian Psycho-Oncology Society we began this approach to show how important is the best assessment and treatment of distress of cancer patients with the purpose to grow the Quality of Life. **RESEARCH IMPLICATIONS:** More research work is needed to study the best methods of assessments and treatment of distress in cancer patients. **CLINICAL IMPLICATIONS:** In this trial we wanted to emphasize how big the need that oncologist and psychologist work together is. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.39

Basic Elements That Improve in the Supporting Network 'Patient-Family-Professional Team,' and the Patient Quality of Life with Oncological Terminal Illness at the San Juan Bautista Hospital's Department of Oncohematology

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BACKGROUND: General goal: To go deeply in the knowledge of the basic elements of the patient-family-professional team supporting affective environment. To think of it over the psychologist's move in improving via psychotherapeutic actions, the quality of life of a patient with an oncologic terminal illness, and that of those close to him, in the idea that is possible starting from a continuous task. **METHOD:** To get purposes a questionnaire was made to the nurses to know their needs. Right after, workshops were organized in Palliative Cares, and another questionnaire was made to evaluate changes. Regarding the patients, they were administered self-registration (to see the vulnerability, and related issues) to know their quality of life; later on, they were invited to take part in painting workshops, bibliotherapy, and the like. It was observed the psychologist's important task in the good performance of the supporting affective environment, giving way to structure spaces (hint to patients and relatives). **RESULTS:** The topic proposed refers to basic elements such as to give integral care, to get an adequate control of symptoms, to give attention and company, to give emotional support, and to establish an efficient communication; and the influence both in the patient's quality of life, and in the supporting network of patient-family-professional team. Activities were started under the idea that working with the principles of Palliative Cares and the existential approach is possible to get an improvement for the patient and for those close to him in

terms of relief, comfort, and accompanying. **CONCLUSIONS:** We know the quality of physician-patient relationship, the most conflictive issues for the patient with oncologic illness throughout the quality of life's evaluation and we apply a set of strategies to get from the nurses conscience, with the purpose to obtain the needed strategies and abilities to improve the patient's quality of life and to contribute to the efficiency of the supporting network, promoting actions that favor an active role of the patient so that as to obtain a behavioral change towards illness and life, looking for an improvement in his quality of life. **RESEARCH IMPLICATIONS:** The goal of this paper is to go deeply in the knowledge of the supporting network of the basic elements to, by means of psychotherapeutic actions, improve the quality of life of both the patient and his relatives. **CLINICAL IMPLICATIONS:** Cancer is an illness that presents itself as a traumatic fact for whom has it; it assumes a set psycho-physical transformations that can be mitigated with the patient inclusion to a supporting affective environment integrated by the family and an interdisciplinary team, to decrease confusion and hopeless, thus, fostering the increase for the members' quality of life. **ACKNOWLEDGEMENT OF FUNDING:** It is convenient to point out that from the San Juan Bautista Hospital's Oncology Department the instruction and high training of nursery personnel was demanded within the Palliative Care framework. This was done given the non sufficient knowledge of such specialization. For these reasons it has been decided to perform workshops with the nursery personnel, with relatives, and the involved patient in an ambulatory treatment.

P1.4.40

A Comparison of Quality of Life in Patients with Advanced Lung Cancer at Home Palliative Care and at the In-Patient Palliative Care Unit

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BACKGROUND: Quality of life in patients with advanced lung cancer is an important issue in cancer and palliative care. The aim of the study was to assess pain intensity, performance status and quality of life in patients with advanced lung cancer. **METHOD:** A prospective study of 50 consecutive patients who were cared at home care (25) and at the in-patient palliative care unit (25 patients). The following scales were used: VAS scale for pain intensity, Karnofsky Scale for performance status, QLQ C 30 and LU-13 questionnaires for quality of life assessment. The measurements were made twice with 10 day interval

in each (home-based and the in-patient unit) group and compared within groups. All significant differences were $p < 0.05$, 80% of patients in both groups were diagnosed with NSCLC, 20% with SCLC. **RESULTS:** From physical symptoms weakness intensified at in-patient unit, dyspnoea and dyspnoea at rest more intense in home patients, haemoptysis better controlled at in-patient unit. No differences in both groups in alimentary symptoms. In physical and role functioning no differences in both groups. Karnofsky performance status deteriorated in home patients. Social functioning deteriorated in home patients (hobby and family life) and at the in-patient unit (hobby). In emotional functioning patients at home more worried (no change at in-patient unit), in cognitive functioning at in-patient unit more problems in concentration and with memory (no change in home patients). Global quality of life (GQL) and global health status (GHS) deteriorated at in-patient unit, no change at home care. Pain intensified at in-patient unit (VAS 6.4 and 7.12), home patients stable (5.44 and 5.72). **CONCLUSIONS:** Quality of life in both groups explored was poor with a trend towards deterioration in the second measurement with low values GQL (1.5–2), GHS (2.0–2.5) and KPS (3–4). Pain relief was unsatisfactory especially in patients staying at the in-patient unit. Among most frequently reported symptoms in both groups there were dyspnoea (over 90%), fatigue (90%), weakness (80%), constipation (60%) and loss of appetite (50% of patients). **RESEARCH IMPLICATIONS:** This study indicates the necessity of performing quality of life assessment in patients with advanced lung cancer, which provide important information on symptoms prevalence and the level of quality of life in all dimensions and the fluctuations over time in two different patients groups: Those treated at home and at the in-patient palliative care unit. The study indicates the problems that are encountered in home and in-patient palliative care and may help to resolve them. **CLINICAL IMPLICATIONS:** The study clearly demonstrates clinical problems encountered in patients with advanced lung cancer. It may be useful to improve symptom relief focusing especially on pain, dyspnoea, weakness and fatigue as these symptoms were most frequent in this study and not adequately controlled. It also indicates as symptoms are more intense and more frequent with the progression of the disease and thus the interventions should be more efficacious at more advanced stage of the illness. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.4.41

Psycho-Oncological Care in the Czech Republic Focused on Patients in Productive Age

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BACKGROUND: Amelie is a non-profit civic association founded in 2006, at the time when no systematic psycho-oncological care existed in the Czech Republic. Our activities are focused on the interconnection with specialized institutions and patients organizations, utilise the results of the research project 'Psychiatric and psychosocial problems of patients with malignant tumours' (1985–1990). There is a close cooperation with The Complex Oncology Centre (COC) of the General Teaching Hospital in Prague. **METHOD:** We interconnect the care of professionals with the activities of self-help client groups using motivational workshops during all phases of treatment. Our activities free of charge for patients include: Individual and family therapy and psychiatric care with a possibility of medication in the co-operating health institutions (Railway Hospital with Polyclinic in Prague, psychiatric clinic Hranice in Moravia); Therapeutic sessions, art therapy, theatrical and musical workshops, relaxations, etc.; Courses with psycho- and physiotherapeutic programme for patients (also during outpatient treatment) and their loved ones; Amelie Infoline and www.amelie-os.cz—responding inquiries about social law, psychological and oncological problems; Volunteer training and development of their activities at inpatient (The Complex Oncology Centre (COC) of the General Teaching Hospital in Prague, IOR Na Pleši, and COC in Olomouc). **RESULTS: Outpatient Amelie Centre** (October 2006–December 2008): 56 registered patients (41 women, average age 50.4 years and 15 men, average age 53.8 years); Individual consultations for 11 women (including 4 family members) and 2 men; Supportive psychotherapy, eventually combined with medication, utilised by 25 women (including 1 family member) and 10 men (including 3 family members). **Amelie Open Centres** was attended just during 2008: by 89 persons at the age between 18 and 65 years; There were 125 afternoon sessions; at average 6.4 client per session. **Infoline and web portal Amelie** during 2008: responded 167 queries. **CONCLUSIONS:** Psycho-oncological care for patients and their families, which includes psychotherapeutical intervention, social and spiritual assistance or supportive psychosocial programs, is an integral part of the overall approach at various stages of disease and various stages of treatment. Due to decreasing age of the oncological patients it is important to help patients also in labour issues, in retraining, and to support their adaptation to new conditions (retraining, part-time job, gradual integration into the working process or finding alternative activities). **RESEARCH IMPLICATIONS:** Creating a target group of patients provided with an overall psycho-oncological and managed care program according to their specific needs as a part of their treatment. Evaluation of selected followed aspects such as

duration of the treatment, return to work, need for social assistance, the family ties, etc. **CLINICAL IMPLICATIONS:** Better awareness of oncological and other specialists on the importance of linking psychotherapeutic, supportive, spiritual and social care for patients and their loved ones. Creating a safety network including such services. **ACKNOWLEDGEMENT OF FUNDING:** CEE Trust, Grant project: Professionalization of organization AMELIE 2008/2009. BMS Foundation, Grant project: Propagation of psycho-social help for oncology—diseased and their relatives and volunteer work.

P1.4.43

Psychological Distress, Needs and Quality of Life in People with Inoperable Lung Cancer at the Commencement of Treatment

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BACKGROUND: People with lung cancer report a higher burden of unmet needs, specifically psychological and daily living unmet needs. They are the most psychologically distressed and also experience more physical hardship than other tumor sites. This project examined the levels of unmet psychosocial needs, psychological distress, and quality of life in inoperable lung patients towards the start of a treatment plan. **METHOD:** This presentation reports on the baseline data from a randomised controlled trial testing the effectiveness of a tailored informational and supportive care intervention. Eligible lung cancer patients were approached to participate at a suitable time towards the start of their treatment plan. Consenting patients completed baseline questionnaires and were randomised to participate in a supportive care intervention or usual care. Data was collected on Perceived Needs, Anxiety and Depression, Psychological Distress, and Quality of Life, from established reliable and valid scales. **RESULTS:** Data was collected for 108 people with lung cancer. Most of the prevalent needs (9 of the top 10) related to medical communication/information. Anxiety and depression means (and standard deviations) were 4.37 (2.85) and 4.39 (3.18) out of 21 respectively. Twenty-six patients (38.2%) reported a likely case of significant distress. Global quality of life was assessed at 61.94 out of 100, with several differences between specific subscales outlining the burdensome nature of their symptoms and the impact on quality of life. **CONCLUSIONS:** The present data indicates that many lung cancer patients report high levels of unmet medical information needs, depressive symptoms and psychological distress, and a high burden of physical symptoms. **RESEARCH**

IMPLICATIONS: There is a need for tailored, evidence-based interventions aimed at improving quality of life. Future research should investigate screening measures for identification of those with outstanding needs and psychological distress. **CLINICAL IMPLICATIONS:** This highlights the needs for assessment of patients' supportive care needs when commencing treatment for inoperable disease. **ACKNOWLEDGEMENT OF FUNDING:** This project has been funded by a Palliative Care Research Grant from the National Health and Medical Research Council, Australia.

P1.5.1

Review: The Impact of Religion/Spirituality on the Quality of Life of Breast-Cancer Patients

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BACKGROUND: Aim of this study is to review the scientific literature to the effects of Spirituality and Religion on the Quality of Life of Breast-Cancer patients. This review is the starting point of a research project that is being conducted with the aim of assessing the impact of Religion/Spirituality on Quality of Life in Breast-Cancer patients in a Colombian sample, and then comparing it to a German sample in order of identifying cultural differences. **METHOD:** A systematic review of the literature was carried out. The topics that were included were: Quality of life, Religion, Spirituality in Breast-Cancer patients and indexed-terms such as religion/cancer or. Several databases were consulted: Jstor, Psycodoc, Psychology and Behavioral Sciences Collection, APA Psycnet, Science Direct, Springerlink and Pubmed. Some of the Journals that were reviewed were: Quality of Life Research, Psycho-Oncology, Journal of Religion and Health, and Journal of Clinical Psychology in Medical Settings. **RESULTS:** Research has shown that there is a positive relationship between Spirituality/Religion and Quality of Life in Breast-Cancer patients. However, little attention has been paid to the distinction between Spirituality and Religion (conceptually speaking) and their impact on the Quality of Life of Breast-Cancer patients, as well, to the cultural differences. There are some indications suggesting that spirituality is stronger related to Quality of life than religion. Another important finding is that in spite the clearly assessed impact of Spirituality/Religion on Quality of life, there is little evidence of clinical applications or treatments that include these variables. **CONCLUSIONS:** There is a clear relationship between Spirituality/Religion and Quality of life in Breast-Cancer patients. Nevertheless, research is needed to assess the distinction between Spirituality and Religion and their separated impact on Quality of Life in Breast-Cancer

patients. Furthermore, it is important to clearly delimit the concepts of Spirituality and Religiosity; how they are related and differentiated and shaped by culture. Finally, it is important to include these variables in clinical treatment plans and report the results to enhance the Quality of life of the Breast-Cancer patients. **RESEARCH IMPLICATIONS:** This information is relevant to Breast-Cancer researchers because it highlights the importance of defining and delimiting the variables Spirituality and Religion which have been found to help increase the Quality of Life of patients with Breast Cancer. Still, there is a need for further studies evaluating these variables in detail and assessing for other (mediator) variables. **CLINICAL IMPLICATIONS:** A better understanding of the concepts, the dynamics underlying, and their impact on the Quality of Life of patients with Breast Cancer, will facilitate the development of more integral treatments that help the patients to cope with their illness and to have a better life. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.5.2

Measuring Spirituality in Cancer Patients: A Methodological Review of Existing Scales for Spanish-Speaking Population

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BACKGROUND: There is a higher conscience of the importance of covering the spiritual needs that oncology patients demand as part of all the needs they have. Their somatic, emotional, and social needs join with the spiritual ones. There for it is important to have quick and effective tools appropriate to measure spiritual needs. **METHOD:** Purpose: To discriminate spiritual needs instruments adapted for Spanish-speaking population. Methodology: Medline and PsycINFO were systematically searched to identify instruments and papers reporting the psychometric qualities of relevant instruments. there were selected only those instruments used for Spanish-speaking population. Were analyzed data attending to reliability, validity, and kind of sample. **RESULTS:** In we study we has found: Each authors structures the spiritual need concept in some different categories. Depending on those different categories of spiritual needs concept exist diverse measurement instrument. Existence only a few instruments validate in Spanish-speaking population. **CONCLUSIONS:** The instruments must measure the spiritual needs

in oncology patients in every socio-cultural context. It is necessary that instruments are adapted and validated for each type of population. **RESEARCH IMPLICATIONS:** This information can be very use full for identifying instruments to measure spiritual needs adapted and validated for Spanish-speaking population. **CLINICAL IMPLICATIONS:** Each specialist would give a better assistance, coherent with the needs of their patients if they would have instruments true measure those needs. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.5.5

Exploration of Oncology Social Workers' Spiritual Self-Care Practice Using Cross-Cultural Focus Groups in Korea and Australia

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BACKGROUND: To identify in the end-of-life setting, social workers' perception of the meaning of their spirituality and discuss self-care strategies for practitioners. **METHOD:** Focus group interviews were conducted in Korea and Australia between April 2007 and March 2008 Psychodramatic techniques in the first warm-up session were applied to both groups, followed by exploratory questions in the second session. Free commentaries, feedback and inquires were processed with a sense of intimacy and autonomy between group members. Qualitative analysis with the assistance of an NVivo software program was undertaken. **RESULTS:** 1. Most participants acknowledge spirituality was essential for their personal and professional lives. 2. Both groups identified difficulties in accessing professional training both in-service and externally in this field. 3. Korean social workers overwhelmingly expressed their personal religious practices and their religious community involvement, as well as other self-discovery training helped their reflexiveness and efforts to foster endless compassion and love for others. 4. Australian social workers stressed the importance of relationships between human beings and nature. They emphasized the effectiveness of meditation or contemplation in nature for their spiritual well-being. **CONCLUSIONS:** 1. Spirituality is seen only within a personal relationship framework, not within a larger social transformation dimension. 2. Korean social workers draw upon religiosity for their spiritual while Australian social workers seek a connection with Nature. 3. This study has begun to offer creative ways of self-care for social work practitioners drawing upon philosophical, religious and experiential processes. **RESEARCH IMPLICATIONS:** Spiritual self-care amongst the multidisciplinary health team is gradually being acknowledged as an important

issue. Qualitative methods offer professions such as psychology, nursing and medicine, pathways for reflective exploration of how practitioners live with their own spirituality. Little evidence is yet available within the literature. Devising the content offers researchers a new field of exploration. **CLINICAL IMPLICATIONS:** Our findings suggest spirituality can be a strengthening resource for social workers in end-of-life care. There has been increasing research that reveals inadequacy in social work education and training for spirituality, (Derezotes, 1995; Russel, 2001; Furman, 2004; Sheridan, 1994). This study supports the rationale that culturally sensitive and experiential education on spirituality should be integral to good training for end-of-life care practitioners. **ACKNOWLEDGEMENT OF FUNDING:** This study is not supported by external funding.

P1.5.6

Religiosity and Spirituality as Predictors of Health Related Quality of Life, Anxiety and Depression in Colombian Women

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BACKGROUND: Aim of this study is to assess how religiosity and spirituality are related to Quality of Life (QOL) in Colombian women and which aspects of these constructs are more relevant to this population, in order to establish criteria relevant to breast-cancer patients in the same age group. **METHOD:** 100 women, aged 29 to 63 (mean: 46, SD: 9.7) were interviewed. This sample is the control group for 60 breast cancer patients which will be interviewed in spring 2009. Religiosity and Spirituality were assessed using the System of Beliefs Scale (SBI), some dimensions of the Fetzer Report (2001) relevant to health ('beliefs', 'private religious practices' and 'organisational religious practices') items to a global self-evaluation of religiousness and spirituality as well as the Post-Critical-Belief Scale (PCBS). Anxiety and Depression were assessed using the HADS. Quality of life was assessed with the EORTC. **RESULTS:** The baseline for Health Related Quality of Life could be established, with a significant difference between women suffering any chronic medical condition, and those who were not. The baseline for anxiety and depression was established, which will allow further analysis with cancer patients. A weak positive correlation (statistically significant) could be found between religiosity and QOL. Spirituality and dimensions of religiosity were relevant only to sub-aspects of health. A significant moderate inverse correlation was found regarding the functional dimension of Quality of Life and the religious dimensions 'meaning' and 'beliefs', especially in women older than 45 years.

CONCLUSIONS: A relationship between health and religion could be confirmed, the absence of a chronic condition emerged as an important predictive element. Furthermore, some specific aspects of the religious experience ('meanings', 'beliefs' or 'practices') as well as the global evaluation a woman makes about her spiritual life were proven to have an influence on her perceived well-being. Limitations of this study were the limited sample as well as the overrepresentation of better educated women. Further investigations as well as implications of these findings are discussed. **RESEARCH IMPLICATIONS:** Baseline levels of anxiety and depression in the south-American Latino population are relevant for further research. Also the very detailed assessment of religion and spirituality, and their underlying dimensions are a contribution of this study. Baseline levels of Quality of Life permit international comparisons and also a more culture-sensitive approach to the issue of religion and health. **CLINICAL IMPLICATIONS:** Clinicians that are more sensible to a patients religious and spiritual life are also supporting effective coping resources for this patient and will contribute to his/her well-being. The importance of religion and spirituality in cancer have been effectively assessed in the past, nonetheless, this study elucidates which aspects of these constructs (meaning, beliefs or religious practices) can be determinant in this process. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.5.7

Self Care For The Healer—Using Soul Communion™ A Process for Self-Transformation, Punctuated by the Research in 'Life After Life'

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BACKGROUND: After a short review of the research on 'life after life' (Dr. Raymond Moody, Dr. Elizabeth Kubler Ross, Dr. Kenneth Ring, Dr. Bruce Greyson *et al.*), healers will be taught Soul Communion, the practice of engaging your higher self, deceased ancestors, guidance realms, angelic realms, God (as one defines the Divine or creation), and/or universal consciousness at any time, to provide help and assistance for healers' self care. **METHOD:** Caregivers stressed for long periods of time, often revert to primitive patterns of self care. A psycho-spiritual intervention helps restore a loving attitude, inner peace and a sense of purpose. We are, as psychologically probing caregivers, a questioning people not satisfied to live just the religious experience that was handed down to us. In the process of personalizing, we may pull from various traditions to find our own way to restored health. **RESULTS:** Viewed their soul as an agent

for self-growth, self-protection and action. Made their unconscious more conscious from two different perspectives: the physical realm by which we perceive through our five senses and the intuitive realm by which we perceive through alternative forms of spiritual energy. Engaged the intuitive realm-which is made up of not only our own 'God-self', but includes other souls who have passed or reside on a non-physical dimension. These souls cannot interfere with our lives unless we invite them in through meditation, visualization or prayer. Identified Intuitive Information the inquirer holds them self still and quiet, much the way you would do in a 'normal' conversation after you posed a question. In the stillness, wait for signals that can come in many forms: thoughts, body-knowing, dreams. **CONCLUSIONS:** Most practitioners reported less anxiety in the presence of the patient at the most difficult moments. At those times of intense concern, they found themselves more capable, open and available to their intuition. The healers did utilize unseen consciousness. Curiously, while such consciousness has describable form in the way it is perceived, it seems to be driven by the uniqueness of the practitioner who interacts with it, partners with it and comes in relationship to the consciousness' own thematic through lines. Those with evidence based bents helped us understand alternate realms and intuition even more. **RESEARCH IMPLICATIONS:** Based upon these experiences, some research implications would be: explore how different religious or spiritual orientations aid or interfere with the practitioners ability to access their intuition explore how practitioners of different philosophies use 'Soul Communion' as part of their self care (keep your nose to the grind stone vs. relax) explore how practitioners of different affiliations feel about discussing 'Soul Communion' openly with others. **CLINICAL IMPLICATIONS:** Reduces a sense of isolation; Reduces the personal burden and expectation of having all the answers oneself; Allows the clinician to see the 'Bigger picture' (there is a larger purpose and order); Has the potential to allow the clinician to feel more or differently connected to the patient; Enhances the effectiveness of treatment through broadening the experience of collaboration; More openness to the experiences of death and dying. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.1

Screening and Comorbidity of Clinical Fear of Cancer Recurrence

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BACKGROUND: Prevalence rates of the Fear of Cancer Recurrence (FCR) have varied widely across studies, which may be partly explained by the lack of a standardized assessment method that would make it possible to adequately evaluate FCR and distinguish between normal and clinical levels of FCR. Besides, despite the overlap between FCR and some manifestations of anxiety disorders, it is surprising that no study has evaluated the comorbidity of clinical FCR. **METHOD:** The goals of this study were to assess the Fear of Cancer Recurrence Inventory (FCRI)'s capacity to screen for clinical levels of FCR, and to assess the psychiatric comorbidity of clinical FCR. Sixty French-Canadian patients who had been treated, within the past four years, for localized breast, prostate, lung or colon cancer were randomly selected by cancer site. A clinical interview was undertaken with each patient individually, during which the Structured Clinical Interview for DSM-IV and an FCR interview developed by our research team were administered by a licensed psychologist. Participants were also asked to complete the FCRI Severity Subscale. **RESULTS:** An ROC analysis revealed that a cut-off score of 13 on the FCRI Severity Subscale (AUC = .88) was associated with optimal sensitivity (88%) and specificity (75%) rates for the detection of clinical levels of FCR as assessed by the clinician. Results showed that patients with clinical levels of FCR were significantly more likely to meet the diagnostic criteria for a psychiatric disorder (60%) than patients with lower FCR (29%; $\chi^2(2, 60) = 5.93, p = .02$). Psychiatric disorders that were the most commonly associated with clinical levels of FCR were anxiety disorder (generalized anxiety disorder, panic disorder). **CONCLUSIONS:** This study shows that the FCRI Severity Subscale allows rapid and effective screening of clinical FCR and that patients with clinical FCR display a variety of comorbid conditions, particularly anxiety disorders. **RESEARCH IMPLICATIONS:** The FCRI Severity Subscale could become extremely valuable for research purposes to better evaluate the prevalence and acquire a better understanding of FCR. In addition, the higher prevalence of psychiatric disorders among patients with clinical levels of FCR suggests clinical FCR may be a risk factor or a consequence of psychiatric disorders. Longitudinal studies are needed to assess this hypothesis. **CLINICAL IMPLICATIONS:** The FCRI Severity Subscale could become extremely valuable in clinical settings for rapidly screening patients who would need professional intervention to help them to cope with the uncertainty associated with cancer recurrence. Furthermore, the potential predisposing role of antecedent psychiatric disorders in the development of clinical levels of FCR suggests targets for intervention for patients exhibiting high levels of FCR. **ACKNOWLEDGEMENT OF**

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P1.6.2

Long-Term Cancer Survivors Experience Work Changes After Diagnosis: Results of a Population-Based Study

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BACKGROUND: Although cancer survivorship is increasing with improved diagnosis and treatments, few studies have explored employment changes and the factors related to this change among cancer survivors. Therefore, we aim to explore the prevalence of employment problems in long-term cancer survivors. In addition, we explored what patient or tumour characteristics predicted employment changes. **METHOD:** All 1893 long-term survivors of prostate cancer, endometrial cancer, non-Hodgkin's lymphoma and Hodgkin's lymphoma diagnosed between 1989 and 1998 in the area of the Comprehensive Cancer Centre South, the Netherlands were included in a population-based cross-sectional survey. **RESULTS:** Response rate was 80% ($n = 1511$). After excluding survivors without a job before diagnosis, 403 survivors remained; 197 (49%) experienced no changes in their work situation following cancer diagnosis, 69 (17%) were working fewer hours, and 137 (34%) stopped working or retired. A medium educational level was significant in reducing the risk of work changes. Being older, having more than one comorbid condition, being treated with chemotherapy, and disease progression were significant independent predictors of work changes after cancer. Experiencing work changes was associated with lower physical functioning but positively associated with social well-being. **CONCLUSIONS:** Long-term cancer survivors experience work changes after diagnosis and treatment, and clinical factors significantly predicted work change after cancer. As such, our study underscores the importance of rehabilitation programs in improving the return to work after cancer. **RESEARCH IMPLICATIONS:** Although the results of this study form an important contribution to the limited information available on work changes in the growing group of long-term cancer survivors,

an effort should be made to include work-related factors like type of job and physical workload of the job in future studies. Furthermore, a comparison with work changes in a general population would be useful. **CLINICAL IMPLICATIONS:** Giving special attention to those that are at high risk of experiencing work changes is warranted. Rehabilitation programs that improve vitality in cancer patients, especially for those treated with chemotherapy, can influence the workforce participation positively and thus have a high social impact since half of cancer survivors experience work changes after cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.3

Neuropsychological Profile of Cancer Survivors: Preliminary Results

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BACKGROUND: Previous studies on cancer patients have shown cognitive impairment in particular in breast cancer patients who underwent adjuvant chemotherapy. At the same time numbers of anecdotal reports of cognitive deficits during and after exposure to chemotherapy is increasing. The aim of this study is to provide objectively (neuropsychological tests) and subjectively (self-assessment questionnaire) measure of cognitive functioning in long-term cancer survivors. **METHOD:** Cognitive profile of adult participants to the 'Medical and psychosocial rehabilitation program for long-term cancer survivors' was assessed. All patients received a cancer diagnosis in the last 25 years and, as inclusion criteria, at the moment of the assessment all of them had been out of illness and treatment since at least five years. Participants were individually administered with a self assessment questionnaire and a brief battery of standardised neuropsychological tasks, involving a selection of tests on memory, attention and executive functions. Anxiety and depression measures were also administered in order to control distress. **RESULTS:** Preliminary results from this particular sample of patients not-more-patients show that, although all participants do not suffer for brain injury and are out of cancer, a third of them report in the self-assessment questionnaire moderate level difficulties in remembering just known information and frequently tip of the tongue phenomenon. The standardised cognitive assessment showed poorer performance in story immediate recall test respect to normative data. **CONCLUSIONS:** For

the most part cancer survivors exhibit a standard cognitive profile. Nevertheless they complain difficulties in the long term in memory and executive functions. Moreover, at standardised tests, deficits in different abilities sometimes emerged and memory seems to be the most affected function. Other surveys show treatment negative effects on cognition and in particularly widespread memory deficits. Participants' performance seem to indicate that these difficulties persist over time, although at different levels. **RESEARCH IMPLICATIONS:** Cognitive deficits in cancer survivors are not largely diffuse, but when present they can make it difficult to work effectively in cognitively challenging situations. More studies are needed to comprehensively describe the cognitive impairments associated with adjuvant therapy, particularly long term after treatment. **CLINICAL IMPLICATIONS:** A specific and high sensitive neuropsychological assessment could be useful for at least cancer survivors, who complain memory difficulties in order to recognize deficits and undergo specific compensative training. **ACKNOWLEDGEMENT OF FUNDING:** This original survey was supported by found of Italian Health Minister.

P1.6.4

Physical and Psychosocial Rehabilitation After Cancer: The First Italian Cancer Survivor Clinic

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BACKGROUND: The steady advances in medicine and in medical technology make cancer survivorship a reality for a growing number of persons. It is a new 'clinical' condition in which long term and late effects of the disease and treatments play a role in the biopsychosocial health of survivors. A Cancer Survivor Clinic for survivors has been created to determine cancer survivors' physical and psychosocial needs and to identify the priority actions required to meet them. **METHOD:** According to the Clinic Program, a cancer survivor is defined as an individual who has been diagnosed with cancer but is currently disease free and has not had any active treatment for at least five years. The Clinic is firstly aimed at the evaluation of cancer-related and treatment-related late and long-term (medical and psychosocial) effects; furthermore it offers adequate support services to the patients and, if required, to their families, including screening advice to prevent the occurrence of new cancers. Patients' enrolment has started since July

2008. **RESULTS:** The Program will take three years. During the first six months, thirty-two cancer survivors have been evaluated; thus, we estimate to reach, by the end of the Program, two-hundred and fifty units. At the conclusion of the Program, a set of guidelines defining cancer survivorship and the best rehabilitative (medical and psychosocial) approach, tailored upon the specific needs of this kind of users, will be drawn up together with patient education handouts. **CONCLUSIONS:** The Cancer Survivor Clinic offers a unique multidisciplinary assessment to whom experienced cancer in their past. It is also an important opportunity to investigate the quality of life and the needs of this population and to create a 'survivorship culture' in the scientific as well as in the general community. **RESEARCH IMPLICATIONS:** Data collection concerning a large set of psychosocial and medical aspects from a large national sample belonging to a population not yet systematically studied is the main research implication. **CLINICAL IMPLICATIONS:** To cancer survivors, the Clinic offers a multidisciplinary monitoring of their medical and psychosocial health; in it, they can discuss with clinicians and psychologists the medical and emotional issues deriving from their new health condition. **ACKNOWLEDGEMENT OF FUNDING:** The Clinic Program is supported by the Italian Ministry of Health.

P1.6.5

Project of Assessment and Rehabilitation of Neuropsychological Sequelae in Children with Onco-Hematological Diseases

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BACKGROUND: Several studies have been demonstrating that the survivors of childhood cancer experience life-threatening, severe or moderate late effects, between them, those of neuropsychological nature. The aim of this paper is to present the experimental design of a longitudinal investigation (in process) that pretends: (i) to measure and characterize systematically the neuropsychological deficits and its implications and, (ii) afterwards, to design and implement rehabilitation program for the signaled sequelae. **METHOD:** The sample of this study is composed by children admitted in the Paediatric Service of the IPO-Porto, according to the following inclusion criterions: (i) diagnosis of Lymphoblastic/Mieloblastic Leukaemia or Lymphoblastic Lymphoma; (ii) to have more than five years; (iii) to be treated with therapeutics

with a direct action in the Central nervous System; and (iii) to have the parents informed consent. Children with mental disease, global development disturbance, sensorial limitations, incapacitating physical deficits or metastatic disease cannot participate in the investigation. All the participants are referenced to an evaluation in different moments: pre-treatment (baseline), six months, two years and five years after treatment conclusion. **RESULTS:** At this moment it is not possible to present any results since the research team is starting to collect the first data. **CONCLUSIONS:** However, it is possible to point some conclusions that reflect the work done until the moment: few longitudinal studies with some limitations; no Portuguese measures to some of the defined variables; the necessity to translate and validate international instruments; problems with the acquisition of instruments; the difficulty to identify the subjects at the time and don't lose participants during the research and, the difficulty of conciliating clinical assistance and investigation work. **RESEARCH IMPLICATIONS:** In Portugal this is the first investigation designed and implemented with these characteristics. The research team pretends to increase the knowledge about the neuropsychological sequelae resulting from the oncological disease and treatments and to promote a more enlarge comprehension of the nature, extension and intensity of those sequelae. With these contributions we believe that it will be possible to develop more complex and rigorous research projects and to design and implement effective neuropsychological rehabilitation programs. **CLINICAL IMPLICATIONS:** We first intend to know the eventual deficits in general and in children in particular in order to a posterior multidisciplinary intervention. The aim of this intervention with multiple health professionals is the minimization and/or elimination of the referred neuropsychological late effects. These results will enable a easier reinsertion and adaptation of the child in her different life spheres. Consequently, survivors and their families will perceive an increased quality of life and generalized well-being. **ACKNOWLEDGEMENT OF FUNDING:** This research is funded by Pfizer Laboratories, Lda. The independence of the authors was guaranteed by protocol. With the support of the Investigation project 'Portuguese Adaptation and Standardization of the neuropsychological tests: Normative and Validity Studies' (Coimbra Neuropsychological Assessment Battery—BANC); SAPIENS/POCTI/FEDER/PSI/35410/2000 Project, Science and Technology Foundation and Psychological Evaluation Service of the Psychology and Science Education Faculty of the Coimbra University.

P1.6.7

Cancer Survivors Creating Hope, Courage and Change Ranjit Kaur Pritam Singh, Barbara Delaney, Mee Yee Wong

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BACKGROUND: To demonstrate that after recovering from their battle with breast cancer, women can be motivated to make a change in the attitude of society towards cancer. Pink Challengers is a dragon boat team from Breast Cancer Welfare Association in Malaysia consisting of paddlers who are breast cancer survivors. The team was formed in March 2005 and since then it has participated in local and international dragon boat races, motorbike rallies and other challenges. **METHOD:** Through its community-based activities Pink Challengers implement adventurous activities in the community. These include regular weekly training in dragon boat paddling, participating in local and international level dragon boat racing, taking on challenges to compete with our own capacity and doing adventures with other partners. The team then gains feedback from the public regarding the level of attitude change in them. The method used is mostly qualitative and narrative. **RESULTS:** It is found that the activities and achievements bring about a 'wow' factor amongst members of the public, the media and as well as women who are newly diagnosed and their families. The Pink Challengers, through their numerous activities, are able to create hope, courage and change regarding breast cancer, conveying the message that early detection and timely medical treatment can save lives. **CONCLUSIONS:** In Malaysia, the Pink Challengers have created history as it is the first dragon boat team of breast cancer survivors to accomplish many challenging endeavours. The team's aim to create a change in the attitude of the public that breast cancer is not a death sentence, but one can still live an active life after breast cancer, is steadily being achieved. The team is constantly demonstrating to the public at large that early detection of breast cancer can save lives and reduce suffering, and, at the same time, breast cancer survivors can live normal and active lives. **RESEARCH IMPLICATIONS:** It is suggested that more studies can be done to demonstrate that if breast cancer survivors engage in adventurous team activities, they can live improved quality of lives and at the same time, create hope, courage and change in the attitude of the public towards breast cancer. **CLINICAL IMPLICATIONS:** Clinicians can use this example of role models to bring hope, courage and change amongst newly diagnosed breast cancer patients and their families. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.8

Demographic Antecedents of Changes in Life Perspectives Among Older Adult Long Term Cancer Survivors

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BACKGROUND: We explored demographic factors that contribute to reporting changes in life perspectives among older long term cancer survivors. Associations among age, gender, educational level, race and four specific aspects of self reported transformation were considered. Transformation refers to changes in life perspective that survivors attribute to their cancer experience. Such changes in outlook and behavior may have positive, negative, mixed or neutral valences. **METHOD:** The sample included 288 cancer survivors obtained from the tumor registry of a large Midwestern university medical center. It consisted of breast, colorectal, and prostate cancer survivors age 58+ ($12x' > \text{age} = 72.5$; $SD = 7.6$). The sample included 42% male, 58% female, 33% African-American, and 67% Caucasian respondents. We questioned survivors, in face-to-face interviews, about the extent to which their cancer experiences 1) altered their decisions in life, 2) minimized other problems, 3) resulted in changes in religiosity, and 4) led to changes in family closeness. **RESULTS:** The majority of long-term cancer survivors reported transformations attributed to their illness experience. Based on multivariate OLS regression, our model had greatest explanatory power for the 'decision altering' aspects of posttraumatic transformation ($\text{Adj. } R^2 = .23$, $p^2 = .16$, p). **RESEARCH IMPLICATIONS:** This research portrays the importance of selected demographic variables in affecting changes in life outlook, subsequent to the cancer experience. Future research should further clarify distinctions between negative consequences of trauma (e.g., PTSD), positive consequences (e.g. Post Traumatic Growth), complex mixed sequelae, and neutral consequences. Future studies are also needed which can clarify the mechanisms by which 'Social Structural Factors' operate to change life perspectives of survivors. **CLINICAL IMPLICATIONS:** Evidence of positive transformations underscores the value of encouraging survivors to develop confidence in their resilience, even during early and highly stressful phases of their illness. Oncologists, primary care physicians, as well as mental health professionals, can benefit from recognizing and specifically communicating with patients about the potential life-changing nature of the cancer experience. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by grants RO1-CA78975

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P1.6.9

Living at High Risk of Developing Melanoma: A Qualitative Study of Individuals' Experiences and Unmet Needs

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BACKGROUND: Melanoma is a major health problem in Australia, exemplified by the highest national mortality rate worldwide. Australians with a personal history of multiple primary melanomas and/or multiple dysplastic naevi live at further high risk of developing melanoma. Little is known, however, about the psychological experiences of these individuals. This study aimed to explore the melanoma-related beliefs, health behaviours, and unmet information, support and service needs of those at high risk of developing another melanoma. **METHOD:** Participants were recruited via the High Risk Clinic (HRC) at the Sydney Melanoma Diagnostic Centre, which is a part of the Sydney Melanoma Unit. This Unit is the world's largest clinical service committed to the treatment of melanoma, with the specialty HRC dedicated to patients who are at particularly high risk (i.e. 10–20 times the population risk) of developing melanoma. At least three past attendances at the HRC were required for study inclusion. Participants completed a semi-structured telephone interview, approximately 45 minutes in length, assessing major melanoma-related themes. Data were analysed using the qualitative data analysis software, NVivo 8. **RESULTS:** Informational saturation was reached after completing a total of 17 interviews (8 male, 9 female, mean age 57 years), yielding a response rate

of 90%. While some participants described healthy adjustment, others expressed feelings of anxiety and uncertainty about the possibility of developing another melanoma. Participants expressed confusion about the potential role of genetics in relation to melanoma risk. All participants were highly satisfied with the level of clinical care received at the HRC, and many perceived their treating dermatologist as a source of expert care as well as information and support. All participants reported awareness of the importance of adherence to sun protection and skin cancer screening, though not all participants reported use of the total-body photographs provided by the HRC as a skin self-examination aid. **CONCLUSIONS:** Most participants perceived the availability of an expert team at the HRC and regular clinic appointments as an important source of medical care as well as melanoma-related information and support. Attendance at the HRC may also help patients to form realistic beliefs regarding the benefits of early intervention and prevention in the control of melanoma. Good adherence and a proactive commitment to self-screening and sun protection behaviours were consequently reported. These preliminary data highlight the importance of dedicated centers for the continual care of individuals at high risk of developing melanoma. **RESEARCH IMPLICATIONS:** The results of this exploratory study will be used to inform the development of a survey instrument to quantitatively assess the prevalence and predictors of psychological adjustment to melanoma risk, as well as uptake of health behaviour practices such as skin self-examination and sun protection in a larger cohort of patients. **CLINICAL IMPLICATIONS:** These preliminary data provide an evidence base for the further planning and development of best practice clinical care for those at high risk of developing melanoma. In particular, these results will inform the development of supportive services, as well as educational materials, in-line with the needs reported by this population in order to assist individuals in fostering healthy psychological, social and behavioural responses to melanoma risk. **ACKNOWLEDGEMENT OF FUNDING:** This project was supported by a Cancer Institute NSW Program Grant for Excellence in Translational Research. Nadine Kasparian is supported by a Clinical Research Post-Doctoral Fellowship from the National Health and Medical Council (NH&MRC) of Australia (ID 510399).

P1.6.10

Quality of Life and Posttraumatic Stress Disorder Symptoms in Oncology Long Term Survivors
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BACKGROUND: Authors focuses on research appearance of symptoms of PTSD after diagnosis and the cancers treatments. Those argue that the oncology survivors have significantly higher levels of reexperimentation, avoidance and arousal. The goal is to evaluate the quality of life of oncology survivors and observe the influence of quality of life in the anxiety and depression of those survivors. We evaluate the presence or absence of PTSD symptoms and its relation with the quality of life, anxiety and depression. **METHOD:** The sample is composed by 100 oncology long term survivors who were follow up at Hospital Universitario 12 de Octubre, Madrid, Spain. This survivors were evaluated trough the SF-36 Health Survey (Ware, 1993) that measure quality of life, STAI (State-Trait Anxiety Inventory, Spielberger CD., Gorsuch RL., Lushene RE., 1997) to measure anxiety levels, BDI (Beck Depression Inventory, 1979) that evaluate mood and a semi-structured interview to recollect socio-demographic information and to evaluate the presence of the posttraumatic stress disorder symptoms. **RESULTS:** Final results will be presented at the congress as data is being analyzed at presented time. **CONCLUSIONS:** Its implications for clinical practice will be discussed. **RESEARCH IMPLICATIONS:** The volume of publications concerning quality of life in long term survivors in Spain is insufficient. This study can be used to design future research. We provide data to improve research in this area. **CLINICAL IMPLICATIONS:** To improve the insufficient interventions assigned to this population and to design future prevent interventions for patients in active treatment. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.11

The Psycho-Physical Needs and Concerns of Cancer Survivors: Nursing Perspectives

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BACKGROUND: In Italy the Cancer Survivors (C.S.) are about 1.709.000, 2.5% of the whole population with an increasing forecast to 2010 of 1.250.000 (3.3%). For this reason the National Cancer Institute of Bari wanted to identify qualitatively the needs and concerns of a sample of C.S. Indeed we know the cancer diagnosis can lead to impairment in multiple areas of psychosocial well-being, including physical, social and emotional functioning. **METHOD:** A sample of 60 C.S. (> 18 age, male and female, > 5 years from diagnosis, disease free) were interviewed on the phone by the Nurses, about a wide variety of

psychosocial concerns and needs related to: coping with side-effects; dealing with self-concept change; stress and adjustment reactions; management of their own unhelpful beliefs, expectations and emotions; and issues with survival and post-traumatic growth. **RESULTS:** Telephonic consultation was an effective way of identifying concerns and needs of C.S. and of describing both the Quality of Life (QoL) experienced by C.S., and the factors that promoted their adaptation. The interviewed C.S. (93% women and 7% men) shown the following problems. State of Mind: 70% anxiety; 12% quietness; 9% denial; 9% indifference. Physical issues: 24.3% pain; 12% lymphedema. Dealing with self-concept change: 34.1% difficulty in touch himself; 29.2% difficulty in showing himself; 26.8% difficulty to look in the mirror himself. Relationship: 49% reinforced relationship; 7.3% partner considered as a stranger. **CONCLUSIONS:** This preliminary study allowed the identification of many problems which affected C.S. Findings showed a new scenario, less known until now. C.S., Persons cured of cancer but still dealing with long-term and late effects of cancer and its therapy, represent a wide field of interest for nursing, to give relief and support to the different needs and concerns which impact their QoL. We believe that Nurses can resolve many of the problems resulting in C.S. who feel alone without physical and emotional support. Nurses could become a landmark, to call ever, playing a key role in both illness and recovery. **RESEARCH IMPLICATIONS:** The great survivorship is due to the increased availability of efficacious therapies and to the diffusion of screening programs, even if, no cancer therapy is free from adverse effects: many of these ones are transitory, but other ones hesitate in chronic sequelae. This is the reason why C.S. often have medical, psychosocial, emotional, cognitive, physical, spiritual and economic sequelae. The research in this field would help C.S. to improve QoL for the best Survivorship. **CLINICAL IMPLICATIONS:** The research in this field would help the Cancer Survivors to improve Quality of Life for the best Survivorship. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.12

Prediction Models of Depression and Anxiety of Childhood Cancer Survivors

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BACKGROUND: Some studies reported childhood cancer survivors have more emotional problems, especially depression and anxiety, than controls. Although recent studies are trying to

examine various predictors of pediatric cancer survivors' psychological health, there are only few studies which aimed to investigate predictors of emotional health. This study investigated whether predictors, including demographic factors, treatment factors, and post-treatment factors impact on levels of depression and anxiety of pediatric cancer survivors. **METHOD:** 179 survivors of childhood cancer (mean age 11.62) participated. Children's Depression Inventory (CDI) and Revised Children's Manifest Anxiety Scale (RCMAS) were administered. The possible predictors consisted of demographic factors, treatment factors, and post-treatment factors. Some of the predictors which significantly correlated with CDI scores were selected for the prediction models; head/skull/spine radiation therapy, limbs surgery, the number of treatments (chemotherapy/radiation/surgery/transplantation), and complications. For anxiety, some predictors which significantly correlated with RCMAS scores were also selected; survival duration, transplantation, dosage of anthracycline, the number of treatments (chemotherapy/radiation/surgery/transplantation), and complications. General Linear Model (GLM) was used. **RESULTS:** The prediction model of depression was reported statistically significant ($F(10,115) = 2.566$, Adjusted R Squared = .111, $p < .01$). The prediction model of anxiety was also statistically significant ($F(9,120) = 2.742$, Adjusted R Squared = .108, $p < .01$). **CONCLUSIONS:** Treatment factors (head/skull/spine radiation therapy, limbs surgery, and the number of treatments) and post-treatment factors (complications) can predict anxiety level in pediatric cancer survivors. Demographic factors (survival duration), treatment factors (transplantation, dosage of anthracycline, and the number of treatments), and post-treatment factors (complications) impact on childhood cancer survivors' depression. To sum up, the present study concludes that types of treatment, the number of treatments, and complications can make a strong prediction of both depression and anxiety. **RESEARCH IMPLICATIONS:** More studies are suggested to investigate whether the more treatments patients received, the more psychological problems did the patients have, especially in the emotional aspect. Screening tests should be developed to identify risk factors for depression and anxiety among pediatric cancer survivors. Other specific predictors of emotional health should be investigated. **CLINICAL IMPLICATIONS:** For childhood cancer survivors, psychological care is needed to decrease the negative effect of painful treatment which impacts on their emotional health. Psychological prevention programs should be made for survivors at risk of depression and anxiety. Psychological care should be provided to pediatric cancer survivors with complications. Psychological treatment to manage pain during invasive medical

treatment might be helpful for some childhood cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** Brain Korea 21.

P1.6.13

Can Positive Health Changes be Considered Part of Posttraumatic Growth in Cancer Patients?

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BACKGROUND: Cancer patients report positive changes in the health domain, but researchers consider posttraumatic growth (PTG) and health changes (for example smoking cessation or increasing physical activity) to be distinct constructs. Five PTG domains have been identified to comprise the Post Traumatic Growth Inventory (PTGI), the most widely used PTG instrument: relating to others, new possibilities, personal strength, spiritual change, and appreciation of life. This scale does not include items that tap health changes. **METHOD:** The primary goals of this study were to examine the validity of adding two health-related questions to the PTGI and to determine whether they represent an independent sixth factor. Two items were added to the 21 items that comprise the PTGI and they addressed: (1) taking better care of one's health and (2) making positive health changes. Respondents ($N = 208$) included 101 head and neck cancer and 107 lung cancer patients, recruited from Princess Margaret Hospital (PMH) in Toronto, Canada. All completed the modified 23-item PTGI within a larger study concerning stigma in cancer. **RESULTS:** A 6-factor structure was tested using exploratory factor analysis with varimax rotation. Both health items loaded unambiguously on a sixth factor, which we labelled 'Positive Health Changes'. However, the 21 original items did not all load onto the five factors previously observed. The six factors and Positive Health Changes accounted for 71.5% of the variance and 3.9% of total variance, respectively. The 23-item PTGI ($\alpha = .94$) and new factor ($\alpha = .86$) showed high internal consistency. Correlations between Positive Health Changes and the PTGI total and subscale scores were all significant ($r_s = .33$ to $.63$, all $p_s < .01$). **CONCLUSIONS:** The addition of two 'health changes' items to the 21-item PTGI resulted in an independent sixth factor when completed by people with head and neck or lung cancer. The new factor taps Positive Health Changes including taking better care of one's health and making healthy lifestyle changes. **RESEARCH IMPLICATIONS:** The PTGI was developed to assess PTG after a traumatic experience; further research is needed to identify whether health implications are applicable in non-medical

populations. **CLINICAL IMPLICATIONS:** Clinicians may use the modified PTGI with cancer populations to assess PTG more comprehensively. **ACKNOWLEDGEMENT OF FUNDING:** Internal funding from the department of Psychosocial Oncology and Palliative Care at the PMH and a CIHR fellowship, both in support of Sophie Lebel.

P1.6.14

A Study of the Narratives of Danish Cancer Patients—with Focus on Existential Issues

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BACKGROUND: An increasing number of Danish cancer patients and cancer survivors write about their illness experiences thereby creating a vast corpus of important data that can bring important insight into the everyday life of cancer patients. Limited studies are currently available on Danish first person cancer narratives published in books. To address this, I am conducting a broader study to explore the narratives. This presentation will focus on the existential issues the patients describe are involved in living with the illness. **METHOD:** Data were generated through a systematic literature search and selection. The study includes 30 narratives published as books from 1990 to 2008 with a variation in gender, age and type of cancer. The study comprises a systematic thematic and theoretical analysis of the narratives, primarily based on literary theories. **RESULTS:** My preliminary findings suggest that the narratives of Danish cancer patients constitutes a specific narrative genre that in general is concerned with and describing the development of different kinds of a) practices, technologies and philosophies of life related to b) the meaning of death and dying. The findings also suggest that writing about the illness is one of the practices and technologies the patients use to negotiate the existential meaning of living with cancer. **CONCLUSIONS:** My findings show that cancer patients struggles with different kind of existential problems but at the same time develop different means to handle these problems. **RESEARCH IMPLICATIONS:** Researchers can use my results (when published) to broaden their general insight in to the conduct of cancer patients. The results can inspire further research within the psychosocial cancer research and specifically within narratives of cancer patients. **CLINICAL IMPLICATIONS:** The practitioners can use my findings to plan and develop new rehabilitative interventions, and the patients and their relatives can use my findings to help them understand the issues and problems that surrounds the illness experience. **ACKNOWLEDGEMENT OF FUNDING:** Danish Cancer Society.

P1.6.15

Positive Health Changes in Head and Neck and Thoracic Cancer Patients

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BACKGROUND: With increasing cancer survival rates, post-treatment quality of life becomes increasingly important. Attention has only recently begun to focus on health changes, such as exercise, increased attention to diet and nutrition, and smoking cessation, to improve quality of life and/or decrease second-cancer occurrences and other morbidities. The current study examined hypothesized determinants of positive health changes in people with head and neck or thoracic cancers. **METHOD:** 208 people with head and neck or thoracic cancer (age $M = 64$, $SD = 12$), were recruited from the Princess Margaret Hospital in Toronto an average of 1.3 years after diagnosis. Consenting volunteers completed a battery of questionnaires at home and returned them at their subsequent follow-up visits. Questionnaires measured sociodemographic (marital status, age, education, sex, and income), psychological (depression, self-blame, well-being, and stigma), and medical factors (cancer site, stage, alcohol and tobacco consumption). Positive health changes were measured by a modified version of the Post-Traumatic Growth Inventory and an open-ended question that documented specific health changes made since the completion of treatment. **RESULTS:** More than half (59%) of the participants reported taking better care of their health post-treatment and 53% reported making specific, positive health changes. Sociodemographic, medical, and psychological variables accounted for 22% of the variance in health changes. Significant determinants of health changes were high psychosocial well-being ($B = .303$, $t = 2.64$, $p = .009$), receiving radiotherapy ($B = .224$, $t = 2.30$, $p = .023$), and being a non-smoker ($B = -.273$, $t = 2.64$, $p = .002$). Most commonly reported health changes involved diet and nutrition, exercise, and smoking cessation. Education was associated with reported improvements in diet and exercise. **CONCLUSIONS:** Many cancer patients make positive lifestyle changes after undergoing treatment. Psychosocial well-being and treatment type were significantly associated with positive health behaviours. Education may play an important role in encouraging a healthy lifestyle (e.g., improving diet and increasing physical activity). **RESEARCH IMPLICATIONS:** With the variables accounting for 22% of the variance in health changes, much remains to be understood about cancer patients' health behaviour. Future

research should undertake a theoretical approach in identifying other factors (e.g., the Health Belief Model), and a prospective, longitudinal experimental design can provide a clearer illustration of the health changes cancer patients make and can indicate temporal priorities. Increased use of objective measures can circumvent the biases intrinsic to self-report methods. **CLINICAL IMPLICATIONS:** As many as 59% of head and neck and thoracic cancer patients appear to make efforts to improve their health after cancer. The strongest correlate of positive health changes was psychosocial well-being, indicating that psychological interventions may help to maintain or improve cancer patients' and survivors' mental and physical well-being. **ACKNOWLEDGEMENT OF FUNDING:** Internal funding from the department of Psychosocial Oncology and Palliative Care at the PMH and a CIHR fellowship, both in support of Sophie Lebel.

P1.6.16

Patient and Physician Attitudes and Expectations for Cancer Survivorship Care

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BACKGROUND: Concerns have been raised about the lack of clarity surrounding physician roles during the cancer survivorship care process, and that this may contribute to suboptimal qualities in care. Our objective was to compare the attitudes and expectations for cancer survivorship care between patients and their physicians and between primary care providers (PCPs) and oncologists. **METHOD:** Cancer survivors and their physicians were surveyed to evaluate for expectations regarding physician participation in primary cancer follow-up, screening for other cancers, general preventive health, and management of co-morbidities. Of 992 eligible cancer survivors and 607 physicians surveyed, 535 (54%) and 378 (62%) were evaluable, respectively. **RESULTS:** Among physician respondents, 67% were PCPs and 33% were oncologists. Comparing patients with oncologists, expectations were highly discrepant for screening of other cancers (29% agreement), with patients anticipating significantly more oncologist involvement. Between patients and PCPs, expectations were most incongruent for primary cancer follow-up (35% agreement), with PCPs indicating they should contribute more to this aspect of care. PCPs and oncologists showed high discordances in perceptions of their own roles for primary cancer

follow-up, cancer screening, and general preventive health (3%, 44%, and 51% agreement, respectively). For primary cancer follow-up, both PCPs and oncologists indicated they should carry substantial responsibility for this task. **CONCLUSIONS:** Patients and physicians have discordant expectations with respect to the roles of PCPs and oncologists in cancer survivorship care. Uncertainties around physician roles and responsibilities can lead to deficiencies in care, supporting the need to make survivorship care planning a standard component in cancer management. **RESEARCH IMPLICATIONS:** Future research should elucidate the mechanisms for such discordant perceptions between patients and physicians, and identify methods that would more clearly outline the roles of each physician type during the cancer survivorship care process. To the extent that patients simply lack the appropriate information about provider roles, this should highlight a valuable opportunity for increased patient education. **CLINICAL IMPLICATIONS:** The study findings provide further support for recent recommendations to create clinical models of cancer survivorship care where relevant information about diagnosis, treatments, and future plans can be explicitly shared and coordinated among all health professionals involved. **ACKNOWLEDGEMENT OF FUNDING:** Funds from the Perini Family Cancer Survivor's Center.

P1.6.17

Behavioural Activation Therapy Can Help Depressed Cancer Patients Get Their Life Back Following Treatments: Preliminary Findings

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BACKGROUND: Following cancer treatments, survivors must cope with stressors at a time when they may be experiencing physical and emotional exhaustion. Facing these challenges may result in psychological difficulties that may be severe enough to meet criteria for an adjustment or a major depressive disorder. Our team adapted a behavioural activation therapy (BAT) in order to support cancer survivors during this transitional process. This study documents the feasibility and efficacy of this individualized intervention. **METHOD:** Using a single-case design, this protocol includes the data of three survivors who completed treatment for either breast or prostate non-metastatic cancer. Eligible volunteers had to have obtained a score of 7 and higher on the Depression scale of the HADS at the time of screening. Among others, assessment included

weekly assessments of depression and anxiety using the HADS scale and daily self-monitoring of mood. BAT is a manualized intervention involving 9 weekly 60-minute individual sessions and two sessions targeting relapse prevention. **RESULTS:** All three participants attended the nine therapy sessions and were largely involved in their treatment. Visual inspection of the data on the HADS scales suggests that patients benefited from the behavioural strategies implemented. Participants 2 and 3 showed the greatest decrease in anxiety and depression symptoms. Follow-up data suggest that specific attention should be devoted to relapse prevention. **CONCLUSIONS:** Preliminary results show the relevance of behavioural activation therapy for this population and underline the benefit of conducting pilot work before randomized controlled trials. **RESEARCH IMPLICATIONS:** Documenting with precision to what extent and for what exactly such a program helps (e.g. mood, fatigue, anxiety, quality of life) may remain a challenge. We might have to use more sensitive measures of well-being that would allow for the detection of significant changes even in patients presenting less severe, although significant, distress at the beginning of the program. **CLINICAL IMPLICATIONS:** A nine-session program appears to be suitable for implementing behavioural activation strategies and fulfilling associated therapeutic objectives among cancer survivors. Following a randomized trial, such a program could be offered, within a preventive perspective, to cancer survivors at the end of their active treatment—a time when interactions with health care providers are far less regular. **ACKNOWLEDGEMENT OF FUNDING:** National Cancer Institute of Canada.

P1.6.21

Cancer Survivorship: Creating a National Agenda

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BACKGROUND: The cadre of individuals who are living after a diagnosis of cancer is growing steadily. In developed countries, as many as 78% of pediatric patients and 60% of adult patients are alive five years following their diagnosis. With the anticipated increase in the incidence of cancer, and the success of treatment approaches, this cadre will continue to grow. **METHOD:** The national strategy for Cancer Control identified cancer survivorship as a priority for action. We undertook an environmental scan, held a national workshop with a broad range of stakeholders, and assessed unmet needs of survivors at two provincial workshops.

RESULTS: Survivors do experience ongoing challenges and few specifically designated programs exist across our country. The work has begun to build an agenda for priority action in our country and mobilize a research platform. **CONCLUSIONS:** Cancer survivorship does not come without cost. Late and long term effects can emerge that compromise quality of life and increase the burden of suffering. Cancer survivors are a vulnerable population and new approaches are needed to provide appropriate care and overcome barriers. **RESEARCH IMPLICATIONS:** There is ongoing demand to understand survivors' needs and what models of care are most effective. **CLINICAL IMPLICATIONS:** This will provide an opportunity to improve the attention and care cancer survivors receive. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Partnership Against Cancer.

P1.6.22

Psychological Adjustment After Breast Cancer: A Follow-up Study

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BACKGROUND: Psychological adjustment following cancer occurrence remains a key issue among the survivors. This study aimed to investigate psychological distress in patients with breast cancer following completion of breast cancer treatments and to determine its associated factors. **METHOD:** This was a prospective study of anxiety and depression in breast cancer patients. Anxiety and depression was measured using the Hospital Anxiety and Depression Scale (HADS) at three points in time: baseline (pre-diagnosis), three months after initial treatment and one year after completion of treatment (in all 18 months follow-up). At baseline the questionnaires were administered to all suspected identified patients while both patients and the interviewer were blind to the final diagnosis. Socio-demographic and clinical data included: age, education, marital status, disease stage and initial treatment. Repeated measure analysis was performed to compare anxiety and depression over the study period. Logistic regression analysis was performed to determine contributing factors. **RESULTS:** 167 patients were diagnosed with breast cancer. The mean age of breast cancer patients was 47.2 (SD = 13.5) years and the vast majority underwent mastectomy (82.6%). At eighteen months follow-up data for 99 patients were available. The results showed that anxiety and depression improved over the time ($P < 0.001$) although at 18 months follow-up, 38.4% and 22.2% of patients presented with major anxiety and depression, respectively. 'Fatigue' was found to be a risk factor for developing anxiety

and depression at 3 months follow-up [odds ratio (OR) = 1.04, 95% Confidence interval (CI) = 1.01–1.07 and OR = 1.04, 95% CI = 1.02–1.07 respectively]. At 18 months follow-up, anxiety was predicted by 'pain' [OR = 1.02, 95% CI = 1.00–1.05] whereas depression was predicted by both 'fatigue' [OR = 1.06, 95% CI = 1.02–1.09] and 'pain' [OR = 1.05, 95% CI = 1.01–1.08]. **CONCLUSIONS:** The findings indicated that the breast cancer patients experienced lower level of anxiety and depression one year after their treatment. This might be mainly due to the fact that the patients enjoyed having their family support. **RESEARCH IMPLICATIONS:** The role of causal factors such as fatigue and pain in developing psychological disorders should be further studied. **CLINICAL IMPLICATIONS:** The impact of breast cancer should be recognized and the survivors need to be followed-up to prevent any possible psychological distress that they might develop. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.23

Engaging Multiple Disciplines: Sustaining and Enhancing Cancer Serving Organizations Using Online Resources

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BACKGROUND: There are hundreds of cancer-serving organizations across the U.S. that are in need of technical assistance and support to be successful. Individuals and organizations contact our organization daily to discuss fundraising, advocacy, evaluation, marketing, outreach, volunteer engagement, grant writing and management. The development of a multidisciplinary, online, free resource will empower professionals in the cancer-serving community to seek out best practices based on evidence-based research to make an impact in their local community. **METHOD:** Interdisciplinary teams were utilized to create content and identify resources based on survey feedback from community partners. These teams included external and internal experts in fields such as development, fundraising, advocacy, outreach, marketing, program implementation and evaluation, and finance and grant management. The diversity of the teams ensured that the product would be a comprehensive resource for people at any level, in any department of an organization. Six months of conference calls, data collection and revisions resulted in a comprehensive toolkit for cancer serving organizations. Initial roll out to community partners was in July 2008 and ongoing survey, focus group testing and revisions are being finalized. Due to the multidisciplinary approach and applications of the toolkit, the scope of this

project has grown to accommodate the demand this unique resource. **RESULTS:** Multidisciplinary internal and external panels identified content for the first draft of the toolkit. In July 2008, 130 individuals representing cancer serving organizations across the United States were trained on the toolkit. A 30 day pilot period followed in which survey data was collected. The existing internal panel and a new external panel convened to review data and make final recommendations. This toolkit is a comprehensive, multidisciplinary document set in a free and easy to use web format that provides best practices to support and enhance all aspects of cancer serving organizations. **CONCLUSIONS:** Data from preliminary research indicates that this type of resource does not exist for cancer serving organizations. No other toolkit for non-profit cancer serving organizations exists and there are specific needs that these organizations have that can be addressed in this resource. By including a multidisciplinary team of staff and external partners we were able to meet the needs of many disciplines who work collaboratively to provide better access to care and have higher quality of services for cancer survivors. The revised product will be used across disciplines to provide support for non-profit cancer serving organizations. **RESEARCH IMPLICATIONS:** Survey results and panel discussions have shown that comprehensive and easy to use resources have a positive impact on cancer-serving organizations. These results have implications for the continual development of multidisciplinary resource tools to improve organizational sustainability, service delivery, and access to technical support. The use of technology to provide free resources, not just for survivors but for those that serve them, enables the delivery of better services and increases organizational sustainability and capacity. **CLINICAL IMPLICATIONS:** Organizational and programmatic effectiveness is directly linked to the quality of service that can be delivered to those affected by cancer. This toolkit provides free online support to organizations that may not have the development staff or resources to support capacity building. The toolkit allows organizations to spend less time searching for support and more time on improving service delivery; thus, organizations provide better quality services to cancer survivors, family members and care givers. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.25

Quality of Life and Coping Strategies of a Cancer Survivor in a Multi-disciplinary Pain Clinic

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BACKGROUND: The following survivor's experience of cancer demonstrates how an ongoing pain management multidisciplinary program including thorough and ongoing assessment, communication among the healthcare team members, interdisciplinary interventions, and reassessment of the whole management process profoundly influences the patient's psycho-social adaptation. Understanding how cancer survivors cope with the impact of the disease and how it affects their Health Related Quality of Life is relevant to Health Professionals who seek to promote a better quality of survival. **METHOD:** Mrs. M. J. F. is currently 39 years old, being diagnosed at the age of 21 with Hodgkin's Lymphoma. In 1997, she suffered a stroke being rushed to hospital in coma. In 2002 was diagnosed with mucoepidermoid carcinoma, undergoing local surgical excision. Currently, she's in remission being monitored by a professional oncology team incorporating a multidisciplinary approach which integrates psycho-social techniques including, cognitive behavioural therapy, Jacobsonian relaxation and clinical hypnosis. She participated in a study to determine how patient's Coping Strategies influence Health-Related Quality of Life. The following instruments were chosen; FACT-G, version 4 (Functional Assessment of Cancer Therapy—General), (Cella *et al.*, 1993); The Mini-Mental Adjustment to Cancer Scale—MiniMAC, (Watson *et al.*, 1988) and The Coping With Health Injuries and Problems Scale—CHIP (Endler and Parker, 1998). **RESULTS:** Results obtained on the FACT-G indicated higher levels of Emotional, Social/Family and Functional Well-Being (mean scores: 83%, 75%, and 71% respectively). Her lowest score was for Physical Well-Being (57%). Results on the CHIP scale indicated higher levels of Instrumental, Distraction and Palliative Coping Strategies (mean scores: 72%, 56% and 53% respectively). Emotional Coping registered the lowest mean score (34%). Regarding the MiniMAC scale, Fighting Spirit, Fatalism and Cognitive Avoidance were the coping styles most utilized (mean scores: 83%, 60% and 58% respectively) and Anxious Preoccupation and Helpless-Hopelessness registered the lowest scores with mean scores of 25% and 8% respectively. Additionally, considering the importance of assessing psychosocial distress in cancer patients, Mrs. J.M.F. was asked to register her level of distress on the Distress Thermometer. A score of 3 was obtained. **CONCLUSIONS:** As the number of cancer survivors increases, it is important that staff caring for these patients incorporate various treatment approaches to promote optimal coping both in the immediate and long-term adaptation process. Considering that cancer is a complex multidimensional experience, a multi-disciplinary treatment approach directed at the patient and his/her family will be most effective to enhance the physical, emotional social and functional well-being of these patients. By facilitating

a patient's active participation in managing the disease, promoting self-efficacy and decreasing psychosocial distress a better quality of life will be viable to these patients, their families and health care providers. **RESEARCH IMPLICATIONS:** Guided by an integrative model of intervention, longitudinal assessment of cancer patients and survivors would provide more insight into which variables are responsible for optimal psycho-social adaptation. With theoretically driven research, our understanding would be expanded on how to intervene most effectively. Additionally, in relation to the complexity of literature on coping and stress, there need to be more studies that test interventions designed to maximize coping efforts and psycho-social adjustment to the disease. **CLINICAL IMPLICATIONS:** This case study may give members of the multidisciplinary cancer care team new insights into the issues encountered by patients regarding pain and potential therapeutic techniques. The range of problems encountered by cancer patients suggests that treatment programs need to be comprehensive in nature. The Health Psychologist's role in these programs is crucial to help cancer patients optimally manage their crises situation, ultimately stimulating a 'fighting spirit' attitude throughout the course of the disease. **ACKNOWLEDGEMENT OF FUNDING:** None.

P1.6.26

The Adolescent Cancer Experience: Impact on Achieving Developmental Tasks—Surviving or Thriving?

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BACKGROUND: Adolescence is a unique period of development characterised by immense physical, cognitive and social change. A diagnosis of a cancer during adolescence raises potential threat to the successful achievement of normal developmental tasks. This study examined the 'adolescent cancer experience' from the perspective of young people who have received treatment within a New Zealand hospital. Comments from participants regarding how their experience of cancer impacted on their development during and post treatment will be discussed. **METHOD:** In-depth semi-structured interviews were conducted with ten young adults (16–22 years old) who had received treatment for cancer during their teenage years. **RESULTS:** Thematic analysis of interview transcripts revealed that experiences of being treated for cancer affected self-image, development of independence, schooling, future goals, and relationships with peers and family. **CONCLUSIONS:** Being treated for cancer during adolescence has both short term and long term impacts on attaining developmental tasks. Participants reported a mix of

positive and negative effects with most participants able to identify some benefits resulting from their experiences. **RESEARCH IMPLICATIONS:** Future research is required to investigate whether providing services which address the specific needs of adolescents improve successful attainment of development tasks. **CLINICAL IMPLICATIONS:** Continued improvement is required to ensure that the differing needs of this age group are addressed by service providers so developmental tasks of adolescents can be achieved despite receiving treatment for cancer. **ACKNOWLEDGEMENT OF FUNDING:** This study was generously funded by a Child Cancer Foundation (NZ) Research Grant.

P1.6.27

Comprehensive, Interdisciplinary Follow-Up Care Programs for Cancer Survivors—Can Components of Ideal Care be Defined?

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BACKGROUND: Cancer survivors have unique health challenges resulting from cancer treatment that require complex, multi-/inter-disciplinary follow-up care predicated on interaction and integration of knowledge and care components. Essential facets/components of survivors' care remain unclear. Data regarding the impact of care on survivors' health, quality and length of life are sparse. Experts delivering and conducting follow-up care research are an underutilized resource in facilitating understanding regarding optimal survivor care. Study objectives included: (1) Identifying key components of survivors' care and essential features of 'ideal' care; (2) elucidating barriers precluding integration of key care facets into ongoing programs or strategies. **METHOD:** An in-depth survey of leaders of and experts directing identifiable follow-up care programs/strategies for survivors of adult and pediatric cancer (USA and Canada) was conducted ($N = 26$ for adult survivors; $N = 24$ for pediatric survivors). A 6-page survey form elucidated care details in 5 categories: (a) description and goal of program/strategy; (b) perceived benefits/strengths of program/strategy; (c) barriers to the development and utilization of program/strategy; (d) strategies for improvement; and (e) components of ideal care. **RESULTS:** Unanimous agreement existed that follow-up care can enhance health and life. However, no program/strategy had measurable goals. Essential care components included: (a) surveillance for recurrence; (b) monitoring/managing late/long-term effects; (c) evaluating new signs/symptoms; (d) primary, secondary or tertiary preventive strategies addressing physical and psychosocial health. 'Ideal' follow-up care

included: (a) specific educational intervention when transitioning to follow-up care; (b) formal treatment summary and care plan; (c) Clear identification of providers responsible for different care aspects; (d) supportive care; (e) general medical/preventive care. Barriers included lack of time, money, accessible expertise, attitudes of physicians or survivors, education, insurance and finances. **CONCLUSIONS:** Few formal survivorship care programs exist. Those providing care to adult survivors are sparse. Care for pediatric survivors is established and may serve as a model for adult survivor care. The impact of care on health and survival cannot be assessed because programs have no evaluable health goals. Models of survivor care need to be tested. Survivor care is complex, multidisciplinary, and must be predicated on interaction and integration of multi-/interdisciplinary components. Essential care components identified from this survey should be incorporated into future programs and tested for their ability to prevent, detect early or manage adverse health consequences. **RESEARCH IMPLICATIONS:** Current survivor care strategies remain under-researched. Research elucidating the optimal frequency, content, setting, providers and goals of survivor care is critical. Survivors report various adverse outcomes well after acute cancer treatment has ended reflecting the need for continued multidisciplinary follow up care substantively different from acute cancer care. Critical challenges include integrating a structured process of program evaluation and building capacity for care. Survey results could inform the development of future survivor care programs internationally. **CLINICAL IMPLICATIONS:** Providers addressing complex health needs of cancer survivors need to be trained to evaluate or manage adverse physical and psychosocial health consequences of cancer and its treatment. Health professionals should be aware of the risk of these outcomes and need to actively assess and manage them. These are unique skills that need specific training. Models of care incorporating medical and psychosocial aspects may most effectively remediate adverse survivor health outcomes. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.2

Psychometric Analysis of the Chinese Version of the Lifestyle Defense Mechanisms Inventory for the Women with Breast Cancer and Healthy Women
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BACKGROUND: The Lifestyle Defense Mechanisms (LDM) Inventory, which consists of two 12-item scales, Rationality/Emotional Defensiveness (R/ED) and Need for Harmony (N/H), measures psychological defenses relating to the repression and denial of emotions. The validity and psychometric properties of the LDM have not been previously studied in Chinese people. **METHOD:** In the present study, cancer mortality was evaluated by examining and comparing the psychometric properties and factor structure of the Chinese version of the LDM Inventory for 48 women with breast cancer and 74 healthy women. The breast cancer subjects in this study had completed the treatments for one to two years and regularly received follow-up check at the cancer centre. There were the significant differences in age between cancer and healthy groups: the mean age of 49.82 for the cancer subjects and the mean age of 39.97 for healthy subjects. **RESULTS:** Although no significant differences were found in the mean scores of the R/ED and N/H scales for women with breast cancer and healthy women, the internal consistency of the two scales were higher for the breast cancer patients than the healthy females. The internal structure of the R/ED and N/H scales also differed for the two groups. Only a single factor was found for the women with breast cancer whereas two factors were found for healthy females. **CONCLUSIONS:** These results suggested that women with breast cancer were less able than healthy women to discriminate between 'rationality' and 'emotional defensiveness', and between 'harmonious relations' and 'self-sacrifice'. Thus, the internal structure for both LDM scales appeared to be more helpful in predicting who might suffer from breast cancer than the mean scores for the R/ED and N/H scales. **RESEARCH IMPLICATIONS:** Not the mean scores but the psychometric properties and factor structures of R/ED and N/H scales can identify the difference between breast cancer and healthy groups in Chinese society. The implication of this study is to understand the validity and psychometric properties of the R/ED and N/H scales cross-culturally in order to elicit the meanings of the scales interpreted by people from different cultural background. **CLINICAL IMPLICATIONS:** Based on the results of the present study, compared with using the mean scores of R/ED and N/H scales, the unidimensional internal structure of both scales might be more helpful to screen Chinese women who may likely suffer from breast cancer. The breast cancer prevention program might include identifying the characteristics of lifestyle defense mechanism in order to screen high risk group for breast cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.3

Disentangling the Babylonian Speech Confusion in Genetic Counselling, an Analysis of the Reliability and Validity of DNA-test Result Nomenclature in BRCA1/2Joel Vos¹, Christi Van Asperen¹, Juul Wijnen¹, Anne Stiggelbout², Aad Tibben¹¹Center for Human and Clinical Genetics, dep. of Clinical Genetics, Leiden University Medical Center, Leiden, Netherlands, ²Department of Medical Decision-Making, Leiden University Medical Center, Leiden, Netherlands

BACKGROUND: Effective communication of DNA-test results requires a sound terminology. However, the variety of terms in literature that are used for non-pathogenic DNA-test results (NPDTR) in BRCA1/2 may create inconsistencies between professionals, and misunderstanding in patients. Therefore, we conducted a theoretical and empirical analysis of NPDTR-terms most frequently used in articles between 2002 and 2007. **METHOD:** We analyzed the content validity of the NPDTR-terms by comparing the literal and intended meaning of the terms, and by examining their clarity and the inclusion of all relevant information. We analyzed the reliability of the terms by measuring the strength of association between terms and their meanings, and the consistency between different authors over time. **RESULTS:** 227 articles with 361 NPDTR-terms were found. Only two terms seemed to have acceptable validity: variant-of-uncertain-clinical-significance and nonpathogenic-DNA-test-result. Only variant-of-uncertain-clinical-significance and true-negative were found to be used reliably in literature. **CONCLUSIONS:** Current nomenclature for communicating DNA-test results in BRCA1/2 lacks validity and reliability. **RESEARCH IMPLICATIONS:** Transparent DNA-test result terminology should be developed, covering both laboratory findings and clinical meaning. **CLINICAL IMPLICATIONS:** Genetic counselors should check with their patients, whether they really understand and interpret the DNA-test results correctly. **ACKNOWLEDGEMENT OF FUNDING:** Dutch Cancer Society.

P2.1.4

Quality of Information and Psychological Distress in Breast Cancer PatientsMaurizio Montella¹, Anna Crispo¹, Maria Grimaldi¹, Giuseppina Caolo¹, Francesco De falco², Valentina Ravallese², Daniela Barberio², Massimiliano D'aiuto³, Immacolata Capasso³, Giuseppe D'aiuto³¹SSD Epidemiologia Istituto Nazionale Tumori Fondazione Pascale, Napoli, Italy, ²SSD Psicologia Istituto Nazionale Tumori Fondazione Pascale, Napoli, Italy, ³SOC Senologia Istituto Nazionale Tumori Fondazione Pascale, Napoli, Italy

BACKGROUND: Breast cancer is the most frequent tumor among woman and survival has improved in the last years so a lot of woman live with psychological problems. The psychological trouble needs to consider many factors such as the quality of information received at the moment of diagnosis. In fact the modality and the quality of information could influence considerably the life of breast cancer patients conditioning their reaction after surgical treatment and therapy. **METHOD:** We analysed the satisfaction and the quality of information received at the moment of diagnosis and the following psychological reaction among breast cancer patients enrolled in the National Cancer Institute of Naples during the period 2007–2008. The questionnaire was administrated some days after the surgical treatment from two psychologists. The overall number of breast cancer was 468 patients. **RESULTS:** Mean age was 54 ± 13 , most of women was in the 41-50 age-category (26%). 242 patients (70%) suffered of mental disorders (anxiety, insomnia, depression). 87% of patients who referred to have received an insufficient quality of information lamented anxiety, sleep disorders and depression while the percentage stopped to 65% if the quality of information received was sufficient (χ^2 p -value = 0.04). Mental disorders are more frequent among women with <50 years of age (90%) than among patients >50 years of age (82%). 75% of women declared to have not significantly changed their life-style after breast surgery. **CONCLUSIONS:** A significant relation was assessed between quality of information and the psychological distress of patients. The majority of patients who received insufficient information show anxiety and depression symptoms and referred difficulties of relationships with their relatives (family) and also difficulties to reintroduce themselves into the social-class. The age plays an important role to worse these symptoms but not to determine the reaction to the event. **RESEARCH IMPLICATIONS:** This results of our research show that a careful information at time diagnosis of breast cancer may also improve quality of treatment and survival of breast cancer patients. **CLINICAL IMPLICATIONS:** For a better prognosis and a fast re-establishment of health conditions, an accurate information on cancer is necessary. In fact the lack of information cause insomnia, difficulty to adaptation and sometime depressive disorders that could influence times and capacity of recovery for the patients. **ACKNOWLEDGEMENT OF FUNDING:** The authors gratefully acknowledge Italian League Against Cancer (LILT), Project N.26-2006.

P2.1.5

The Psychological Assistance on Breast Cancer Treatment in the Instituto Nacional de Câncer (INCA) From Brasil

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BACKGROUND: This project describes the action of the Psychology Department regarding INCA breast cancer patients, in a multidisciplinary way. The main objectives are: promoting patients' involvement in the treatment; reducing their psychological distress; helping them to elaborate all the situation in order to the new reality. **METHOD:** The psychological assistance begins after the diagnosis process and therapeutic decision. It starts with individual and semi-structured interview, and the assistance covers all the oncological treatment. It takes place in the clinic and /or during the hospitalization period. Besides the individual assistance, the psychological intervention is extended to the patients' family. Psychological assistance is also provided by groups, which are multi-professional, such as the 'Group of Pain' and the 'Quality of Life Group'. We also have a group of informative and psychological support called 'Pre Round Table Group' and another psychological support one for families and caretakers. **RESULTS:** Some of the results of the psychological support are the patients' active participation in the treatment, reduction of distress and anxiety, a better adaptation to the sequels of the treatment and a better communication with the multi-professional group. Talking about their suffering and elaborating their feelings about cancer and treatment help them to deal with their condition. **CONCLUSIONS:** The precocity of the assistance and its continuation throughout the process of oncological treatment reduces serious psychological disorders. The multidisciplinary way can shorten the time needed by the patients to reach a better quality of life, after the breast cancer diagnosis. **RESEARCH IMPLICATIONS:** To investigate psychological factors that interfere in the acceptance and adjustment to the disease and cancer treatment, with the objective of building new modalities of intervention. **CLINICAL IMPLICATIONS:** The psychological assistance throughout the oncological treatment allows a better integration between the patient and the multi-professional staff promoting an efficient and humanized assistance. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.6

The Importance of Psychological Evaluation and Assistance to Patients Submitted to Mastectomy

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BACKGROUND: The National Cancer Institute (INCA) statistics data about breast cancer show that most patients still start their treatment when the disease is already in advanced stage. Assisting patients since the diagnosis and therapy definition provides them with the necessary emotional support for acceptance and active participation in whole treatment. This also helps to deal with both the disease and the treatment in a more favorable way. This is the aim of this work. **METHOD:** The psychological assistance starts right after the treatment definition (mastectomy) with a semi-structured interview. The aim here is help the patients not only to deal with their treatment, but also evaluate their emotional conditions and life history in order to face their losses and changes of their body image. The assistance covers the whole oncological treatment through psychotherapy. **RESULTS:** The best results of psychological assistance can be related to a stronger capacity to deal with the disease, losses and death fantasies, as well as with changes of the body image and physical limitations, due to the treatment. Patients also tend to overcome difficulties concerning their sexuality and family relationships. **CONCLUSIONS:** Patients submitted to mastectomy show an active participation in therapeutic decisions, if they start their treatment under psychological assistance. It's also easier for them to interact with the multi-professional group, which consequently strengthens the relationship, trust and commitment along the treatment. This work also shows that patients have their level of anxiety sharply reduced, which underlines the importance of the psychological approach and the multidisciplinary interaction, from the very early stage of the treatment. **RESEARCH IMPLICATIONS:** Psychological assistance to patients submitted to mastectomy opens the door to new studies about therapeutic strategies concerning more advanced stages of the disease. It also encourages the creation of psychoeducational programs in order to detect the disease precociously. **CLINICAL IMPLICATIONS:** When the patients' emotional barriers are taken into account, there is the possibility of creating new and individual therapeutic strategies, which, with the help of the multi-professional staff, may result in a less painful and more efficient treatment. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.7

Post-treatment Subjective Cognitive Dysfunction in Breast Cancer Patients: A Systematic ReviewMarleen J. J. Pullens¹, Jolanda De Vries¹, Jan A. Roukema²¹Tilburg University, Tilburg, Netherlands, ²St. Elisabeth Hospital, Tilburg, Netherlands

BACKGROUND: Studies examining subjective cognitive dysfunctioning in breast cancer patients after systemic treatment (chemotherapy and/or hormonal therapy) are inconsistent. To resolve this issue, this review aimed to examine the prevalence and nature of experiencing subjective cognitive dysfunction when receiving systemic therapy for breast cancer and the relation of subjective cognitive dysfunction with psychological factors, and objective cognitive dysfunction. This is important because subjective cognitive dysfunction may influence psychological distress, quality of life, and health care consumption. **METHOD:** A comprehensive search in databases (MEDLINE, PSYINFO) was conducted to identify original research studies, published since 1960, that used a self-report instrument or interview to assess cognitive complaints in breast cancer patients. Reference lists were hand searched. We included reports on the prevalence and nature of subjective cognitive dysfunction, the relationship between specific breast cancer treatments and subjective cognitive dysfunction, and the relationship between objective and subjective cognitive dysfunction. The methodological quality of the 26 included studies was examined according to a list of predefined criteria. **RESULTS:** Fourteen studies were graded of high, nine of moderate, and three of low methodological quality. Studies had methodological problems: cross-sectional design, small number of patients, assessment at a short time post-treatment and not implementing psychological factors, fatigue, and quality of life. Heterogeneity across studies influenced the definitive results. Twenty-one to 64% of patients reported subjective cognitive dysfunction. Changes in subjective cognitive dysfunction over time were conflicting. No consistent group differences were found between treatment types and cognitive complaints. Subjective and objective cognitive dysfunction were unrelated, but cognitive complaints were associated with psychological distress, fatigue, and quality of life. **CONCLUSIONS:** Methodological limitations and heterogeneity of the current studies made it difficult to draw definitive conclusions. Subjective cognitive dysfunction in breast cancer patients after systemic treatment was found in most of the included studies, but inconsistent findings have been reported. Psychological factors such as anxiety, depression, stress, and fatigue and quality of life could be possible explanations for the self-reported cognitive

complaints, since there was no relation reported between subjective and objective cognitive dysfunction. **RESEARCH IMPLICATIONS:** Prospective longitudinal follow-up research with a baseline measurement, more patients, and a control group is needed in order to draw valid conclusions regarding a person's subjective cognitive experience. In order to accomplish this, studies should use a validated instrument and cut-off points to measure subjective cognitive dysfunction. Psychological factors, fatigue and quality of life should be topics in future research elucidating the persistence of these post-treatment self-reported cognitive dysfunction in breast cancer patients. **CLINICAL IMPLICATIONS:** Until more research is done on the persistence, prevalence, and nature of subjective cognitive dysfunction after systemic therapy for breast cancer and the relation with psychological distress, it should be assessed, monitored, and intervened upon in clinical practice. **ACKNOWLEDGEMENT OF FUNDING:** Dutch Cancer Society (KWF), project code: 2008-4075.

P2.1.8

To Reconstruct or Not to Reconstruct a Breast After Mastectomy Due to Breast CancerUlrika Fallbjörk¹, Birgit H Rasmussen¹, Pär Salander², Stig Karlsson¹¹Department of Nursing, Umeå, Sweden, ²Department of Social work and the Department of Radiation Sciences—Oncology, Umeå, Sweden

BACKGROUND: Due to improved diagnosis and treatment an increasing number of women are living with breast cancer for many years or a whole life. Subjection to, or abstaining from, breast reconstructive surgery is a part of their dealing with a new everyday life. The objective of this study was to explore characteristics of women who had undergone mastectomy and chosen to reconstruct the breast compared to those who chose not to. **METHOD:** In 2003, 400 women were diagnosed with breast cancer in Northern Sweden, and 149 of these had undergone a mastectomy. In 2007, four years later 126 of the 149 women answered a questionnaire covering experiences related to losing a breast in relation to self-perception, sexuality and if they had or had not reconstructed a breast. **RESULTS:** Preliminary results show that 25% of the women chose to reconstruct their breast. These women were younger and had a higher education than the women who chose not to. Also, the women who had undergone reconstruction scored that the mastectomy had influenced their self-perception more negatively compared with the women who did not reconstruct their breast. Since the data analysis is currently in progress the final result and the discussion will be presented at the conference. **CONCLUSIONS:** It

has been stated that reconstruction should be available to every women as a part of breast cancer treatment and care. As found in other studies from the Anglo-Saxian part of the world, our study confirms that merely 25% of the women choose breast reconstruction and that these women are younger and more well educated than the women who have not undergone reconstruction. The reconstructed women also scored a significant lower self-perception. A more comprehensive understanding of the characteristics of these two groups of women will be presented at the conference. **RESEARCH IMPLICATIONS:** Few studies have highlighted characteristics beyond age and education of women who undergo or do not undergo breast reconstruction after breast cancer. Our study points towards a difference between the two groups of women in relation to self-perception. A more comprehensive understanding of the typology and meaning of self-perception is important for future research. **CLINICAL IMPLICATIONS:** More women survive a breast cancer disease and thus have to face the choice of living with or without a reconstructed breast. Knowledge of the influence of a mastectomy on women's self-perception and motives for choosing to reconstruct a breast or not, is necessary in the professional care and support of these women. **ACKNOWLEDGEMENT OF FUNDING:** The Swedish Cancer Society, the Northern Cancer Research Foundation, the Lions Cancer Research Foundation at Umeå University, the County Council of Västerbotten and Visare Norr.

P2.1.9

Accentuations of Character and Treatment of Major Depressive Disorder in Breast Cancer Patients

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BACKGROUND: Early identification and treatment of major depressive disorder in breast cancer patients may help improve outcomes of treatment of a cancer. The relationship between accentuations of character and psychotherapy of the major depressive disorder in breast cancer patients are complex. **METHOD:** The aim of this study was to assess relationship between accentuations of character and combines therapy of the major depressive disorder in breast cancer patients. 245 females with breast cancer, aged 45–63 years, part into research. All participants were assessed after mastectomy in a common protocol via a psychiatric interview, standardized psychological tests (Hospital Anxiety and Depression Scale) and personality characteristics psychological tests (MMPI, Lichko's Accentuations of Character). Breast cancer patients with major depressive disorder participated in an eight-week program that combines behavioral

psychotherapy and melatonin in a doze of 0.006 g/day. Each patient with major depressive disorder was assessed in a common protocol at the follow-up interview took place at two months after baseline. **RESULTS:** Psychasthenic and neurasthenic types of character accentuations were most prevalent in breast cancer patients ($p < 0.05$). After combines therapy in the psychasthenic type of accentuation breast cancer patients, the reducing depressive symptoms was established in 85% whereas in neurasthenic accentuation, in 72% of patients. **CONCLUSIONS:** Combines behavioral psychotherapy and melatonin have an important role in the treatment of major depressive disorder in breast cancer patients. **RESEARCH IMPLICATIONS:** The use of the offered scheme treatment of major depressive disorder in 245 breast cancer patients with made it possible to cut down the period of hospitalization and improve the efficacy of cancer treatment. **CLINICAL IMPLICATIONS:** This makes it relevant for implementation in ordinary clinical practice. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.10

The Relation Between Adjuvant Therapy and Health Status in Women with Breast Cancer Six Months After Surgery

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BACKGROUND: There are many studies concerning health status (HS) after one type of adjuvant treatment (chemotherapy, radiotherapy, or hormonal treatment) in women with breast cancer, but the combination of the different types of adjuvant treatment and the relation with HS of these combinations still remains underexposed. **METHOD:** Before receiving a diagnosis, women who visited the department of surgery of one of the participating Dutch hospitals were asked to participate in this study. Women who appeared to have breast cancer ($N = 282$) completed, among others, the EORTC QLQ BR23 one, three and six months after surgery. Information on types of adjuvant treatment was collected from the medical files of the participants. This could be 'no adjuvant treatment', a single treatment (chemotherapy, or radiotherapy, or hormonal treatment), or a combination of the treatments. **RESULTS:** Type of adjuvant treatment has a significant relation with systemic therapy side effects ($p < .001$) and with body image ($p = .027$), also after controlling for type of operation. Women who received only hormonal treatment ($N = 16$) showed significantly less side-effects ($p = .010$) and had a more positive

body image ($p = .006$) than women with other adjuvant treatments. When women had a combination of chemotherapy and radiotherapy ($N = 10$), or chemotherapy, radiotherapy, and hormonal treatment ($N = 28$), they scored significantly worse on side-effects ($p = .033$ and $p = .002$ respectively) than women with other adjuvant treatments. Women who received only radiotherapy ($N = 68$) had the lowest scores on side-effects ($p = .021$). **CONCLUSIONS:** Almost no patient received only chemotherapy ($N = 7$) and most patients received a combination of adjuvant treatments, except for radiotherapy ($N = 68$), which is a common single adjuvant treatment after breast conserving therapy. Combinations of therapies result in lower health status, in particular with regard to side-effects. **RESEARCH IMPLICATIONS:** Future studies should focus on patients receiving combinations of adjuvant treatment instead of patients with a single adjuvant treatment. These studies should contain more patients in each treatment combination group in order to examine replicability of the present results. **CLINICAL IMPLICATIONS:** When giving patients multiple adjuvant treatments, they should be given information on possible effects on their health status. The present study provides some information on these effects. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.11

Psychosocial Approach of Pregnant Patients with Breast Cancer. Social Worker's Role

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BACKGROUND: The present poster refers to the psychological support of pregnant women suffering from breast cancer, emphasizing in the role of the social worker in an oncological hospital. Agonies, fears and questions that emerge to pregnant women from the first moment of the diagnosis of the illness are presented here as well as the role of home and social environment during treatment. **METHOD:** The diagnosis of breast cancer during pregnancy presents not only a clinical challenge for health professionals but also a moral issue as the proposed curative interventions purpose is to make sure that it won't arise a conflict between mother's and fetus' health. The full approach of pregnant women suffering from breast cancer from an interdisciplinary team which will cover these patients' double needs has as its goal to achieve the patient's best possible adaptation in the new life data that arise from the appearance of illness. **RESULTS:** In the past, the diagnosis of breast cancer decreased dramatically the positive results for the mother and the fetus; the current curative

options for cancer make pregnancy a likely and realistic fact. What has not changed are the difficult decisions that the pregnant women suffering from breast cancer have to take. This seemingly odd situation, a healthy fetus to be developed during a chronic and socially 'lethal' illness is not usual; however the update scientific approaches lead the patients to experience this double situation. **CONCLUSIONS:** As a member of the interdisciplinary team, the social worker develops its role in two levels: a) initially great prominence is given to the sentimental support of the pregnant patient as well as her family's supporting procedure in each stage of illness, individualized collaborations occur with the pregnant patient, her spouse and the other family members wherever this is considered essential b) we create a supporting network for the regulation of all procedural issues that ensure from the first moment of diagnosis and during the whole duration of the treatment, aiming at the patient's and her family's psychosocial support. **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** A program of psychosocial intervention, aiming at the holistic cover of pregnant patients needs an organized and flexible network of social support and services. The psychosocial support of pregnant patients with breast cancer requires the fine collaboration of all health professionals so as to help them in the new reality of illness with mutual goal to handle as better as possible the changes that occur in the emotional, social, psychological field of their lives. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.12

Psychooncological Intervention in Breast Cancer Patients—A Prospective Randomised Controlled Trial

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BACKGROUND: Though psychological interventions have gained importance in clinical practice the last years the efficacy and the acceptability of psychooncological interventions are controversially discussed in the scientific community. We conducted a prospective randomised controlled study investigating the efficacy of psychological interventions in breast cancer patients. Two types of psychological interventions on patients' quality of life (QOL), anxiety and depression and coping in short- and long term were investigated. **METHOD:** At Innsbruck Medical University—Department of Gynaecology patients were consecutively recruited and randomly assigned to two intervention groups (A and B) and a control group (C). Group A received a comprehensive psychological intervention program including

information, relaxation, cognitive behavioral therapy with at least five appointments (first before surgery). Group B participated in a relaxation program 2–3 times a week (inpatient stay) and control group C received psychooncological standard-care. Assessment of QOL, anxiety and depression and coping was conducted at baseline (before primary treatment; T1), at patients' three-month (T2) and six-month (T3) clinical after-care appointments. **RESULTS:** 60 patients (mean = 54.69.5; 36–82 years) were allocated to the three groups (A: 18 patients, B: 21 patients, C: 21 patients). All groups improved over time in global QOL ($p = 0.00$) and physical functioning ($p = 0.14$), no significant differences were found between the groups. Emotional and social functioning increased over time in both intervention groups ($p = 0.002$), whereas the control group showed significantly lower scores at T3. Anxiety and depression decreased significantly over time in all groups with no significant differences between groups. **CONCLUSIONS:** All groups showed improvements of certain aspects of QOL and a reduction of anxiety and depression over time. Significant differences between the groups were not found. **RESEARCH IMPLICATIONS:** Further research in this field is required. High-quality studies comprising standardised, well documented intervention strategies, adequate sample sizes and randomisation are required to strengthen evidence and clarify outcome. Attention has to be paid to the fact that also inclusion in standard-care groups may increase the awareness of availability of psychosocial care. **CLINICAL IMPLICATIONS:** Psychooncological interventions have been developed well in the last decade and have been proven in daily clinical practice. Accounting for significant QOL improvement in cancer patients further support and development of psychooncological work are required. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.13

TIME-trial: Timing of Genetic Counselling and Testing in Breast Cancer—Behavioral and Psychosocial Effects of Rapid Genetic Counseling and Testing in Newly Diagnosed Breast Cancer Patients: A Multicenter Study

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BACKGROUND: About 5–10% of breast cancer patients carry a BRCA1/2 gene mutation. Such women have an increased risk of second tumors and

therefore may opt for preventive surgery. Usually, genetic counseling and DNA-testing are offered to eligible patients after their primary treatment, and takes 4–6 months. However, some laboratories can generate test results within 3 to 6 weeks. Little is known about the effect of such rapid procedures on treatment decisions and psychosocial health. **METHOD:** The TIME-trial is a randomized controlled trial. In an 18-month period, newly diagnosed breast cancer patients with $\geq 10\%$ risk of having a BRCA mutation will be recruited from 13 hospitals in the Netherlands. They will be randomized either to the intervention group (referral for genetic counseling within a week after diagnosis), or to a usual care group. If needed, DNA-test results will be available within 3–6 weeks. Primary outcomes are choice of treatment, cancer risk perception, cancer-related worry and distress, health-related quality of life and decisional satisfaction. Psychosocial assessments will take place at study entry, at 6 and 12 months. **RESULTS:** The trial recently has been opened. To date, 15 women have been recruited. In total, 255 women are expected to participate. According to a randomization ratio of 2:1, 170 participants will be offered rapid genetic counseling and testing, while 85 participants will receive usual care. **CONCLUSIONS:** Conclusions will be based on observed differences between groups in choice of surgical treatment and psychosocial health over time. **RESEARCH IMPLICATIONS:** This study will provide essential information about the impact of rapid genetic counseling and testing on the choice of primary surgical treatment among women with breast cancer with an increased risk that their cancer has a hereditary basis. Additionally, this study will provide data on the psychosocial consequences of genetic testing and risk-reducing behavior among individuals with a recent diagnosis of cancer. **CLINICAL IMPLICATIONS:** The TIME-trial will inform clinical geneticists, surgeons and patients about the potential benefits and risks of rapid genetic counseling and testing. The study will also yield recommendations for improving the quality of the multidisciplinary care provided in breast cancer clinics by the addition of genetic expertise when patients are at relatively high risk of having a genetic predisposition for breast cancer. **ACKNOWLEDGEMENT OF FUNDING:** This study is financially supported by the NutsOHRA Fund.

P2.1.14

To Live in Suspense. A Qualitative Study of Women's Experiences of Breast Cancer Diagnosis Awaiting Primary Surgery

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BACKGROUND: The study purpose was to explore how women with newly diagnosed breast cancer experienced awaiting primary surgery. One in eleven women in Norway will be diagnosed with breast cancer during their lifetime. The annual number of new cases is estimated to increase. The emotional preoperative reactions to diagnosis influence postoperative adjustment. Given the increase in annual number it becomes important from a multi-disciplinary perspective to broaden the understanding of women's experiences awaiting primary surgery. **METHOD:** Individual semi-structured interviews were conducted with a purposive sample of 21 women with newly diagnosed breast cancer (aged 41–73 years) during 2006–2007 at a Norwegian University Hospital. The interviews were conducted the day before surgery, before the preoperative information and lasted from one to two hours. The informants were asked specifically about: experiences of the preoperative phase. Interviews were analysed using Kvale's method of qualitative content analysis. **RESULTS:** Major terms employed by women in describing this phase: feeling healthy but having to adapt to the disease, waiting, uncertainty, having to inform others, and existential awareness. The waiting was experienced as frightening, painful, long, and hard to endure. Some felt living a life on hold, and some expressed apprehension because they couldn't do anything about their situation. In contrast, some emphasized that it was good to have some time between confirmation of diagnosis and surgery, in order to be prepared and to talk to those they loved. It was a great burden to inform others about the diagnosis. **CONCLUSIONS:** Our findings provide increased insight into women's experiences awaiting primary breast cancer surgery. It revealed that in this situation of suspense, uncertainty, and waiting, the women experienced this phase in different ways. In general, all their energy was channeled into coping with the uncertainty of not knowing how severe their cancer was. The need to have someone's attention, to be seen, to feel loved was vital in the coping process. Social support to sort out fantasies from realities was vital to endure the waiting time with minimal anxiety and uncertainty. **RESEARCH IMPLICATIONS:** The results can be used when planning and implementing care of women receiving the diagnosis of breast cancer and awaiting surgery. Further studies are needed to broaden the understanding of women's experiences in relation to different cultural and ethnic backgrounds. **CLINICAL IMPLICATIONS:** Nurses and other healthcare professionals need to be aware of these women's individual experiences in order to provide support and enhance coping. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.15

Prognostic Value of Health-related Quality of Life Parameters in Early-stage Breast Cancer. A Eight-Year Follow-up Study

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BACKGROUND: Our purpose was to investigate whether self-reported health-related quality-of-life (HRQOL) parameters at time of diagnosis and/or one-year follow-up are prognostic for disease-free survival (DFS) in early-stage breast cancer patients. **METHOD:** Data from 195 women, diagnosed with early-stage breast cancer, who had filled in the EORTC QLQ-C30 and the Hospital Anxiety and Depression Scale (HADS) were analyzed. Median follow-up was 7.98 years (range 0.09–9.23). **RESULTS:** Using Cox multivariate regression analysis, appetite loss reported at time of diagnosis (HR 2.03 (1.13–3.63), $p = .018$) and one year following surgery (HR 3.23 (1.64–6.30), $p = .002$), were significantly predictive for shorter DFS, even after controlling for age, psychological distress, and relevant biological and clinical prognostic variables. **CONCLUSIONS:** Our findings indicate that loss of appetite probably is of prognostic value in addition to well-recognized clinical and biological data, in early-stage breast cancer. **RESEARCH IMPLICATIONS:** Studies on metastatic breast cancer have found appetite loss to be the strongest independent predictor for disease-free survival. However, very few researcher have investigated if appetite loss reported by women diagnosed with early stage breast cancer also can be an predictor for disease-free survival. This topic needs further research before definitive conclusions can be drawn. **CLINICAL IMPLICATIONS:** If more studies can confirm our findings that appetite loss (measured at one year following surgery) is of prognostic value for disease-free survival, it would give the clinicians an indication of how well the women responded to treatment. During the years of follow-up, the clinicians should always inquire about their appetite. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.16

The Impact of Joint Aches, Pain and Stiffness Post Primary Breast Cancer Treatment on Psychosocial Health: A Case Controlled, Cross-Sectional Survey

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BACKGROUND: Joint aches, pains and stiffness are commonly described problems amongst women

who have had breast cancer. There is evidence these symptoms may be specific to or exacerbated by primary breast cancer treatment. Detailed information about the prevalence and causes of joint pain and its impact on women, including on psycho-social health, is not available. We explored the prevalence of these symptoms, their severity and impact on women after primary breast cancer, compared to age-matched controls. **METHOD:** A cross-sectional survey was conducted comparing 247 women who had completed treatment for primary breast cancer (median time since diagnosis 27 months) with an age-matched group of 274 women without breast cancer attending for mammographic screening or benign breast clinics. Measures used were the Nordic questionnaire for musculoskeletal pain, the Brief Pain Inventory and the SF-36 general health questionnaire. Medical details were gathered along with information on conditions which could cause joint pain and stiffness, such as rheumatoid arthritis, fibromyalgia etc. and other factors which may have a bearing on these pains such as menopausal status, lymphoedema and weight. **RESULTS:** 62% women post breast cancer reported current pain compared to 49% age-matched controls ($p = .005$). 84% women with breast cancer experienced joint pain in the last seven days and 88% in the last 12 months; 44% said that this interfered with their ability to carry out normal activities. Compared with age-matched controls, women with breast cancer had significantly poorer health on 5/8 domains of the SF-36 and no difference on mental health and role limitation due to emotional problems. However, women with pain and breast cancer had significantly poorer health than women with breast cancer and no pain on all SF-36 domains, including mental health. **CONCLUSIONS:** This research shows that women who have been treated for breast cancer may continue to experience significant problems due to joint aches, pains and stiffness which have a significant impact on their health for some years after primary treatment has been completed. This data suggests that recovery from breast cancer treatment can be slow and that people who have had breast cancer might have comparable needs to those with other long term health conditions. **RESEARCH IMPLICATIONS:** More details is required to understand the nature and experience of joint aches and pains subsequent to breast cancer on women's lives, including the onset and duration of pain and impact on women's psycho-social health and quality of life. Research is needed to identify and test potential interventions. **CLINICAL IMPLICATIONS:** Further research exploring joint aches and pains in women with primary breast cancer may allow researchers and clinicians to develop interventions to support women and reduce pain after primary breast cancer. Additionally, research

may inform clinician and patient choices and treatment decisions. **ACKNOWLEDGEMENT OF FUNDING:** This project was funded by the UK National Cancer Research Institute Supportive and Palliative Care (SUPAC) Research Collaboratives Capacity Building Grant Scheme.

P2.1.17

Psychosis in Breast Cancer: Four Case Reports

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BACKGROUND: Breast cancer is associated with a broad psychological impact, life patterns changes and several fears/concerns. The common stress reactions, are well managed with the help of family and medical team. However, some vulnerable women have greater problems and literature recommend full psychiatric evaluation in appropriate cases, because psychiatric disorder may interfere with treatment, compliance, medical tests and affect several issues in the course of disease. Nevertheless, in literature, psychotic disorder has been little associated with breast cancer. **METHOD:** The authors describe four cases of women with breast cancer in whom psychotic disorder developed after treatment of cancer. In all cases appropriate medical tests were realized and full mental status examination was performed by senior psychiatrists and diagnosis made, according to DSM-IV. **RESULTS:** The authors describe 4 women with age between 47 and 78 years old, diagnosed with breast cancer between 7 and 14 years ago, all subjected to surgery. All of them developed psychiatric disease with psychotic symptoms in form of delirious persecutory ideas and auditory hallucinations, impaired judgment and lack of insight. The four patients had in common psychiatric antecedents (in particular paranoid personality traits or depressive episodes) and were exposed to a major stress: cancer diagnosis and treatment and post-treatment sequelae. All performed brain tomography and medical tests in order to exclude organic disease. The consequences of psychiatric condition had an important impact in their lives. **CONCLUSIONS:** Psychotic disorder is infrequently described in literature in cancer patients. Nevertheless we conclude that those women, with vulnerable personality or psychiatric history and lack of social support may be in greater risk of psychiatric disorder and thus they should be offered psychosocial support in order to help them cope with the stress of cancer and the psychological and physical sequelae of treatment. **RESEARCH IMPLICATIONS:** The impact of cancer and treatment in patients with psychiatric history is insufficiently known as well as the impact of

psychiatric disease in cancer diagnosis, treatment and evolution. More research is needed on this subject. **CLINICAL IMPLICATIONS:** The Psycho-Oncology teams need to be attentive and develop specific programs to properly support this minority group of patients with psychiatric history and articulate with mental health services who attend them. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.18

A Counselling Service for Breast Cancer Operated Women

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BACKGROUND: Psychological and social implications of breast cancer often require supportive programmes to help newly operated patients cope with their disease. With this aim, in January 2007, a group of pre-trained breast cancer survivors, committed themselves to a Counselling Service (CS) at Breast Unit, in Forlì. This work presents the data collected in 2007–2008 about the volunteers' training programme, patients' satisfaction and perception of the CS's utility, number of contacted patients, most required/offered services. **METHOD:** Nine women, in remission at least 3 years, attended a role-playing/brainstorming-based course held by psychologists, physicians and physiotherapists on the following themes, Communication, Aid Relationship, Volunteers' Role, Social/work/healthcare Rights, Organisation of Breast Unit. The volunteers participated in a monthly supervision with a psychologist to analyse the course topics, organisational problems, patients' backgrounds arisen in the meetings and volunteers' integration into the staff of the Division. For each contacted woman, a file was created with the following data: type of surgery, demands, leaflets handed out. In late 2007, 100 close-question/self-report questionnaires were handed out to assess patients' satisfaction about the CS, perception of its utility and most appreciated/required services. **RESULTS:** Over 2007–2008, 263 patients, undergoing mastectomy or quadrantectomy in equal proportions, accessed the CS. The results of the 100 questionnaires were: (i) perception of utility: very useful 46.45%, pretty useful 46.25%, little useful 3.75%, useless 1.97%; (ii) frequently discussed topics (more answers were possible): information about therapy programmes 27.27%, personal sickness backgrounds 22.72%, general backgrounds 18.18%; how the volunteer women had coped with their own sickness and therapy 18.18%; advice about social/work rights

13.63%. The volunteers' communicative approach was rated as 'reserved' by 100% (choosing among intrusive, fairly reserved and reserved). **CONCLUSIONS:** The CS is a service based on mutual aid, characterized by a sympathetic, non-medical approach to the problems affecting women operated for breast cancer. To achieve a constructive and supportive sharing of personal sickness experiences, the volunteers' activity should always be backed by specific training programmes and continuous supervision. Acceptance of emotional awkwardness and dissemination of practical information by former patients, who have already coped with the same sickness, may not only help breast cancer patients feel healthcare institutions better understand their diverse needs, but may also convey a message of hope and improve their lifestyle. **RESEARCH IMPLICATIONS:** With the objective of making healthcare institutions more compassionate, researches based on quality assessment made by breast operated women, as regards the services offered by voluntary former patients, should be further fostered. Such researches could allow doctors/administrators to evaluate which needs can be fulfilled by the volunteering associations integrated into hospitals. **CLINICAL IMPLICATIONS:** This experience demonstrates the need to respond to the many requirements of breast cancer patients. A CS run by volunteer women is a 'linking space' between institutions and patients, offering an additional service to welcome and advise them, starting from their hospitalization, which is a period of deep emotional bewilderment. The work of suitably trained volunteers can be integrated into healthcare institutions and provide an additional response to the complexity of the oncological disease. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.19

Symptom Attribution and Radiation Therapy for Breast Cancer: Changes Over Time and Associated Psychological Factors

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BACKGROUND: Breast cancer patient's symptoms attribution during radiation therapy (RT) has not been much studied. The objective of this study is to assess the frequency of different types of symptoms attributions and to determine the psychological factors which underline these attributions. **METHOD:** Women with primary breast cancer were assessed during the first and the last week of their RT treatment. Symptoms attributions were assessed with a symptoms and

attributions inventory especially developed for this study. A correct attributions percentage was calculated for each patient (percentage of symptoms which are correctly attributed to radiotherapy). A biased attributions percentage was also calculated for each patient (percentage of symptoms which are wrongly attributed to radiotherapy). Patients' psychological factors and knowledge about RT side effects were measured at baseline. **RESULTS:** The mean of correct attributions increased between the first and the last sessions of RT (51.2% vs 88.9%; $P < 0.001$). **CONCLUSIONS:** Correct and biased attributions increased during radiation therapy. Symptoms attributions seem to be influenced by patient anxiety and by their knowledge about radiation therapy. **RESEARCH IMPLICATIONS:** Future research should study the effects of psychological interventions aiming at not only reducing anxiety but also at considering patient's knowledge about radiation therapy which may increase the attention paid to somatic perceptions. This could allow avoiding potentially anxiogenic biased attributions. **CLINICAL IMPLICATIONS:** Radiotherapists should consider in their daily practice patients' anxiety and knowledge as potential factors that may increase biased attributions. **ACKNOWLEDGEMENT OF FUNDING:** This research is financed by the FRS-FNRS Télévie: 'L'optimisation de la réponse aux besoins psychologiques des patientes traitées pour une affection cancéreuse du sein par un programme de formation à la communication destinée aux équipes de radiothérapie: une étude randomisée'.

P2.1.20

Presentation of a Psychosocial Intervention Programmer for Groups of Women Mastectomy and Their Husbands

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BACKGROUND: The present intervention program on psycho-oncology aims to promote strategies of conflict to deal with three major variables associated to breast cancer: variables socio-cultural's, psychological and medical. We want that the support groups of women's submitted to total mastectomy develop, among their companions, strategies to deal with the illness, regarding one of the major points of interest which are body image and self-esteem. **METHOD:** The population target of this intervention program, are women's which have been submitted to total mastectomy and their companions. The program is composed

of 15 sessions of 90 minutes each, on a weekly bases. The goals regarding the sessions planning are: 1) to facilitate the emotional expression facing the illness and side effects of mastectomy and chemotherapy; 2) implement strategies of acceptance of the new body image; 3) to promote communication strategies to facilitate managing conflicts between the couple; 4) develop strategies to control unadaptive thoughts; 5) to promote emotional expression of the problems between the couple; 6) enhance self-esteem and promote changes related to personal and social enhance. **RESULTS:** As this program is still on initial phase of application, efficiency is expected: by the expression of feelings and conflict solving; by the way how is understand and the meaning of body image; the increasing of these woman self-esteem; by developing comfort strategies and problem solving; and by developing the quality of life of women's and their companions. **CONCLUSIONS:** The woman who has been through a mastectomy deals with scions social, psychological and physical changes wish will influence her personal organization, her relationship with the others and particularly with her partner. Thus, the implementation of an intervention programmer like this, new an the Portuguese health system, is completely necessary. The literature shows that the psychotherapy in oncological discuses particularly in mastectomy woman and her family, has a great impact in the post-cyrurgical period and also on the adaptation to the illness, it's treatment and prognostics. The goal of this intervention programmer isn't limited to the decrease of specific symptoms but also aims to promote a shift in attitudes and to decrease or eliminate unhealthy behaviors or feelings. **RESEARCH IMPLICATIONS:** The planning of this intervention programmers was based on previous research results with pointed out problematic areas and factors that influence the emotional balance and the life quality of these woman and respective partners. It's implementation and results evaluation will allow the identification of positive and negative points with are fundamental to its future implementation in health case services that deal with these women. **CLINICAL IMPLICATIONS:** Most of the times, the groups psychological interventions in case of ontological disease are planned to the patient and not to his/her families or close friends. In this programmer, the mastectomy woman partners are also included in the intervention in order to contribute to a better health and life quality of the family. **ACKNOWLEDGEMENT OF FUNDING:** We want to thank this opportunity emerged from the investigation on psychology and occupational health (them am development and psychology investigation unit) through the teachers Maria João Cunha and João Paulo Pereira and also ISMAI.

P2.1.21

Primary Cognitive Appraisals and the Impact on Illness Adjustment, Psychological Distress, Perceived Social Support and Marital Satisfaction in Advanced Breast Cancer Couples

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BACKGROUND: Breast cancer patients experience high levels of anxiety and depressive symptoms regardless of staging or type of surgery, social support, or relationship satisfaction. The dyadic component in stress and coping models transfers the focus from an individual to an interpersonal context. The present study examined couples' cognitive primary appraisals (threat, challenge, harm/loss, or benign) to determine the impact on psychological distress, illness adjustment, perceived social support, and marital satisfaction in advanced breast cancer. **METHOD:** We predicted that non-matched appraisals would yield higher marital discord (Lock-Wallace Marital Adjustment Test-MAT), lower perceived social support (Northouse Social Support Scale-NSSS), and increased psychological distress (POMS). Further, we predicted matched appraisals would decrease psychological distress, increase marital satisfaction and social support, and positively impact illness adjustment (Illness Adjustment Scale-IAS) among the couples. Fifty-five married couples ($N = 110$) consisting of women diagnosed with stage III or IV metastatic breast cancer and their spouses were recruited from Indiana University Simon Cancer Center. Average age was 52 ($SD = 12.23$) for patients and 53 ($SD = 12.17$) for husbands. **RESULTS:** ANOVAs comparing matched (2 groups) and non-matched (2 groups) couples were significant for patient NSSS, patient POMS, patient IAS, spouse IAS and spouse POMS (all $p < .05$). Tukey's post hoc tests clarified the ANOVAs. Specifically, the patient group that reported worst POMS, NSSS, and IAS was the group where both husband and wife endorsed threat-harm/loss appraisals. The spouse group that reported worst POMS and IAS was the group where his cognitive appraisals were negative and hers were positive. The spouse also reported worse IAS when both husband and wife appraised threat-harm/loss. No significant differences among groups were found for MAT. **CONCLUSIONS:** Findings suggest that patients do worst when both they and their husbands appraise the cancer as a threat-harm/loss, and best when they both have appraisals of challenge. Husbands do worst when they have negative appraisals and

their wives have positive ones. It is possible that for patients, a spouse that agrees with a negative appraisal is confirming her fears. For husbands, a wife that focuses on the positive keeps him from sharing with her his prevalent concerns. **RESEARCH IMPLICATIONS:** No research has yet focused on matched and unmatched appraisals and their correlates. More research, specifically of a longitudinal nature is necessary to better understand the directions of these relationships and their full implications. **CLINICAL IMPLICATIONS:** The population of advanced breast cancer patients may be very different psychosocially than early stage cancer patients and need to be sought out for care. The strong association between psychological distress and morbidity is of concern, as is the impact that spouse appraisals have on patient well-being. **ACKNOWLEDGEMENT OF FUNDING:** The present study was supported by the National Cancer Institute.

P2.1.22

Personality Variables and Sexual Functioning of Woman with Breast Cancer

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BACKGROUND: Breast cancer is the most common form of cancer among woman today. With early detection and advanced treatment survival rates continue to improve. However, life after breast cancer treatment causes many problems in different areas of social and psychological functioning, especially it affects sexual life. **PURPOSE:** This study investigated the effects of illness and cancer treatment on sexuality and discusses how personality variables influence sexual functioning of woman with breast cancer. **METHOD:** Patients with Stage III breast cancer who underwent surgery but before adjuvant chemotherapy were recruited in the years 1999 and 2000. All women underwent mastectomies. The initial interview and assessment took place just short of 2 months after diagnosis. After 4 to 5 years 102 women were alive. The rest of the group—thirty-six patients (28.57%) had declined participation in the second assessment. Patients answered twice (during the first assessment and after 5 years) instruments for measurement of personality and temperament: the Polish adaptation of NEO-FFI Inventory and the Formal Characteristics of Behavior-Temperament Inventory (FCB-TI). **T.** When they were assessed after five years since diagnosis they also answered the Sexual Activity Questionnaire which measures women's sexual functioning. **RESULTS:** Multivariate regression analysis was used to study personality and temperamental predictors of sexual functioning after 5 years. **CONCLUSIONS:** Personality and temperament may have influence on

breast cancer patients sexual functioning. **RESEARCH IMPLICATIONS:** In short, this research adds to the literature by showing that some of basic dimensions of personality and temperament might have influence on sexual functioning. **CLINICAL IMPLICATIONS:** Some of basic dimensions of personality and temperament might have influence on sexual functioning and this findings may have important practical implications for identifying who is at risk for having sexual problems. **ACKNOWLEDGEMENT OF FUNDING:** It will be write later.

P2.1.23

The Anxiety and Coping with Disease in Women with Breast Cancer at Different Disease Stages

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BACKGROUND: The disease and treatment determine serious psychological stress, which experiences patient and in the face of which engage different activity, effective or ineffective. The purpose of the study was to assess anxiety level in women with breast cancer at different disease stages and to define the relationship between level of anxiety and strategies in the study subject. **METHOD:** The study involved 155 women aged 28–77 years who were qualified to one of four study groups, according to their disease stage the first group (I) consisted of patients being diagnosed at that time ($n = 48$); the second group (II) involved patients subject to primary therapy ($n = 51$); the third group (III) comprised disease free patients (patients in remission); the majority of patients in this group returned to normal professional and family activities ($n = 31$); patients with the first or a subsequent relapse were qualified to group four (IV). The following research instruments were used: the State-Trait Anxiety Inventory (STAI), the Mini-Mental Adjustment to Cancer Scale (Mini-MAC), the Rotterdam Symptom Checklist (RSCL) as well as medical history and data from patients' medical records. **RESULTS:** Disease stage differentiates the study subjects with respect to expressed anxiety level. The values achieved in scales of physical and social activity decrease along with disease progression. Patients preferring 'positive' forms of coping with stress of disease (fighting spirit, cognitive avoidance) reveal the lower level of anxiety than manifesting the 'negative' forms of coping patients (helpless—hopeless, anxious pre-occupation, fatalism). There are the differentiation between level of anxiety and strategies of coping with stress in different stages of disease. In earlier stages the more effective are 'positive' the strategies of coping. During the progress of disease (the stage of relapse) these strategies appeared ineffective.

CONCLUSIONS: The obtained study results allow to formulate the following conclusions: Study subjects differ with respect to expressed anxiety level according to their cancer stage. The highest levels of anxiety accompany patients in the diagnostic period of treatment. An elevated level of anxiety is also expressed by patients during the primary treatment and disease relapse. The lowest levels of anxiety are observed in patients in remission. Patients with significant somatic symptoms and markedly reduced social activity manifest elevated anxiety levels. The strategies of coping with disease—fighting spirit, cognitive avoidance influence on lowering the level of anxiety. This relationship appear in early stages of disease. **RESEARCH IMPLICATIONS:** Anxiety is a unpleasant emotion accompaniment patients with cancer and there are various ways of coping with it. Little is known about the influence of strategies of coping with disease on the intensity of anxiety. **CLINICAL IMPLICATIONS:** The assessment anxiety level in women with breast cancer at different disease stages will make possible the better adjusting to the psychological help to stage of disease and will facilitate adaptation to difficult situation. The definition of influence of specific strategies coping with breast cancer on level of anxiety will permit on better therapeutic reaction and reduction of the anxiety intensification in this patients' group. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.24

Effects of Cognitive-behavioral Intervention on Anxiety, Depression and Adherence Therapeutic in Breast Cancer Patients

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BACKGROUND: Cancer has a severe impact in the quality of life of the patients who suffer it. The majority of whom are not prepared to confront in a successful way the conditions that the disease and its treatments imply. Therefore the purpose of the present study was to analyze the effects of an intervention cognitive-therapy on anxiety, depression and adherence therapeutic in breast cancer patients of Mexico's National Cancer Institute (INCan). **METHOD:** 70 patients were included, with low education, between 18 and 70 years of age, with breast cancer diagnosis, in clinical stadiums I, II or III that are treated in the INCan. Excluded from the protocol where those patients that had a psychiatric diagnosis, including retardation, undergoing a terminal phase or were participating in another study. All the participants signed

the informed assent. The Inventories of Anxiety and Beck's Depression and a behavioral record of therapeutic adherence were used. The intervention consisted of detection and restructuring of defective cognitions, training of auto-regulation of emotional reactions and establishment or behavioral modification. **RESULTS:** The results have shown an improvement in emotional self-regulation, mostly a reduction in the level of anxiety before stimuli associated with the hospital and treatments such as the chemotherapy, radiotherapy and surgery. The records show that the patients have shown positives behavioral changes associated with the use of the self-recording procedure of therapeutic adhesion. This has made possible the control of risky behaviors in the care of the patients and has facilitated the establishment of new behaviors for their well-being. **CONCLUSIONS:** The cognitive-behavioral therapy decreases the levels of anxiety in the patients and allows them to learn new emotional autoregulation skills; the restructuring help them to modifies beliefs that obstruct the medical treatment and the implementation of instrumental conducts allows improve health behaviors. **RESEARCH IMPLICATIONS:** The patients included in this investigation had different characteristics such as the age, clinical stadiums, socio-economic status, and education status. In spite of these differences the cognitive-behavioral skills can improve different aspects of the life of the breast cancer patients. Principally the intervention was made in the hospital with the purpose of control the symptoms before that the patients were exposure to the medical treatments. **CLINICAL IMPLICATIONS:** Better adhesion to the treatment; Better emotional and interpersonal managing of the physical aspect; Improved communication skills in the interaction physician-patient; More emotional self-regulation; Better tolerance of treatment side effects; Psychoeducation reduces uncertainty and anxiety during treatment; Decrease of risky behaviors that obstruct the oncology treatment and the development of the disease. **ACKNOWLEDGEMENT OF FUNDING:** UNAM.

P2.1.25

A Behavioral Self-recording Procedure in the Management of Breast Cancer

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BACKGROUND: Indeed, the treatment of breast cancer requires the systematic implementation of a wide array of assessment and therapeutic actions. Some such tasks are carried out by the health

professionals in a hospital but others depend primarily on the patient and/or her home primary caregiver. Thus, the purpose of the present study was to develop a behavioral self-recording procedure with low schooling breast cancer patients in a public healthcare facility in Mexico City. **METHOD:** 70 patients were included, all had a confirmed diagnostic of breast cancer with at least three months of evolution and were recipients of healthcare services at the main hospital of Mexico's National Cancer Institute. Were excluded if they had a psychiatric diagnostic, including retardation, were in an unambiguous terminal phase or were participating in another study. The behavioral self-recording instrument consisted in a portable booklet containing twelve pages with designed spaces for recording the behavioral categories for one week. Were included the most frequent complaints by breast cancer patients regarding suffering related to the condition itself or to its medical treatment. **RESULTS:** Regarding reliability, eight out of twelve behavioral categories yielded percentages of 80% or higher, two were marginal (deep muscle relaxation and time spent with friends and family) and two showed agreement percentages between 65 and 70 percent (risky behaviors and appropriate eating). Reliability on emotional reactions showed one marginal reading of 79.2% (angry) and the remainder ranged from 82.7% to 90.6%. The categories showing positive change included exercising, spending time with family and friends, reduction of risky behaviors, positive emotional reactions and repairing-refreshing sleep. Those showing the smallest improvement included sexual activity, performing at work or in home chores, and recreation. **CONCLUSIONS:** In general, data point in the direction of a useful, practical and reliable behavioral self-recording procedure. Regarding behavioral change, most pre-post measure comparisons yielded change in the direction required to support patient therapeutic adherence and reduce distress. The patients are capable of observe which are their risky behaviors and then change it. **RESEARCH IMPLICATIONS:** The results obtained with the self-record procedure show that it is a reliable and practical low-cost tool, for the evaluations of interventions aimed at effective home-based self care of breast cancer. Other contribution of the present study relates to the specificity of features in both recording materials and interventions so as to address needs of patients with low socio-economic status. **CLINICAL IMPLICATIONS:** Different convictions about the cancer and the lack of schooling severely limit the viability of interventions aimed at improving the patient's condition and reducing distress, the establishment of self-care skills, modifying incompatible private verbal events and behaviorally regulating maladaptive emotional responses become an important applied

behavioral priority in the case of breast cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** UNAM.

P2.1.27

Women with Breast Cancer Symptom Experiences: A Metasynthesis

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BACKGROUND: Women with breast cancer may suffer from numerous symptoms resulting from the primary disease and/or the treatment of the disease. It is inarguable that the best source of information on symptoms experience is the patient themselves. Qualitative studies allow the patient to describe their symptom experiences and provide a fuller understanding. This presentation will explore the symptom experience of women with breast cancer from time of diagnosis to completion of treatment using metasynthesis. **METHOD:** Relevant qualitative research studies were located and retrieved using computer searches in CINAHL, PsychLIT, Academic Search Premier, Embase and MEDLINE. The research reports selected for this synthesis met the following inclusion criteria: (a) the study focused on women with breast cancer (b) there were explicit references to the use of qualitative research methods; and (c) the study focused on women's perspectives and experiences of breast cancer. There were no restrictions related to the date the research was published. The steps in undertaking a metasynthesis as advocated by Sandelowski and Barroso (2007) were followed. **RESULTS:** The overarching idea emerging from this meta-synthesis is that the symptoms experience for women with breast cancer has effects on the very 'self' of the individual. Emerging from women's descriptions of their symptom experience is their need to consider the existential issues that they face while simultaneously dealing with a multitude of physical and psychological symptoms. Women feel that they are discredited by having cancer and undergoing treatments and therefore stigmatised. Women also describe a sense of loss of control and self image, resulting in an impact on their personal autonomy and a loss of roles. **CONCLUSIONS:** This metasynthesis develops a new, integrated, and more complete interpretation of findings on the symptom experience of women with breast cancer. The approach taken created a time event line from time of diagnosis to post completion of treatment. This was achieved by undertaking constant targeted comparative analysis of the studies to arrive at a general overview of the symptoms experience of women with breast cancer. For most women with breast cancer the concept of self is redis-

covered and redefined. This requires a continual reappraisal that then necessitates an acceptance of this redefinition by self and others. **RESEARCH IMPLICATIONS:** There are a limited number of studies published that focus specifically on women with breast cancer symptoms experience but rather in reading the narratives provided by the participants evidence of symptoms experienced could be seen to emerge. Studies tended to have very specific and therefore limited focus. It would seem therefore that there is a paucity of research studies that embrace the entire symptom experience of these women. **CLINICAL IMPLICATIONS:** The results of this metasynthesis offers the clinician a greater understanding in depth and breadth than the findings from individual studies on symptom experiences. It is important to realise that the underlying feature of the concept of symptom distress is the meaning the illness holds for that individual and this metasynthesis facilitates clinicians in developing an understanding of symptoms women with breast cancer find distressing. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.28

Plasma Hormonal Comparison Between Familial and Non Familial Benign and Breast Cancer Females

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BACKGROUND: Women with a family history of breast cancer are at increased risk of the disease, but no study has been characterized how over women lives this risk is influenced by family history or other risk factors like plasma hormones. **METHOD:** Ninety women attending King Hussein Medical Center (Amman, Jordan) during the period between June 2007 and May 2008 were enrolled in this study, 80% of them were breast cancer patients and the other (20%) were breast benign patients. Cancer status were diagnosed and classified by a specialized pathologist. Familial and non familial breast cancer was categorized according to presence of breast cancer history in the family by having at least one of first degree or second degree relatives with breast cancer. **RESULTS:** Most breast cancer patients and benign were with no familial history of breast cancer (84.7%, 72.2%) respectively. A high percentage of non familial breast cancer patients had high plasma estradiol (16/19 = 84.2%) progesterone (10/12 = 83.3%) or prolactin (8/9 = 88.9%) concentrations indicating that these hormones may be implicated in breast cancer development. In contrast, these plasma hormones have lower effect

in familial breast cancer development. Non familial benign patients had higher Plasma estradiol and progesterone concentrations (265.2 pg/ml, 3.4 ng/ml) respectively, than those with familial history, while plasma prolactin concentration (66.9 ± 24.5 ng/ml) was higher in familial breast cancer females compared with non familial benign patients. **CONCLUSIONS:** Nonfamilial breast cancer females were associated with significantly higher plasma prolactin and estradiol concentrations when compared with familial breast cancer females. At the same time the association of family history with benign breast cancer risk may be mediated by plasma prolactin concentration. **RESEARCH IMPLICATIONS:** Our results indicated that both breast and benign patients with non familial history of breast cancer have significant changes in plasma hormones that should be considered in breast cancer pathogenesis as well as in the treatments. **CLINICAL IMPLICATIONS:** Our results indicated that both breast and benign patients with non familial history of breast cancer have significant changes in plasma hormones that should be considered in breast cancer pathogenesis as well as in the treatments. **ACKNOWLEDGEMENT OF FUNDING:** This study was financially supported by a grant from the Hashemite University-Zarqa-Jordan. We thank King Hussein Medical Center (Amman-Jordan) where part of this work was carried out. Special thanks go to Zghool. Fuad for his technical assistance in the hormonal analysis, and for all participating women.

P2.1.29

Psychosocial Adjustment During Diagnosis and Treatment for Breast Cancer: Changes, Continuities and Determinants

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BACKGROUND: Being a dreadful and life-threatening illness, breast cancer (BC) can induce negative psychosocial sequels and quality of life (QoL) impairments, resulting in significant demands on women's individual and social resources. Nevertheless, BC experience can bring patients a greater sense of enhanced relationships and life appreciation. This longitudinal study examines women's QoL, anxiety and depression levels after diagnosis and during treatments for BC and searches for psychosocial determinates of women's adjustment and psychological growth. **METHOD:**

45 women diagnosed with BC were selected in Gynaecological Department of Coimbra University Hospitals and were assessed before surgery for BC (M1) and during radiation or chemotherapy treatments (M2). A group of 45 aged-matched women from general population (Gp), with no personal history of cancer was also selected (control group). All participants completed a demographic and clinical information form, HADS, WHOQOL-Bref, PTGI and Brief IPQ (only BC group). Dependent and independent samples *t*-tests were performed. Regression analyses were conducted in order to test the impact of age, surgery, treatment and also illness representations on adjustment, QoL and psychological growth. **RESULTS:** There were significant differences between women with BC and Gp on anxiety, physical and overall QoL and also growth. Longitudinal comparisons among women with BC from M1 to M2 revealed a significant reduction on physical QoL and also a decrease on anxiety levels. Regression analyses shown that older women had poor Psychological and Social Relationships QoL. Women who had a mastectomy were more depressed. Chemotherapy had not a significant effect. Those who after diagnosis revealed worse cognitive and emotional illness representations have shown higher levels of anxiety and depression, as well as worse Psychological, Environment and Overall QoL during treatments. **CONCLUSIONS:** BC diagnosis and treatment has a significant impact on women's emotional adjustment and QoL although contributes for the experience of positive life changes. During treatments women tend to be less anxious than in the aftermath of BC diagnosis but their physical QoL is significantly impaired. Although chemotherapy is associated with neither distress, QoL nor even growth, mastectomy is predictive of higher depression and younger age with better Psychological QoL as well as Social Relationships. Negative cognitive and emotional illness representations after diagnosis contribute to poor psychosocial adjustment during treatments. **RESEARCH IMPLICATIONS:** The majority of studies in the context of BC is cross-sectional and does not study continuities and changes along BC trajectory. The increasing number of women newly-diagnosed with BC and the advances in treatment options urge the examination of the longitudinal impact of diagnosis and treatment on QoL and emotional distress. Besides that, must focus well-being and the hypothesis of growth in the aftermath of BC. **CLINICAL IMPLICATIONS:** The assessment of psychosocial adjustment, QoL and positive life changes in the aftermath of BC and cognitive processes associated with is essential in order to identify the specific needs and risk factors that clinicians should monitor in each phase of cancer trajectory. Psycho-educational and psychosocial

programs must emphasize more adjusted illness representations and enhance resiliency mechanisms during the course of BC so that women can experience cancer as an opportunity for developing more adjusted trajectories. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.1.30

Arm Morbidity Predicts Difficulties with Recreational Activities After Breast Cancer Surgery: Does It Improve with Time?

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BACKGROUND: Engaging women in recreational activities after breast cancer surgery is important because being able to participate in these activities represents a return to 'normal' and provides psychological and physical benefits. Using our longitudinal study data we have examined the relationship between arm morbidity and recreational activities one and two years after breast cancer surgery. **METHOD:** Women with stage I–III breast cancer were recruited in four centers across Canada. Participants enrolled in the longitudinal study between 6 to 12 months following their breast cancer surgery. Six months after the initial clinical assessment the women participated in a telephone interview, and one year after the initial clinical assessment, they underwent a second clinical assessment. At each clinical assessment arm morbidity was determined using a physical exam measuring pain, lymphedema and range of motion of the affected arm. Participants completed the Profile of Moods States; Disability of Arm, Shoulder and Hands; and the Social Impact of Arm Morbidity questionnaire. **RESULTS:** A total of 726 women enrolled in the study. Forty-seven percent had undergone axillary node dissection, 28% sentinel node dissection, and 25% both. On average women were almost 1 year past surgery at the first clinical assessment and almost 2 years past surgery at the time of the second clinical assessment. At the first assessment, arm morbidity was the predictive variable for women reporting having difficulty with recreational activities that required 'little effort' (8%), 'some effort' (49%) and 'free movement' (42%). At the second clinical assessment the impairment was largely unchanged: 12%, 44% and 37% respectively. **CONCLUSIONS:** We have been able to determine that breast cancer survivors who develop arm morbidity secondary to

their cancer surgery experience restrictions in their ability to participate in recreational activities requiring easy use of the ipsilateral arm and these restrictions persist for at least two years after surgery. **RESEARCH IMPLICATIONS:** The most valuable aspect of this study methodology is that using this longitudinal data-following a large group of women over time—we have learned that arm morbidity secondary to breast cancer surgery does persist for at least two years after surgery. **CLINICAL IMPLICATIONS:** Arm morbidity limits recreational activities that require arm movements. Clinicians, physiotherapists and other therapists need to be aware of these long term limitations and not expect any significant improvements for at least the first two years after surgery. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research (CIHR) MOP 68883.

P2.1.31

DCIS and Breast Cancer: Worlds Colliding

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BACKGROUND: Ductal carcinoma in situ (DCIS) is a non-invasive breast condition, where cancer cells are confined to the ducts, and currently do not have the ability to spread. Patients with DCIS face a paradox; although reassured that the condition is early and not life-threatening, they undergo surgery (including mastectomy) similar to invasive breast cancer (IBC). There is limited research exploring women's experiences of DCIS, especially near to diagnosis, which the current study aimed to address. **METHOD:** As part of a mixed methodology prospective study with women newly diagnosed with DCIS, 45 women took part in a semi-structured interview at baseline. Women were recruited from 9 breast clinics in the UK and were eligible if they had a biopsy diagnosis of DCIS and were awaiting or had undergone surgery within the preceding 3 months. Interviews were flexibly arranged and conducted to avoid overburdening women during the early, sensitive period. The aim of these interviews was to explore women's initial experiences and perceptions post-diagnosis. Interviews were transcribed verbatim and analysed using thematic analysis. **RESULTS:** An overriding aspect highlighted throughout the findings is how women's DCIS experiences merge and sometimes collide with a lay experience of breast cancer. Overall the analysis identified 5 themes (Knowledge about DCIS; Paradox to Acceptance; Influence of and Managing Significant Others; Personal Impact) but this presentation will focus on one theme: Perceptions of DCIS. Most women highlighted the initial lack of awareness about DCIS

but their perceptions evolved overtime. Early perceptions were diverse, were related to women's interpretation of the terminology used by professionals, knowledge about DCIS, and will be discussed in terms of their impact on treatment and support. **CONCLUSIONS:** This study represents one of the few qualitative studies conducted with newly diagnosed DCIS patients and captures women's initial experiences and perceptions of the condition. The findings highlight the development and diversity in perceptions of DCIS (ranging from cancer to not cancer). The communication and terminology used by health professionals is crucial for the development of these views. Therefore, the nature and impact of the variation in communication about DCIS warrants further exploration and debate with both professional and patient groups in order to help inform the provision of the most appropriate care, support and information. **RESEARCH IMPLICATIONS:** The findings discussed highlight the importance of exploring how patient and non-patient groups perceive health conditions. Along with the authors' previous work in this area (with health professionals and patients), this study emphasises the need for future research to investigate the psychosocial impact of DCIS. This should work towards developing effective interventions to help health professionals accurately explain and communicate with their patients about DCIS and to ensure that they fully understand the condition. **CLINICAL IMPLICATIONS:** The diversity of patients' perceptions of DCIS must be recognised in clinical practice. The findings emphasise the importance of the initial terminology health professionals use to describe the condition and highlight that clear, accurate and consistent communication by all members of the multi-disciplinary team is essential. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by a PhD studentship grant from the UK charity Breast Cancer Campaign.

P2.1.32

Living with a Breast Cancer Diagnosis

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BACKGROUND: Aim: The purpose of this qualitative phenomenological study is to provide in-depth understanding of the experience of Lebanese women living with a diagnosis of breast cancer. Background: In Lebanon, a country of 4 million people, breast cancer is the most widespread type of cancer among Lebanese women. Despite this issue the international literature lacks information on how Lebanese women live with a diagnosis of breast cancer when compared with women of another cultures. **METHOD:** The study

followed purposeful sampling in which 10 participants with a mean age of 51.3 years were chosen based on their actual knowledge of the phenomena, and their readiness to share that knowledge. Data were collected between December 2007 and May 2008. All interviews were audio taped and transcribed verbatim. Data were analyzed based on the Utrecht School of Phenomenology. **RESULTS:** Four major core themes describing the participants' lived experience emerged from the interviews: Living with losses; living with guilt feeling; living with fears and uncertainty; Living with the need to know and to share that knowledge. **CONCLUSIONS:** The diagnosis of a disease such cancer is a critical life incident that can alter an individual's life. Dealing with the breast cancer diagnosis, as well as physical symptoms and emotional sufferings experienced both after diagnosis and during treatment, can interfere with living a normal life. A good comprehension of the experience and effect of cancer on the lives of women is crucial to allow health professionals to offer appropriate information, and to lead to the knowledge development in the field of breast cancer. **RESEARCH IMPLICATIONS:** This study reported the guilt idea as lived by women diagnosed with breast cancer which is mentioned for the first time in the literature and it needs further clarification and studying. **CLINICAL IMPLICATIONS:** The results of this study challenge nurses and other health care providers to be aware of the difficulties that women are facing when they are diagnosed with breast cancer. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by a grant from the Medical Plan Program at the American University of Beirut.

P2.1.33

Psychology/Attitudes of Primary Healthcare Workers Toward Breast Cancer: Experiences of Indian Cancer NGO

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BACKGROUND: Indian-Primary-healthcare-workers are backbone of rural/tribal-area healthcare-sector. Not provided with extensive-knowledge about Breast-cancer-patients needs like psychosocial support. majority Primary-healthcare-workers have apprehensions/lack-confidence in caring such patients. Objective: To find percentage of Primary-healthcare-workers: a) who give psychosocial/nursing care in villages; b) who refer Breast-cancer patients to speciality-counselling-centres owing to their apprehensions or lack of confidence, during their practice; c) scared of stigma from society/community; d) who would opt for

specialised training to provide supportive care to Breast-cancer patients. **METHOD:** A pre-tested questionnaire was given to 52 Primary healthcare workers from rural/tribal centres of India. Objectives was to answer anonymously, give suggestive opinion for modification of their current nursing training program. data were analysed by simple descriptive statistics. **RESULTS:** 21% Primary healthcare workers would treat patients themselves; 79% would refer them to speciality centres; 75% feared social ostracism/bycott/stigma; only 7% showed willingness to undergo special nursing training-program. **CONCLUSIONS:** Majority of Primary healthcare workers fear social stigma for associating with Breast-cancer patients leading to unnecessary referral for routine issues like nursing care & psychotherapy support. This will result in difficult access to treatment and avoidable burden on speciality centres. We need to sensitise nursing personal for psycho-social issues of breast cancer sufferers. 11th-IPOS-Vienna meeting must develop agenda on this matter in developing nations. **RESEARCH IMPLICATIONS:** Cancer-nurses/activists should be posted to counselling-centres during training. This will help in developing confidence, removing apprehensions and establishment of better relationship with cancer-patients during their practice. Cancer-care-givers needs to be sensitized towards psycho-social issues of breast-cancer-sufferers. Especially in resource-poor-developing-nations there is urgent need to familiarize them to mental trauma/humiliation suffered by breast cancer-patients. By interaction with senior-researchers at IPOS-Vienna-congress we shall carry back expertise/knowledge from IPOS congress back into our NGO community in rural/tribal India. **CLINICAL IMPLICATIONS:** At 11th IPOS I as NG-representative shall exchange our concerns/experiences/difficulties about psycho-social issues of breast-cancer-sufferers with congress-participants. IPOS-participation will spread our activities in collaboration with conference participants. Analysis of international trends in psycho-oncology & its correlation with our study will help clinicians develop a plan to tackle such issues in developing-nations. Presentations by leading cancer researchers on issues of breast cancer at Vienna-congress will also modify our future action plan of our Community-work. **ACKNOWLEDGEMENT OF FUNDING:** This was a project designed & conducted by volunteers of this cancer NGO in rural/tribal India. We did not receive any funding. All 12 volunteers, 2 nurses & one psychologists [Abstract presenter] gave their free services for this project. All breast cancer patients were those who returned to villages after chemo/surgery in city hospitals. This was a unique effort 'As a Community study without any funding resource'.

P2.1.34

Barriers in Access to Care Among Undocumented Immigrant Women with Breast Cancer

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BACKGROUND: Of the estimated 47 million Latinos living in the U.S., approximately one quarter are undocumented immigrant adults. Little is known about cancer treatment experiences among Latino immigrant communities. Recently enacted federal/state legislative reforms to control immigration are emerging as new barriers in access to cancer care. The purpose of this presentation is to describe how immigration reform contributed to difficulties in accessing cancer care among undocumented Mexican immigrant breast cancer survivors. **METHOD:** A qualitative design was used to describe and analyze cancer care experiences among Mexican immigrant women. Participants were diagnosed with breast cancer (Stages 1–4) within the past 6 years. Nearly all of the Mexican immigrant women were low income and had inadequate or no healthcare insurance. Participants were recruited from a variety of community-based organizations in the Southwestern U.S. **RESULTS:** Mexican immigrant participants ($N = 10$) migrated between 7–15 years ago and were residing in the U.S. illegally. Most participants had been paying out of pocket for cancer treatment. The majority (75%) described significant psychological distress related to inability to obtain continued cancer care services. Enforcement of immigration laws restricting employment opportunities created further economic strain. For these families, addressing immediate needs such as food and rent became prioritized over cancer treatment. **CONCLUSIONS:** Findings from this study revealed that economic effects of immigration policy created barriers to cancer treatment and added burdens in the struggle of living with cancer. Latino immigrant populations are especially vulnerable because of lack of access to social and healthcare resources, as well as prejudice and misunderstanding towards immigrant groups by the dominant society. **RESEARCH IMPLICATIONS:** No other studies were found that investigated the cancer care experiences of undocumented immigrant Latina breast cancer survivors. Further research is needed to understand how cancer survivors among immigrant communities manage their illness along the cancer care continuum. **CLINICAL IMPLICATIONS:** Healthcare providers need to consider opportunities to fulfill their ethical obligation to enhance the well-being of cancer patients. Strategies

for medically underserved populations include interventions such as identification of local cancer care services that are available regardless of citizenship status or ability to pay. **ACKNOWLEDGEMENT OF FUNDING:** Supported by NIH 5R03 CA 124752-02.

P2.2.1

Psychological Process Model Mainly on 'Unfinished Tasks'

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BACKGROUND: People always live having 'Unfinished Tasks' in the life. What kind of regret do the bereaved have to endure toward 'Unfinished Tasks' that they were unable to accomplish? This study focuses on the 'Unfinished Tasks' of families nursing cancer patients, as well as clarifying how the accomplishment of the 'Unfinished Tasks' caused and developed in their relationship would influence the bereaved families. **METHOD:** Participants are 11 families in Osaka residential zone, providing 17 effective answers (6 male, 11 female; average age, 58.05). All participants answered questions regarding 'subjective evaluation of relationship with the deceased (patient)', 'conversation during nursing care', 'interactions with medical staff', 'interaction with others excluding medical staff', 'positive (negative) sides of nursing care', 'interactions with others after bereavement', 'Unfinished Tasks', and 'dialogues with the deceased'. Partial participants ($N = 10$) answered about the change in 'Unfinished Tasks' and 'dialogues with the deceased' taking place at the half of the year, and about the 'Unfinished Tasks' and 'taboos after bereavement' having been newly actualized. **RESULTS:** Results of qualitative analysis by MGTA indicated that interactions with the patients, medical staff and others imply prescriptive factor in subjective evaluation of relationship with the patients. In addition, the cognitive process of 'Unfinished Tasks' also played a very significant role in family members' daily life after bereavement. The cycle of process undergoes 'assessment of difficulty', 'accomplishment (performance)', and 'evaluation of accomplishment (performance)', and lead to 'finding benefit' or 'discontentment.' Dialogue with the deceased gives influence to evaluation of accomplishment. We are going to introduce the psychological process model of the 'Unfinished Tasks' provided by the analysis during the presentation. **CONCLUSIONS:** The psychological process in accomplishment of 'Unfinished Tasks' among the families of the cancer patients received favorable and unfavorable affects their social interaction during the time progress. **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** The psychological process models

provided in this study could apply to family palliative care of the cancer patient. However, in practice, it has to be based on sufficient mutual trust between the family and the medical staff, together with understanding of the illness prognosis by both patient and the family. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.2.2

Assessing Psychological Adjustment in Siblings of Children with Cancer

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BACKGROUND: Few studies have been conducted on the psychosocial functioning of siblings of children with cancer. This study assesses the psychological adjustment of a sample of siblings, compared with a control sample. Further, we analyzed the impact of several moderating variables such as children's gender and age, order of birth vis-à-vis the ill child, family size, degree of awareness and changes in their lifestyle. **METHOD:** Parents of children admitted to the Istituto Nazionale dei Tumori in Milan completed the CBCL questionnaire (*Child Behavior Checklist*, version 4–18 year-olds, 1991) on their healthy offspring (clinical sample, $N = 30$) and the scores were compared with those of a control sample of the same age (4–18 year-olds, $N = 33$). The parents of the clinical sample were also administered a semi-structured interview (*Questionnaire for Parents*) on factors that might exacerbate or protect against any related risks. **RESULTS:** *t*-test statistics were conducted over independent samples. Significant differences emerged in both the internalizing and the externalizing CBCL syndrome scales but, contrary to expectations, higher scores were recorded for the children in the clinical sample. The gender and age of the healthy siblings, and their order of birth with respect to the child with cancer had no influence on the scores obtained in the CBCL for the clinical sample, whose scores were also found to have no significant correlation with the variables concerning size of family, awareness or change in lifestyle. **CONCLUSIONS:** Future research will need to clarify whether such results are attributable either to the resilience of the healthy siblings or to the parents difficulties in assessing the psychosocial functioning of their healthy children, who are often neglected. The siblings themselves might deliberately choose to externalize any discomfort they feel as little as possible. Moreover, the parents probably tend to deny any difficulties their healthy children

are experiencing, seeing the latter's conditions as better than they really are due to the cognitive effect of the "contrast" with the child who has cancer. **RESEARCH IMPLICATIONS:** Further studies are needed to directly investigate healthy siblings' point of view, not only their parents', administering projective tests in addition to focused questionnaires on observable behaviors, such as the CBCL. Furthermore, virtually no studies have been conducted to ascertain teachers' point of view. It would also be important to distinguish between short and long-term adjustment, by comparing siblings of newly-diagnosed cancer patients, with siblings of those who relapse or have completed their therapy. **CLINICAL IMPLICATIONS:** It is essential to design support programs for all family members, helping parents to become more aware of their healthy children's needs. It would be useful to create discussion groups for healthy siblings, and to provide opportunities for them to enjoy themselves together with other children (for instance, at summer camps); such schemes are already fairly widespread in the English-speaking countries and have been judged very favorably by the children involved and their parents. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.2.4

Risk Factors for Distress Among Patients and Next of Kin Facing Cancer—Associations Between Socio-Demographic and Illness-related Variables and the Distress Thermometer

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BACKGROUND: The study's aim was to analyze associations between a range of relevant socio-demographic and illness-related variables and distress measured with a short screening method, the Distress Thermometer, in order to identify differences and similarities in risk factors for distress among patients and next of kin. **METHOD:** A heterogeneous sample composed of 443 patients and 321 next of kin from a multi-site study (four oncology units) completed questionnaire surveys that included the Distress Thermometer as a measure of negative psychological effects, self-reported socio-demographic (study site, sex, age, education, income, single/partnered) and illness-related (cancer type, type of treatment undergone, number of treatments undergone, stage of illness, time since last diagnosis, subjective physical condition) items. **RESULTS:** Among patients, socio-demographic variables were not related to distress. Among next of kin, however, sex, income, and education were associated with distress. Illness-

specific variables were related to distress in both groups. Among patients, the number of treatments undergone, their subjective physical condition, and the stage of their illness were all related to distress. Among next of kin, only stage of the illness was found to be related to distress. While some variables were related to distress in both groups, more often than not the strength and pattern of the associations differed between them. **CONCLUSIONS:** Socio-demographic and illness-related factors may differentially affect the experience of distress among patients and next of kin. Socio-demographic variables were only linked to distress among next of kin. The association between illness-related variables and distress differed in pattern and strength between the two groups. Context-related factors may be crucial for next of kin while illness-related factors more strongly impact distress among patients. Level of distress among patients and next of kin is connected; thus, similar factors appear to impact their distress. The present findings may help explain how some patients and next of kin experience different distress levels. **RESEARCH IMPLICATIONS:** The findings emphasize the importance of distinguishing and understanding individual risk factors for patients and next of kin when examining distress. Further studies are needed that examine the impact of such differences and similarities in risk factors for distress among families, on collective level. **CLINICAL IMPLICATIONS:** Being aware of differences and similarities in risk factors for patients and next of kin may enable clinicians to understand when levels of distress among patients and next of kin are similar or dissimilar. This knowledge may facilitate improved support of the individual and collective situation of patients and next of kin as well as enable earlier detection of high-risk settings. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported by the Zurich Cancer League.

P2.2.5

Resilience, Family and Oncology Patients

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BACKGROUND: This abstract shows the importance of the family in oncology patients. In Instituto de Oncología Luis Razetti in Venezuela we work with family groups support. Besides, we are working with different concepts taken from positive psychology like resilience in the assessment with patients and their family. Finally we are studying the resilience development in Venezuelan family members. **METHOD:** This research is a qualitative study conducted in Venezuela from in-depth interviews

with family members of oncology patients. We observed and transcribed the sessions with the families and we did 5 deep interviews asking the family members about their experiences living the disease in family and the learning they had gone through. We selected the people for the interviews choosing from different kinds of relations with the patient (daughter, sister, sister in law, wife, husband). **RESULTS:** The interviews and the sessions with the family members were analyzed. We built six categories: Physician-patient relationship, Family member reaction based on the diagnostic, Needs or Actions to be taken when in-patient in the family, Family disease diagnosis understanding of the patients, Lesson learned based on the experience, Burn out of the situation, Family characteristics. The results show the importance of interaction doctor-patient-family in the illness coping, acknowledge of their fears and needs by the family members and the presence of support networks in the family as factors promoting resilience in families in Venezuela. **CONCLUSIONS:** In Venezuela, as Latin American people, a nuclear and extensive family is very important in personal support during illness. The woman in the family is the principal caregiver and if she knows how to involve the rest of the family everybody learns about the experience. Otherwise, burn out symptoms emerges. Then, Physician-patient relationship was very important to develop resilience in all the family members. Frequency information dialogues talking about alternatives and changes are very supportive. Every person involved confirm that group support listening specialist and the experiences of the other ill people and their family members helped to learn and cope with the illness. **RESEARCH IMPLICATIONS:** Research shows the importance of: studies with all family members, interactions between all the actors of the situation (doctors, patients and family members) and the relevance of individual and group work sessions. This research confirms the importance of positive psychology and 'resilience' as framework to make studies in psycho-oncology. **CLINICAL IMPLICATIONS:** Research shows the importance to assist jointly family and patient. Permanent dialogue in individual and group sessions talking about alternatives and choices develops resilience in all members. The team work with doctors, psychologist, social workers and other health professionals is required to walk to the same goal. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.2.6

The Emerging Notion of Hope and the Complex Journey for Parents of Children with Cancer

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BACKGROUND: This study longitudinally and prospectively examines parental hope and the potential shifts in the concept of hope over the temporal trajectory of a childhood cancer diagnosis, treatment, palliation and bereavement. **METHOD:** A sample of 35 parents of a child with cancer, (26 mothers, 9 fathers), are being followed over five data collection time points for 18 months after enrolment, including data collection after the child's death, as relevant. Parents are completing several standardized questionnaires, utilizing personal diaries, and being qualitatively interviewed. Findings based on qualitative analyses of the interviews using grounded theory are presented here. **RESULTS:** Findings reveal stability, yet fluidity and variation, of hope as a salient concept across the trajectory of a child's diagnosis, illness course, palliation, death, and bereavement. Parents report that hope is an ongoing, although sometimes shifting and precarious, presence in their lives. They consider hope as a positive force for living, which is unique to every parent. Positive communication with health professionals, support from family and friends, spirituality and optimism help maintain hope. Finally, hope appears to be strengthened with improvements in the child's health. **CONCLUSIONS:** Parental hope is a highly complex, stable, yet dynamic construct related to optimism, spirituality, child's health changes and relationships with others. These findings have clinical and policy implications. **RESEARCH IMPLICATIONS:** This study guides future intervention-based research fostering and evaluating parental and family hope. It also adds depth to methods and ethics considerations in methodologies associated with pediatric palliative and bereavement care. **CLINICAL IMPLICATIONS:** Understanding and supporting parental hope across the trajectory of cancer care are important elements in clinical service to families. These findings offer guidance for clinical practice and policy development. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institute of Health Research (CIHR).

P2.2.7

Psychiatric Disorders of the Bereaved Who Lost Family Members Due to Cancer: Experiences of Outpatient Services for Bereaved Families in a Cancer Center Hospital in Japan

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BACKGROUND: The death of a person is a stressful event in life. This stress is related to the physical and psychological well-being of the bereaved. With the

aim of alleviating psychological distress in the bereaved, our hospital started an outpatient service for bereaved families. The purpose of this study was to examine patterns of referral, psychiatric disorders, background characteristics, and psychosocial interventions among the bereaved who lost a loved one due to cancer. **METHOD:** In this retrospective study, all patients who consulted the outpatient service for bereaved families in our hospital between April 2007 and March 2008 were reviewed. This study was approved by Institutional Review Board of Saitama Medical University International Medical Center. **RESULTS:** During the study period, 29 patients consulted the outpatient service for bereaved families. The ages ranged from 16 to 75 years (mean: 52 ± 14). The most common psychiatric disorder among the bereaved was bereavement reaction ($n = 12$, 41%), followed by major depression ($n = 10$, 34%). Five patients ($n = 5$, 17%) experienced dissociative disorders in addition to their psychiatric diagnosis. Females ($n = 26$, 90%), and spouses ($n = 15$, 52%), mostly independently presenting themselves to the center ($n = 21$, 73%), were the most common users of the service. **CONCLUSIONS:** This is the first report of consultation data regarding the bereaved who lost family members due to cancer. Most of the patients who consult outpatient services for bereaved families suffer from psychiatric symptoms related to the death of close family members, and need some help. Psychiatric interventions including psychotherapy and medications are required for these families. **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** In this study, about forty percent of the bereaved family members who consulted the outpatient service for bereaved families suffered from bereavement reaction, and thirty percent suffered from major depressive disorder. These data indicate the need for close attention to both psychological assessments and medical treatments in families who have lost family members due to cancer and consult outpatient services for bereaved families. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by a grant-in-aid from the Ministry of Health, Labour and Welfare, and the UNIVERS foundation.

P2.2.8

The Impact of Parenthood on Quality of Life of Cancer Patients

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BACKGROUND: Diagnosis and treatment of cancer can cause psychosocial problems for the patients. But also the relatives are at risk of being psychosocially distressed. There are only a few empirical-based findings on the role of the parenthood on the psychosocial situation. It is assumed that psychologi-

cal and social problems occur primarily in families with (little) children. Therefore aim of this study was to examine the impact of parenthood on the quality of life of cancer patients. **METHOD:** A total sample of 246 cancer patients (56% female) with different cancer sites were surveyed at the beginning of their inpatient medical treatment (t1) and after 6 months (t2) with the questionnaire EORTC QLQ-C30. Three subgroups (group without children, children under 17 years, children 17 years and older) were compared in a cross-section and a longitudinal design. The variables sex, partnership, distant metastases and age were controlled. **RESULTS:** A negative impact of parenthood on certain sub-dimensions of quality of life can be shown in contrast to patients without children at the time of the acute treatment (t1). After 6 months (t2) quality of life was increased especially in the subgroup of patients with younger children. But there are no further significant differences between patients with or without children. In part variables like younger age, male sex and partnership have a positive impact on quality of life of patients. **CONCLUSIONS:** In conclusion, the present findings suggest a special psychosocial support need of cancer patients with children during the acute treatment. The presence of younger children can be possibly interpreted as a protective factor in the process of illness. **RESEARCH IMPLICATIONS:** Further studies are necessary to clarify the influence the parenthood. The development of suitable instruments for the measurement of psychosocial burden of parents with cancer and their children and the implementation and evaluation of specific intervention programs should be goal of further investigations. **CLINICAL IMPLICATIONS:** Data of family constellations should be collected systematically in the medical history in psycho-oncological settings. In particular psychological and social support should be offered to patients with little children. It is necessary to develop and integrate family-oriented care concepts in the medical and psychosocial treatment of parents with cancer. **ACKNOWLEDGEMENT OF FUNDING:** The authors thank the German Cancer Aid (Deutsche Krebshilfe e.V.) for funding this study.

P2.2.9

Application of the NCCN Distress-Thermometer to Patients and Their Caregivers Before and 3 Months Post Autologous Peripheral Blood Stem Cell Transplantation (PBSCT)

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BACKGROUND: Purpose of the study is to identify psychological distress in patients undergoing PBSCT as well as in their caregivers. Since Zwahlen *et al.* (2008) recently validated the NCCN Distress Thermometer (DT) for family members of cancer patients the DT was presented to patients and to their caregivers. The subjective distress rating by patients and caregivers was complemented by an expert rating using the recommended German Psycho-Oncological Base Documentation (PO-BaDo). **METHOD:** 48 patients with severe haemato—oncological diseases and 28 caregivers completed the NCCN Distress-Thermometer at two time-points: before treatment with PBSCT in one of the cooperating transplant centres and 3 months after PBSCT. According to the PO-BaDo 16 patients have been assessed as highly burdened (high-risk patients) and 32 have been assessed as less burdened (low-risk patients). Differences between DT mean scores of patients and caregivers divided in the two risk subgroups were calculated for both time-points. **RESULTS:** Before PBSCT high-risk patients (Mean = 7.13, SD = 2.17) and caregivers (Mean = 7.00, SD = 1.41) are not significantly different in their mean scores. By contrast, low-risk patients (Mean = 3.94, SD = 2.23) tend to be less burdened than their caregivers (Mean = 5.00, SD = 2.43) ($p = 0.10$). 3 months after PBSCT patients and caregivers show no significant differences. High-risk patients indicate a mean score of 6.78 (SD = 3.23), caregivers indicate a mean score of 7.00 (SD = 1.55). Low-risk patients indicate a mean score of 3.00 (SD = 1.70), caregivers indicate a mean score of 3.83 (SD = 2.79). There is a notable, but not significant decrease in distress over time in the low-risk subgroup of patients and caregivers. **CONCLUSIONS:** Caregivers suffer at least as much burden as patients. Both groups show moderate to severe levels on the DT. As high risk patients respectively caregivers compared to low-risk patients respectively caregivers show higher levels on the DT, an equivalence of expert rating using the PO-BaDo and subjective rating can be assumed. **RESEARCH IMPLICATIONS:** The subjective psychological distress of patients and their caregivers should be evaluated in long term follow-up. Psychological distress could be taken into consideration as outcome measure in studies evaluating psychotherapeutic effects. Supportive psychotherapeutic programs for the dyad patient and caregiver should be developed and evaluated. **CLINICAL IMPLICATIONS:** The NCCN Distress-Thermometer is an economic measure to identify burdened patients and caregivers in need for additional psycho-oncological support. As patients with haemato-oncological diseases and their caregivers are highly distressed, it should be integrated in the standard medical care, including also the caregivers. **ACKNOWLEDGEMENT OF**

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P2.2.10

The Worries and Concern in Parents Having Preschool-aged Children with Diagnosed a Retinoblastoma

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BACKGROUND: Both a parent developing retinoblastoma and the parent that it is not so are agonized why a child has suffered from retinoblastoma, and there is a thing blaming oneself. When the child enters school, parents' worries are diversified. However, parents often worry alone because there is no adviser. The purpose of the study is to identify the worries and concern of parents having preschool-aged child who developed a retinoblastoma. **METHOD:** Subjects were recruited from a support group for parents having child who developed a retinoblastoma. A convenience sample of five parents was interviewed. Data were collected from in-depth interviews that were audiotaped and transcribed. Interview transcripts and field notes provided data for the analysis. The contents were categorized into meaningful themes. **RESULTS:** All parents had concern about their child's school life in terms of their physical, emotional, and social dimensions. Worry of parents is that child may be tormented by an artificial eye in school. Parents also described that it was anxious whether a child was not hurt in time of physical education. Parents want the teacher to understand the method of handling the artificial eye. **CONCLUSIONS:** The findings suggested that worries and concern of parents about their child's school life were various. Therefore, it is necessary for healthcare provider and educator to know various worry and concern in parents having preschool-aged child who developed a retinoblastoma. **RESEARCH IMPLICATIONS:** Further research is needed with larger samples and the development of effective support program. **CLINICAL IMPLICATIONS:** Nurses need to be aware of worries and concern in parents having preschool-aged children with diagnosed a retinoblastoma. In addition, nurses should develop plans of care to assist parents and children to find useful information. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported in part by Grant-in-Aid for Young Scientists (B) (17791656) from the Ministry of Education, Culture, Sports, Science and Technology.

P2.2.11

Traumatic Grief Among Caregivers of Terminally Ill Cancer Patients

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BACKGROUND: Several studies demonstrated that Traumatic Grief (TG) is a syndrome distinct from other disorders correlated to grief, (e.g. depression, anxiety). TG is related to long-term functioning impairments and risk for mental and physical problems. Empirically tested and validated diagnostic criteria have been suggested to identify TG which seems to consist of two core clinical components (symptoms of 'separation distress' and 'traumatic distress'), associated with a certain duration of the symptoms and the presence of disfunctioning. **METHOD:** The aim of this study was to examine the incidence of TG in caregivers of terminally ill patients in Hospice. During a 1-year period, the caregivers of terminally ill cancer patients admitted to the Hospice 'Solidarity House' in Ferrara, Italy. Criteria for inclusion were: having a relative in a terminal phase of illness and in group C (30 day survival <30%) on the Palliative Prognostic Score (Pap) admitted to the hospice. Each caregiver completed the Inventory of Complicated Grief-Short Form-Pre-loss. After three months from the death of their loved-one, each participant was contacted again and submitted to the structured clinical interview (Post-loss interview) for TG. **RESULTS:** 76 caregivers meeting the inclusion criteria participated in the study. The Italian version of ICG demonstrated a high internal consistency (Cronbach's $\alpha = 0.92$), with three principal factors (item loading >0.40) (factor 1 including symptoms related to 'traumatic distress' -53.83% of the variance; factor 2 including elements related to 'separation distress' -9.58% of the variance; factor 3 including other emotional symptoms and explains 7.72% of the variance). At post-loss interview, 60 caregivers accepted to participate and 11 of them (18.3%) met the criteria for TG. Statistical differences were shown between TG and non-TG caregivers on the ICG ($t = 6.78$; $p < 0.0001$). **CONCLUSIONS:** The Inventory of Complicated Grief (ICG) has shown to be a useful scale to identify caregivers who may be suffering from symptoms of TG and helpful in investigating the risk factors for TG and maladaptive symptoms of grief. The main finding of the study documented the difference between the group with TG versus non-TG regarding to the ICG Total Score, showing that higher ICG pre-loss score increase the risk of caregivers to develop TG. **RESEARCH IMPLICATIONS:** The implications of the study have to

do with the importance of having risk factors for traumatic grief more delineated in palliative care as a specific area of research. **CLINICAL IMPLICATIONS:** The clinical implication regards the possibility to early recognize caregivers at risk for TG, liaise in a more specific way with GPs and psycho-oncology health professionals and early start with educational and supportive programs. **ACKNOWLEDGEMENT OF FUNDING:** The Foundation Cassia di Rosario di Ferrara and the University of Ferrara are acknowledged for their support in this study. The staff of the Solidarity House in Ferrara are also acknowledged for their cooperation.

P2.2.12

Are Cancer and Personal Factors Related to Symptoms of Anxiety and Depression in Siblings of Children with Cancer?

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BACKGROUND: Siblings of children with cancer are reported to experience psychosocial difficulties including symptoms of anxiety and depression. Sibling psychological functioning may be affected not only by the disease and treatment, but by personal factors including self-esteem and cognitive appraisal. This study aims to identify which cancer and personal factors may be related to sibling symptoms of anxiety and depression. **METHOD:** 108 siblings (51 males; 57 females; 7-17 years of age) of children treated for cancer participated in the study prior to attending group therapy. Siblings completed both the Children's Depression Inventory (Kovacs, 1992) and State-Trait Anxiety Inventory for Children (Spielberger, 1983). Siblings also completed the Sibling Perception Questionnaire (Carpenter and Sahler, 1991) to assess social support and cognitive appraisal and the Self Perception Profile for Children (Harter, 1985) to measure self-esteem. Age, gender, diagnosis of the brother or sister, and days since diagnosis were also considered. Hierarchical regression analyses were conducted to explore direct and indirect (i.e., mediating) relationships between the potential predictors and outcome factors (i.e., depression, anxiety). **RESULTS:** Self-esteem, social support, and cognitive appraisal were significantly associated with symptoms of anxiety (R^2 change = .24, $F(3, 100) = 10.65$, $p < .01$) and depression (R^2 change = .37, $F(3, 100) = 20.20$, $p < .01$), adjusted for age, gender, diagnosis, and days since diagnosis. These results suggest siblings who reported higher self-esteem, perceived positive social support, and constructive cognitive appraisals reported fewer symptoms of anxiety and depression. Moreover, after entering cognitive appraisal, significant relationships between self-esteem and

anxiety and depression scores were reduced (β anxiety = -4.1 , $p < .01$ vs -2.9 , $p = .04$; β depression = -10.4 , $p < .01$ vs -8.8 , $p < .01$). Thus, cognitive appraisal partially mediated the relationships between self-esteem and symptoms of anxiety and depression. **CONCLUSIONS:** High self-esteem and perceived social support and constructive cognitive appraisal are related to fewer symptoms of anxiety and depression in siblings of children with cancer. Additionally, how constructively siblings appraise the cancer experience will influence the relationship between self-esteem and anxiety and depression symptoms. **RESEARCH IMPLICATIONS:** This study identifies personal factors related to sibling reports of symptoms of anxiety and depression. Specifically, these results suggest positive self-esteem, perceived social support, and constructive cognitive appraisal serve as factors that may protect siblings from developing symptoms of anxiety and/or depression. **CLINICAL IMPLICATIONS:** As sibling cognitive appraisal appears to influence sibling psychological adjustment both directly and indirectly, siblings may benefit from psychosocial interventions that specifically target their understanding of cancer and cancer treatment. Psychosocial interventions for siblings of children with cancer should also focus on fostering self-esteem and social support. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by the Social Sciences and Humanities Research Council of Canada.

P2.2.13

How Do Parents Perceive the Consequences of Their Personal and Family History on Their Capacity to Cope with Their Child's Illness

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BACKGROUND: A paediatric oncology department, in a cancer centre, with two psycho-oncologists, teachers, an art workshop, clowns, meetings with parents, etc. Many parents feel insecure about their parental competence. Doctors and psycho-oncologists are more attentive to parents' current problems (family, socio-economic), than to those, they or their parents experienced before. In France, many parents have experienced major changes or difficult events during their life (social and economic ones, immigration) and live far away from their family. **METHOD:** Over a 3-month period, we proposed a questionnaire to the parents (living in France) of children aged 0–12 years. How do you evaluate the current difficulty? Have you experienced (you or your family) other difficulties (illness, wars, immigration, etc.)? Whom can you rely on? Where was

your child born? And you? Why is it more difficult now? (being far away from your parents, that they find it hard to understand the treatment)? That it is difficult for you to understand oncologists and to be understood by them? Are questions concerning past problems useful? Disturbing? **RESULTS:** 104 parents/130 replied. 93% found the situation difficult. 81% had experienced previous difficulties (themselves, their parents): parents' depression, severe illness, wars, slavery, poverty, deaths. The parents/the children were born in the Paris area (37%/70%), in other regions (33%/17%), abroad (30%/12%). They had moral support from: spouse (92%), friends (86%), siblings (75%), parents (72%), in-laws (56%). What made things more difficult? To think about past problems (51%); their parents being far away or deceased (40%), hardly understanding the treatment (29%), social and economic difficulties (37%), difficulties in the family (30%). 87% found these questions useful and not destabilizing (64%). **CONCLUSIONS:** The parents' satisfaction, their answers and comments confirmed the interest of this issue. The majority had previously experienced difficulties in their personal and family life, thought that the consequences or recalling them (which their child's illness often activates) increased their current difficulties, even more than social and economic ones. This may hamper their capacity to cope with their child's illness and to maintain their parental competence. Their past and present relationship with their own parents (including cultural or religious discrepancies) and with their friends must be considered. Their children were interested in learning their parents' and grand-parents' history. **RESEARCH IMPLICATIONS:** On all aspects of the personal and family history of parents or adult patients, and their consequences on their capacity—and on the child's ability—to cope with the present situation; on the place and meaning cancer has in this history; on the support parents have and how they can maintain or regain it; on the grand-parents' role; on how we can help them to get rid of the negative consequences of the past. **CLINICAL IMPLICATIONS:** As parents do not spontaneously mention this issue, oncologists and psycho-oncologists should do so carefully; particularly to parents whose own parents are far away or deceased, or are living in another cultural environment, and also to those whose distress appears to be excessive, who hardly understand or respect the doctors' decisions, who barely maintain their parental legitimacy. We have to help them to face their past and preserve their family and social relationships. **ACKNOWLEDGEMENT OF FUNDING:** GRASSPHO.

P2.2.15

Family as a Support or Burden for Patients Suffering from CancerMarta Porebiak^{1,2}¹University of Warsaw, Warsaw, Poland, ²Cancer Centre—Institute, Warsaw, Poland

BACKGROUND: Family might be one of the biggest support resources for patients suffering from cancer. Family system often goes through many changes during the treatment. There are families that foster well adaptation to cancer, less emotional distress and anxiety concerning the illness. However, some factors present in family system hinder wellbeing of patients and their relatives. The aim of the study was to identify those family factors that foster or hinder patients' adaptation. **METHOD:** Unstructured interviews were conducted with people who experienced cancer in their families (those who have been suffering from cancer or those who have at least one family member suffering from cancer). Main topics of interviews were: (1) what was/is helpful in psychological adjustment to cancer, (2) what was/is an obstacle in psychological adjustment to cancer, (3) what is the role of family in psychological adjustment to cancer, (4) what were the changes in family system after diagnosis. Psychology students of 'Family and cancer' course recruited participants randomly. Interviews took approximately 60 minutes, and were recorded for further analysis. Data from 10 interviews was analyzed (six with cancer patients, four with patients' family members; all women). Patients were diagnosed with different types of cancer (e.g. stomach, breast, lung, colon). **RESULTS:** Results show that most helpful for patients' adjustment to cancer was perceived support (emotional and behavioural) from their spouse, children or parents, perception of relatives as secure base, engaged in treatment. Identified obstacles in adjustment to cancer were: experience with terminal cancer in the past, genetic related cancer, divorce after diagnosis, communication difficulties, anxiety of leaving spouse and children. Changes in family system included engagement in patient care, cancerophobia, and divorce. **CONCLUSIONS:** These results suggest that family system goes through many changes while facing the cancer. Some of them support adaptation to illness, e.g. sharing emotions and domestic duties. Relatives devoted to patient care manage better with helplessness and supported patients present more fight spirit. Some changes in family system are maladaptive, e.g. withdrawal from interactions with ill person and communication barriers. Family members feel confused while experiencing both anger and guilt towards ill person and unsupported patients feel unmotivated to treatment. Family might be the biggest strength

in fighting with cancer but it might be also the biggest weakness. **RESEARCH IMPLICATIONS:** Results of the study show that investigation of changes in families with cancer should include not only adaptive factors but also maladaptive ones that might hinder good communication within family, behavioural cooperation and emotional closeness and caregiving. This might be also very important in examining results of treatment—we can expect that patients with devoted and loving families will have more motivation and better treatment results than others. **CLINICAL IMPLICATIONS:** While some patients have huge motivation from their family, others might need more support from clinicians. It would be recommended that we recognize from the beginning families that might need professional help from family therapists to manage better with illness and create family environment that will enforce patient's motivation for treatment and recovery. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.2.16

The Establishment of a National Counseling Service for Families with a Parent with Cancer

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BACKGROUND: More 1000 Danish families with children under the age of 18 will each year experience a parent with cancer. The Danish Cancer Society some years ago finished a pilot project offering psychosocial counseling for families experiencing cancer. The pilot project was successful. The Danish Cancer Society therefore decided to implement family counseling as a nationwide service to families. **METHOD:** A national organization for the project was established by inviting counselors from 15 cancer counseling centers in Denmark to join the project. The counselors were trained as family counselors and a common framework for family counseling of cancer families was established. However, different therapeutic backgrounds were allowed. It was decided that families should be offered 5 counseling sessions and that the children should be offered a meeting place with planned meetings for children without their parents. The counseling should focus on family dynamics and communication in a family with a parent with cancer. A common evaluation method was established. **RESULTS:** The family counseling project was started enthusiastically but had some obstacles. Thus some of the counseling sessions could not follow the plan due to the fact that the family structure could be complex with biological and social parents. Deterioration of the disease or death also changed the focus in the counseling sessions. The meeting place for children

was more difficult to establish than expected. Recruitment to counseling, resources used, evaluation of sessions and user satisfaction will be analyzed. In later phase, rating scales will be used to evaluate changes in family interaction and psychosocial distress. **CONCLUSIONS:** A nation wide counseling service was established for families with a parent experiencing cancer. The counseling sessions focus on how an open communication between parents and between parents and children can survive cancer in the family and how different needs for communication can be met for different age groups. The counseling sessions worked well. However family structure, changes in the disease or death as well logistic difficulties were challenges. The evaluation will give more information about the organization, the counseling process and outcome. **RESEARCH IMPLICATIONS:** Currently the research in family dynamics and psychosocial issues in families with a cancer patient as parent is very limited. The nation wide Danish project can create a framework for further research. **CLINICAL IMPLICATIONS:** It is well known that cancer patients suffer from psychosocial distress, depression and anxiety. Psychosocial counseling of cancer families may relieve some of the burden for the patient as well as for the whole family. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.2.18

Mixed-Methods Evaluation of a Family-focused Mind-body Medicine Intervention to Reduce Fatigue Among Breast Cancer Survivors

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BACKGROUND: Persistent fatigue affects about 40% of breast cancer survivors (Miske *et al.*, 2007). We developed a psychoeducational group-based mind-body intervention to reduce fatigue and improve mental health (Appling *et al.*, 2008; Helzlsouer *et al.*, 2007). Since family issues, including changing support roles and poor communication, contribute significantly to stress, a family-based enhancement was added to the mind-body intervention. A mixed-method evaluation of the family-enhanced intervention is presented in this paper. **METHOD:** Patients were randomized to a control arm (group alone) or experimental arm (group plus family-focused intervention). The group component consisted of an 8 session psychoeducational program. The experimental arm included family members in two group sessions, and families also met with the social worker. Standardized measures of fatigue (Piper Fatigue Scale), mental health (SF-36), and mood

(visual analog scale) were collected at baseline, program completion, and follow-up at 6 weeks, 6 months and 12 months. The qualitative component included observation of group sessions, individual interviews and summaries of the family sessions by the social worker. Quantitative data were analyzed using Analysis of Variance. Qualitative data were analyzed (using NVivo7 software) by identifying and verifying themes. Validity was enhanced by triangulation, journaling, and member checking. **RESULTS:** Significant reductions in fatigue and increases in mental health and mood were observed for both arms of the RCT, with all gains sustained through one year. There were no significant differences between the experimental intervention and the control, but the participants in the family intervention trended toward greater reduction in fatigue and improvement in mental health at program completion, and the 6 week follow-up. Qualitative findings showed that the main impact of the family intervention was that the family members learned that fatigue was real, and provided more support following the intervention. In some families, improved communications and improved family relations also resulted. Family involvement was highly appreciated by participants in the family-focused arm. **CONCLUSIONS:** An integrated mind body intervention may be enhanced by including family members. A family-focused program holds promise for improving long-term impact on reducing fatigue, improving mental health and improving mood following breast cancer treatment. **RESEARCH IMPLICATIONS:** A mixed-method evaluation can provide more information than a pure quantitative evaluation, by allowing for rich description of the process of the intervention. Future research should include larger samples. Also, further work is needed to enhance the family intervention and to identify the characteristics of families most likely to benefit. **CLINICAL IMPLICATIONS:** A family-focused intervention can be powerful, but takes more staff time to recruit, has a higher drop-out rate, and is not appropriate for all breast cancer survivors. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded by the American Breast Cancer Foundation.

P2.3.1

Patients' Expectations and the Sexual Health of Adult Patients with Advanced Cancer

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BACKGROUND: Significant advances have occurred in the holistic care of patients with advanced cancer. Nonetheless, the sexual health of adults with advanced malignancy is under-addressed clinically and in research. Quality of life is second only to survival in cancer care. Sexuality is an aspect of quality of life. The purpose of this study was to assess the impact of advanced cancer on patients' sexuality and the coping strategies employed. **METHOD:** An in-depth interview of a random sample of adult patients with advanced cancer admitted to a specialist palliative care service between November 2006 and April 2007 occurred. Informed consent was obtained. A combination of an interview guide approach and a standardized open-ended approach was utilized. Interviews were recorded using a digital recorder, transcribed and anonymized. Recruitment stopped on reaching data saturation. Copies of the interviews were offered to participants. Content analysis occurred. Codes, categories and themes were developed. Nud*ist N6 computer package was used. **RESULTS:** 13 patients were interviewed. One was excluded due to incomplete data. Participants were stratified by gender. The themes identified included the following: differing interpretations of sexuality, varying expectations of sexuality with age and illness, an unpredictable impact on body image, varying strategies for coping with the diagnosis of incurable cancer, anticipation of death and dying, differing means of coping with the impact on sexuality, communication and varying influence on patients dependent on relationship status. Altered emotional and physical intimacy, re-prioritization and coping with the sequelae of cancer and its management also featured. **CONCLUSIONS:** Progressive, advanced cancer may have a substantial impact on the sexual health of patients but the patient's response is unique. The impact is coloured by the patients' pre-existing expectations, lifestyle and experiences. It is influenced by the patients' means of coping with the diagnosis of an incurable malignancy and the knowledge of their nearing death. Relationship status, the reactions of partners to their cancer and expectations of sexuality with age and illness also feature as important variables. Advanced cancer has a variable impact on the sexual health of adult patients which is influenced by the person's expectations. **RESEARCH IMPLICATIONS:** The impact of advanced, progressive cancer on sexuality is a neglected aspect of cancer research to date. This qualitative study shows the holistic nature of sexuality and the possible impact of progressive malignancy on sexual health. This illustrates the need for further research to assess health care professionals' management of this clinical challenge including communication with patients. Further multidisciplinary research is necessary with the aim of providing patient centred

care. **CLINICAL IMPLICATIONS:** Optimizing patients' quality of life is the aim of interdisciplinary care in advanced cancer. Heretofore, the impact of cancer on the sexual health of patients with advanced cancer has frequently been overlooked clinically. However, this study illustrates the holistic nature of sexuality and the potential for impact psychologically, emotionally and physically on patients thereby impacting on their overall quality of life. Addressing this taboo subject is a valuable aspect of holistic patient focussed care. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.3.2

Gender Differences in Cancer Patients Internet Use
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BACKGROUND: Internet has become an usual tool for daily life, including leisure, information and a work space. Health is one of the most searched topics and chronic affections are the most consulted illness. About cancer, internet offers information on illness and interactive programs. Support groups, psychological intervention and evaluation are virtually done. Since 2006 we have a breast cancer web and since 2007 a prostate cancer one, designed similarly. Some differences in user profile of every web have appeared. **METHOD:** We have analyzed qualitative statistics on both webs use. We have done a mean of every month in 2008. **RESULTS:** In 2008 breast cancer web (BCW) was visited monthly by 3839 individuals versus 1875 of prostate cancer one (PCW). BCW visited 6911 sites and PCW 3058, more in the afternoon: 57% BCW and 45% PCW. 4016 visited the home page in BCW while 712 PCW. Illness information was consulted by 113 in BCW and 97 PCW; early diagnosis and prevention by 94 and 126 in PCW; Psychological topics site by 69 in BCW and 54 PCW; Glossary illness by a mean of 6 in BCW but 618 PCW. Medical consultations were done by 8 in BCW but 118 in PCW. Anxiety and depression scale (HAD) was filled by 168 BC and 26 PC patients. Mini-mental adjustment to cancer (MAC) scale by 41 BC and 17 PC patients. Questionnaire on consequences of illness was answered by 60 BC and 16 PC patients. **CONCLUSIONS:** As in face-to face approach there are some gender differences in internet use in cancer patients. Generally speaking breast cancer web is more visited. However prostate cancer web is most used to find out the meaning of concrete topics and also to know about chances of prevention and early diagnosis. Breast cancer web is more used to read about psychological topics illness and treatment related. When talking about the interactive use of the internet sites, we may point out that medical consultations is more used by prostate cancer

patients than by breast cancer ones. However breast cancer patients filled in psychological tools more frequently than prostate cancer ones. Men are more interested on the medical part of illness while women also are willing to find out on their psychological status. **RESEARCH IMPLICATIONS:** This research will be widened, since it is important to understand that internet is a parallel life and cancer in may be a very consulted topic in the net. For this reason is important for researchers to ascertain profiles of cancer patients internet users, in order to offer sound and good sites. Differences in gender are always a matter of research in psychooncology. We may see that men continue in a more medical approach and women more psychological one. **CLINICAL IMPLICATIONS:** We must work to have sound internet sites for patients. They may use internet and we may know deeply this space, since they may use it to obtain information but also medical and psychological relief. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.1

Group Differences in Resilience Between Adolescent Survivors of Brain Tumors and Healthy Adolescents

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BACKGROUND: Resilience is an important concept in the positive psychosocial adjustment of adolescents to adversity. However, few studies have compared differences in resilience and its influence among adolescent survivors of brain tumors (ASBT) with that among healthy adolescents. The aim was to clarify normative development and impact of illness in ASBT by comparing them to healthy adolescents in terms of resilience and the effect of types of health problems on resilience. **METHOD:** This study used a cross-sectional, case-control design. Convenience sampling was used to recruit participants who were ASBT and 13 to 18 years old. Random sampling was used to recruit healthy adolescents matched with ASBT by school level, gender and living area. Data were collected by a structured questionnaire. **RESULTS:** Sixty ASBT and 120 healthy adolescents were included in this study. All participants were on average 15 years respectively. Participants in both groups were predominantly male (63.3%) and studying in junior high school (55%). The major finding was that ASBT and healthy adolescents did not differ significantly in resilience. However, mean score of resilience in ASBT without emotional problems was the highest among healthy adolescents and ASBT with emotional problems. In addition, resilience was more strongly and negatively affected by emotional problems ($b = -0.34$, $p < .05$) in

ASBT than in healthy adolescents with emotional problems. **CONCLUSIONS:** These results can be summarized by three conclusions after considering limitations of the study. 1) Differences in resilience between ASBT and healthy adolescents were due to emotional problems, not 'having a brain tumor' only. 2) The impact of emotional problems on resilience was more severe in ASBT than in healthy adolescents. 3) Emotional problems were identified as a risk factor for resilience in both ASBT and in healthy adolescents. **RESEARCH IMPLICATIONS:** Based on the findings of this study, a surveillance system can be set up that systematically and regularly gathers survivors' data, included bio-psycho-social-spiritual assessment. Use surveillance systems to improve the quality of survivorship studies, such as by gathering longitudinal data, comparing findings from various sites of data collection, and including extreme cases. In addition, to accurately manage these influences on resilience, nurse researchers need to organize interdisciplinary research teams. **CLINICAL IMPLICATIONS:** ASBT with emotional problems are a high-risk group in the development of resilience. For health care providers, it is important to detect ASBT with potential or existing emotional problems as early as possible. Regardless of whether nurses are hospital nurses or school nurses, they need to not only comprehend the medical history of ASBT, but also to understand experiences that are meaningful to them to recognize the effect of emotional problems on their resilience. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.2

Changes in Psychological Adjustment Among Pediatric Onco-Hematology Patients Attended at Niño Jesús Hospital

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BACKGROUND: The present study evaluates changes in psychological adjustment before and after diagnosis in pediatric onco-hematology patients attended at Niño Jesús Hospital, Madrid. Our goal is to study the psychosocial changes in children's well-being at first month of treatment. **METHOD:** We performed a prospective study in 70 pediatric onco-hematology patients (range, 0–18 years) in 2008 in our unit. Sample: 44 of this patients are from Spain and 26 came from other countries; 22 low socio-economic level, 40 middle socio-economic level and 8 high socio-economic level. Diagnosis: 46 malignant hemopathies, 22 solid tumors and 2 non-malignant hemopathies.

Information collected from patients and parents was. 1. Observation 2. Medical and Psychosocial charts. Inclusion criteria: all patients who underwent an onco-hematology treatment in our unit (2008). The information was analysed across the statistical program SPSS 16.0. RESULTS: We found statistical significance between pre-post diagnosis in the following factors: 1. cooperation with the medical procedures and staff ($p < 0.01$); 2. adjustment-adaptation to diagnosis and treatment ($p < 0.01$); 3. predomination of introversion-extroversion personality type ($p < 0.01$); 4. dependence-independence as *autonomy*, and self-sufficiency respect their parents ($p < 0.01$); 5. attention demands as intense requests ($p < 0.05$). We also found significant correlation between malignant hemopathies and adjustment-adaptation after diagnosis ($p < 0.05$). CONCLUSIONS: Our results show significant changes in psychological factors at first treatment period. A lot of factors (as diagnosis, hospitalization, side effects of treatment, isolation, sociability and scholar changes, changes in the family structure...) affect the emotional adjustment in this population. Knowing this changes, can give us skills to offer a better preventive and therapeutic interventions to improve the well-being for this patients. RESEARCH IMPLICATIONS: To be able to measure in a standardized way those bio-psycho-social factors that influence significantly in children's well-being in the treatment period. CLINICAL IMPLICATIONS: Our goal is to give a global vision of the psychological factors involve in onco-hematology pediatric patients. We want to provide answers, and guidelines for preventive and therapeutic interventions to avoid those disorders that can influence in the global children's well-being once they get in our unit. ACKNOWLEDGEMENT OF FUNDING: None.

P2.4.3

Parenting Style and Psychological Adjustment After a Pediatric Cancer Diagnosis

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BACKGROUND: The present study evaluates the relationships between parenting style and psychological adjustment after the diagnosis and describes psychological, medical and social factors in pediatric patients attended at the onco-hematology unit in the Hospital Niño Jesús. Our goal is to show how the parenting educational style can influence in factors as adjustments, emotional distress, anxiety... while children are under treatment. **METHOD:** Prospective study in 70 pediatric patients (range, 0–18 years) in 2008 in our unit.

Sample: 44 patients are from Spain and 26 came from other countries. 22 permissive parenting style, 29 democratic parenting style and 3 authority parenting style. Family structure: 9 single-parent family structure, 43 nuclear family structure and 18 extensive family structure. Diagnosis were 46 malignant hemopathies, 22 solid tumors and 2 non-malignant hemopathies. Information collected from patients and parents was. 1. Observation 2. Medical and Psychosocial charts. Inclusion criteria: patients who underwent an onco-hematology treatment in our unit (2008). Analysed across the statistical program SPSS 16.0. RESULTS: We found statistical significance between permissive parenting style and a) irritability ($p < 0.01$). CONCLUSIONS: Parenting educational styles can also influence in the psychological adjustment in children under onco-hematology treatment. The parenting style is decisive when the children have to make relationships and resolve problems not only in the cancer population, but in general population. In our sample this factor is crucial for adherence to the treatment and coping with illness. **RESEARCH IMPLICATIONS:** To be able to measure in a standardized way those bio-psycho-social factors that influence significantly in children's well-being in the treatment period. **CLINICAL IMPLICATIONS:** Our goal is to give a new perspective in the parenting educational style, and its implication in the well-being and adjustment of the onco-hematology pediatric patients. With this research we try to challenge clinicians to make parenting style a new objective of research, to be able to make better therapeutic intervention for the pediatric psychooncologist. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.4

What About School? Educational Pathways to a Successful Future

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BACKGROUND: For the first time in Australia, the Educational Pathways Project brings together three major paediatric oncology treatment hospitals and Ronald McDonald House Charities with the aim of deepening the understanding of educational issues associated with a cancer diagnosis in childhood or adolescence. Concerns regarding long term treatment effects, the relationship between school attendance and quality of life outcomes and the lack of coordinated educational support led to the project establishment. **METHOD:** Through the

combined resources of three major paediatric oncology hospitals and Ronald McDonald House Charities the following methods are being employed: An online survey distributed to parents who have had a child or adolescent diagnosed with cancer in the previous 10 years ($n = \text{approx } 1800$); Focus groups for parents across 5 regional and rural sites in New South Wales; Educational service overviews developed that critique strengths, needs and recommendations within the context of regional, national and international comparisons; An Educational Pathways resource for parents is being developed focussed upon educating the child with cancer. **RESULTS:** Preliminary results of the online Educational Pathways survey will be available at the time of the IPOS conference (pending current ethical approval). The results will incorporate data from parents regarding their experiences of the school system, school support, and educational needs of their child/adolescent. This will be analysed in the context of age at diagnosis, specific diagnosis, treatment regime, time since diagnosis and school type as well as family demographic data. Interagency communication structures and Educational Pathway diagrams for children and adolescents with cancer will be available. **CONCLUSIONS:** This project demonstrates how multidisciplinary teams across different work sites can work together to identify areas of strength and need as well as to develop resources to support families. With clear, purposeful and structured data collection and detailed analysis, a clearer understanding of the impact of a cancer diagnosis during the school years will be obtained. This deepened understanding will assist to determine the educational support and resources which can be altered or initiated in order to support children, adolescents and families. **RESEARCH IMPLICATIONS:** This research will provide measurable and structured data related to the educational implications of a diagnosis of cancer in childhood. This is an area which is receiving increased international research attention relative to long term treatment effects and intervention approaches. This research project also demonstrates how hospitals, education services and community groups can work together to maximise the benefits for families affected by cancer. **CLINICAL IMPLICATIONS:** Families will be provided with the opportunity to share their experiences regarding educating a child/adolescent with cancer. The research will provide clinical information aimed at maximising and integrating the support provided to families in both the short term and long term. Recommendations for the management of educational, medical and psycho-social issues within the home, hospital and school environment will be developed. **ACKNOWLEDGEMENT OF FUNDING:** The Educational Pathways Project is jointly funded by Ronald McDonald House Charities, Sydney Children's Hos-

pital, The Children's Hospital at Westmead and Kaleidoscope—John Hunter Children's Hospital Newcastle. A Committee of Management (COM) comprised of paediatric oncologists, parent representatives and educational professionals oversee the project development and outcomes.

P2.4.5

Immigration and Transcultural Barriers in Children with Cancer

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BACKGROUND: Over the past 10 years we have experienced an increasing flow of immigrants from developing countries seeking better living conditions and better medical care for their sick children. Cultural and language barriers may be obstacles in achieving a good relationship. Difficulties related to communication seem to strike both patients and medical staff. **METHOD:** In order to improve the global assistance to foreign patients we developed a project named 'working with foreigners' that includes both health and social aspects. We prepared a questionnaire for the health care team in order to investigate the opinions and suggestions concerning some aspects of their specific work with these patients. It includes 13 queries divided into three parts: about personal education and profession, about daily work issues, and about the feelings in transcultural work. interdisciplinary members of the department of paediatric haematology-oncology at the Gaslini Children's Hospital answered the questionnaire. The results were statistically analysed by SPSS. **RESULTS:** As expected, the greatest stress is the difficulty in communication, which is very important in building the relationship among the physician, the children with cancer, and their families. It seems that other aspects, such as cultural and behavioural differences, are included in this field. About half the people who filled in the questionnaire state the need for respect and knowledge of different cultures. Almost all them perceive their experience with foreign patients as a personal and professional enrichment. They would be willing to attend training for languages and cultural information. **CONCLUSIONS:** A diagnosis of cancer is an event that has a strong impact on the family which then becomes the recipient for the stress related to the disease and thus takes on the main responsibility for the child's psychological adjustment. Understanding parent's reactions is often pivotally important to achieving a well balanced coping strategy for the whole family. Our data emphasise that a lack in communication represents a stressor also for health teams working with children affected by cancer. Training programs regarding

communication skills are needed to improve our approach to foreign patients. **RESEARCH IMPLICATIONS:** Further studies will provide us broader view of the topic. **CLINICAL IMPLICATIONS:** Communication between health providers and patient/family is an important aspect both in coping with the disease and in resilience. While a doctor's or nurse's own interpersonal abilities are useful, proper communication in the health care setting often requires skills that need to be learned. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.6

Social Functioning of Children Who Have Lost a Sibling to Cancer

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BACKGROUND: Cancer is the leading cause of death by disease for children ages 2–15. The death of a child is painful for families, yet its impact on siblings has received little empirical attention. Existing studies have been limited by poor recruitment rates, retrospective reports, and a lack of controls. Thus, we conducted a prospective, multi-site study using multiple informants to compare the adjustment of bereaved siblings to peers in the first year after the child's death. **METHOD:** Three to twelve months after a child's death from cancer ($M = 9.52$ months, $SD = 0.42$), families with a surviving child ($n = 67$) were recruited at three institutions in the US and Canada (70% participated). Bereaved siblings were 8–17 years old and, on average, attending 6th grade. Comparison classmates ($n = 67$) were matched for age, race, and gender. The sample was 76% Caucasian and 57% female. Classmates and teachers completed the Revised Class Play (RCP) to assess behavior (i.e., Leadership-Popularity, Prosocial, Aggressive-Disruptive, Sensitive-Isolated, Victimization). Children nominated three best friends and rated how much they liked each classmate. **RESULTS:** Mixed models analyses with a matched pairs design revealed that bereaved siblings and peers had similar scores for Leadership-Popularity, Aggressive-Disruptive, and Sensitive-Isolated domains according to peer, teacher, and self-report. Teachers viewed bereaved siblings as more prosocial,

$t(66) = 2.29, p = .03$, and bereaved siblings felt they were less victimized, $t(62) = -2.27, p = .03$, than peers. The two groups did not differ in number of best friends, reciprocated friendships, or acceptance ratings. In general, child grade and time since sibling's death were not associated with social functioning. **CONCLUSIONS:** Within the first year of losing a brother or sister to cancer, bereaved siblings were similar to matched comparison peers on most measures of social behavior and acceptance, suggesting significant social resilience in the school setting. Contrary to predictions, siblings reported being less victimized than peers. In addition, teachers reported that bereaved siblings were more prosocial, which could represent a halo effect as teachers were not blind to the study's purpose. Alternatively, these findings may be indicative of positive changes or growth in siblings, which has been noted in emerging research. **RESEARCH IMPLICATIONS:** Additional research in this area might consider other aspects of social functioning (e.g., social self-concept, social competence from the perspective of self and parent reports). Ongoing data collection in the home will provide a more complete picture of sibling adjustment as time passes from the child's death. Future work should examine factors that identify subgroups of siblings who may be at increased risk for adjustment problems or those who may demonstrate positive growth. **CLINICAL IMPLICATIONS:** Currently, our findings suggest that bereaved siblings demonstrate social behavior and adjustment that is comparable to peers. Broadband interventions to improve social functioning in school may not be needed for all bereaved siblings. In fact, school may serve as a safe-haven and source of support for bereaved siblings when other family members are grieving. However, careful, periodic screening to determine need for assistance in other aspects of functioning (e.g., emotional well-being, self-concept) may be helpful. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by a grant from the National Institutes of Health (R01 CA98217) to Cynthia Gerhardt.

P2.4.7

Elaboration of Resources to Gather Information on Patients Submits to Chemotherapy

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BACKGROUND: Nowadays cancer is considered an illness with behavioral mediation, which requires the psychologist to be a part of the treatment team. The objective of the research was to gather information and find out the needs of children submitted to chemotherapy treatment in order to

develop playful-educational techniques that can subsidize future interventions in the health context. **METHOD:** One-to-one interviews and non systematic observations took place at the chemotherapy center, together with the medical team, patients and their families. Play therapy was also used with the children. **RESULTS:** The results show that there was lack available information accessible to the parents and children besides the fact that there was also lack of communication between the medical team and patients/family. From the data analysis a routine guide was developed as well as an activity book. The guide describes routines, the characteristics and phases of the treatment, possible interurrences, precautions to be taken, and some general information. In the activity book there is information and activities related to the illness and its treatment. **CONCLUSIONS:** Although they have not been tested yet, it is noticed that there is a need for the development of material that can be used as support for health professionals when it comes to informing parents and patients, preparing them or the procedures as well as making it easier for the child and his/her family to adapt to the context of the chemotherapy treatment. **RESEARCH IMPLICATIONS:** Results from this study may subsidize researches in Health Psychology to the development of effective programs to attending children with cancer in hospitals. **CLINICAL IMPLICATIONS:** The study presents a proposal for children's psychological treatment when dealing with serious illnesses. **ACKNOWLEDGEMENT OF FUNDING:** Araucaria Support Foundation to Scientific and Technological Development of Parana.

P2.4.8

Completing Childhood Cancer Treatment: A Review of the Psychosocial Literature and Guidelines for End-of-Treatment Sport

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BACKGROUND: Completing cancer treatment can be a major stress point in the pediatric cancer journey, as families of childhood cancer survivors face the uncertainty of possible relapse and the emergence of late effects of treatment.

Consequently, an end-of-treatment seminar, to prepare parents for the challenges their family may face as they transition out of hospital care and return to their 'normal' lives, is offered at Sydney Children's Hospital. **METHOD:** First, we conducted a systematic literature review to identify all research reporting the psychosocial adjustment and unmet needs of families in which a child has recently completed cancer treatment. Five electronic databases (from 1988 to 2008) were searched and 1097 relevant articles were identified. Twenty-one articles met all inclusion criteria, of which three utilized a qualitative methodology, sixteen utilized a quantitative methodology and two used mixed methods. Second, we utilized this information to create guidelines for the evidence-based improvement of the existing services offered to these families. **RESULTS:** The literature review revealed that children who have recently completed cancer treatment may experience some positive psychosocial outcomes. However, they may also experience high levels of anxiety, depression and learning difficulties, as well as reduced self esteem, emotional stability and health-related quality of life in the first years after treatment completion. Parents can experience burnout, exhaustion, cognitive difficulties and low social, physical and mental well-being. The newly developed guidelines suggest topics to cover during the end-of-treatment seminar, as well as recommending the creation of additional educational materials to support families as they traverse the first year after treatment completion. **CONCLUSIONS:** The review suggests that cancer treatment completion can have numerous negative and some positive psychosocial implications for children. Parents, particularly mothers, may also experience a number of negative psychosocial outcomes. While the new guidelines outline strategies to provide more comprehensive support of families approaching treatment completion, funding and evaluating this approach without creating additional workload for clinical staff remains a challenge in the hospital setting. **RESEARCH IMPLICATIONS:** The review revealed a dearth of studies on the impact of treatment completion on fathers and siblings. There is also little data available on the unmet information, support and service needs of these families. Future studies of the unmet needs of families, and from different international perspectives, are critical in order to develop a more comprehensive view of the issues to consider when preparing this group for the 'off treatment' phase in the cancer trajectory. **CLINICAL IMPLICATIONS:** This study may inform the development of effective screening tools to accurately identify vulnerable families. Further, it may aid the development of targeted, evidence-based and cost-effective interventions to reduce the levels of distress experienced by families at this transition point and in the following years.

Addressing the psychosocial needs of patients earlier in the care pathway, prior to their presentation at the long-term follow-up clinics, may reduce the burden on these clinics for psychosocial support. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by The Leukaemia Foundation of Australia and the Sydney Children's Hospital Foundation. Claire Wakefield is supported by a Postdoctoral Training Fellowship from the National Health and Medical Research Council of Australia (ID 510421). Belinda Goodenough is supported by the Kids with Cancer Foundation.

P2.4.10

Multidisciplinary and Inter-systemic Intervention in Paediatric Oncology: Application of the Ecological Systems Theory of Bronfenbrenner

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BACKGROUND: The oncological disease in children assumes some particularities especially due to the developmental stage in which it appears and to the several bio-psycho-social implications to the child, to the others intervenients of his/her life contexts and to their interactions. Therefore, the preponderance of the multidisciplinary, ecological and holistic approaches in Paediatric Oncology is undeniable. In this work, it will be presented by an illustration and application of the Ecological Systems Theory of Bronfenbrenner (1979). **METHOD:** The conceptualization of the Paediatric Oncology according to this model of Bronfenbrenner permits to portray the pertinence of the multidisciplinary work and of the articulation between health professionals, children and his/her diverse life spheres. We start proceeding to the reframing of this model into the reality of paediatric cancer and of its inherent dynamics. Then, several testimonies and works developed in psychological consultations were collected, in such a way that the different systems of the model are made visible (from the micro-system to the cronosystem). The material was used with the informed consent of parents, children and adolescents. **RESULTS:** The application of the Ecological Systems Theory of Bronfenbrenner proved to be a useful tool to the comprehension of the complex reality of children with cancer. **CONCLUSIONS:** Through the application of this model it is possible to realize that a greater therapeutic efficacy is intrinsically related to different aspects: the need to always consider the child as a whole constituted by an organized group of interdependent intra-systems and the need of considering that the child is integrated and/or under the influence of different systems (micro, meso, exo, macro, cronosystems)

and their interactions, systems which all have an active role in the adaptation process to the disease. When intervening, is indispensable to ponder all these connections, being its product the goals of intervention and the best therapeutic practices. **RESEARCH IMPLICATIONS:** The presented approach has multiple implications from the bio-psycho-social point of view, thus mirroring the need of greater investment at the level of the establishment of multidisciplinary teams and of the professional training of its elements. It is increasingly more important that these have simultaneously adequate technical and human competences and ensure an appropriate articulation with the intervenients/systems in which the child is integrated. **CLINICAL IMPLICATIONS:** This comprehensive approach of childhood cancer permits to aim not exclusively at the child and the disease but also to the minimization of its impact in other spheres of the child and his/her family's life. Considering all the dimensions and interrelations demonstrated by this model, through the multidisciplinary, it will be more easily achieved a better adaptation to each child/family to the process of disease and a better perception of well-being and quality of life. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.11

Presentation of a Cognitive, Learning and School Support Competence Promotion Programme for Children with Cancer Diseases

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BACKGROUND: Paediatric cancer disease and its treatment introduce major changes in the patients' lives which, very often, interrupt for a long period of time the school attendance, the social inclusion at school and many other experiences associated with this stage of life. Cognitive functioning difficulties and disorders in the learning process are commonly a cause for stress problems. Occupational therapy is essential for these patients and contributes to their well-being. **METHOD:** After indication of the needs stated by parents, it was created a cognitive, learning and school support competence promotion programme, which is being implemented in hospital context. Through playful and well-adjusted activities, this project aims: to develop children's intellectual, social and emotional competences adjusted to their age; to avoid school and social isolation and to integrate pediatric cancer patients at school in order to preserve their psychosocial development and,

consequently, assuring the permanence of the learning process and avoiding potential learning disorders. **RESULTS:** The Programme 'Aprender Mais' contemplates the capacities documented as deficient on children diagnosed with cancer diseases. Though in its experimental phase of implementation, the expected results are: developing visual and hearing memory, improving attention/concentration levels, increasing motivation and the capacity and speed of processing information, rising verbal and non-verbal competences, the arithmetic performance and, as a result, the school/ academic improvement and the facility in the school reintegration process. **CONCLUSIONS:** This programme, being it pioneer in Portugal, will contribute to the well-being and quality of life of patients, taking into account their occupational health and assuring the continuity of the learning and development process of primary, middle and high school students. Accordingly, we believe we can positively contribute to their psycho emotional health and to a more effective return and reintegration in the group. It's also essential to point out the importance of this programme in including the education/instruction of groups of schoolmates and teachers of children with cancer problems. **RESEARCH IMPLICATIONS:** To contribute to a better understanding of the psychosocial consequences of the childhood cancer and implications on the quality of life of the children with these diseases. To promote the importance of occupational health of the children either in ambulatory or admitted to hospital and in subsequent phases. To test the effectiveness of these kinds of interventions in preventing social, cognitive, emotional and school problems caused by cancer diseases, as well as in promoting health. **CLINICAL IMPLICATIONS:** To contribute to emphasize the importance of multidisciplinary effort for the health and the well being of patients, family and all the others involved in the long cancer development of the pediatric patients. The pain associated to the disease, the treatments and the consequent effects in the (re)organization of life after a serious diagnosis cannot/ should not be the core of these children and families' lives. **ACKNOWLEDGEMENT OF FUNDING:** Instituto Superior da Maia, ACRE-DITAR.

P2.4.12

Differences in Emotional Functioning of Children with Cancer Due to the Period of Treatment
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BACKGROUND: During cancer treatment it is recommended not only to monitor somatic func-

tioning of patient but also to give well-planned biopsychosocial support. Due to that psychosocial side effects of treatment can be minimalized. The aim of the study was to establish a set of personality traits and emotional functioning that could be used to distinguish different methods biopsychosocial intervention programmes. **METHOD:** 350 children with cancer during treatment entered the study. The children were divided into 2 groups. In the Group I ($n = 219$) there were patients who were treated in conditions that enabled to use all elements of biopsychosocial support, on the contrary to the Group II ($n = 131$ pts), in which the conditions of treatment were not good enough to provide the patients with full programme of biopsychosocial support. **RESULTS:** Characteristic types of personality and emotional functioning of studied children were distinguished by data clustering K-means method on the group of 10 personality factors. The frequency of appearing these types in the two studied groups was counted. Three types of emotional functioning appeared in both groups with the same frequency ($\chi^2 = 1.21$, $p = 0.271$). However, in the Group I another type was distinguished. On the basis of clinical analysis of features' configuration, all the types were named ('Emotional off-balance', 'Hard-working, Persistent', 'Repressive', in both groups and 'In crisis, Active' in Group I. **CONCLUSIONS:** 1. Intellectual abilities, open-mindedness and the ability to open up (Type 'In crisis, Active') may be a predictor of supplies to overcome crisis and correct adjustment to hospitalization and treatment. 2. Symptoms of worrying behaviour among patients with tendency to hide their emotions, wrongly assessing their own feelings and behaviour (Type 'Repressive') and too demanding for themselves (Type 'Hard-working, Persistent') may be unnoticed by their families as well as by the medical staff. 3. Patients who don't hide their emotions, tempestuous, of low self-control and low persistence (Type 'Emotional off-balance') exact expedient support actions, and the lasting tendency not to make effort may be the reason of their worse adjustment and disorders in psychosocial functioning. **RESEARCH IMPLICATIONS:** It is still interesting, which type of emotional functioning of children with cancer is helpful for them during treatment, and how it influence for their psychosocial functioning after completion therapy. **CLINICAL IMPLICATIONS:** Establishing a set of personality traits and emotional functioning type could be used to distinguish different methods of psychosocial and psychotherapeutical interventions. Especially, patients with 'repressive', and 'hard-working, persistent' tendencies should be overwhelmed a specialistic care. **ACKNOWLEDGEMENT OF FUNDING:** Grant PW 483/08.

P2.4.13

Discrepancy Between Parent and Child Report on Psychological and Behavioral Problems in Adolescent Cancer Survivors and Healthy Group

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BACKGROUND: Discrepancy between adolescent and parent self-report is well documented and considered when assessment instruments are chosen to test treatment effect. The purpose of this study is to investigate whether the similar pattern is found of adolescent cancer survivor group as well as their healthy control. **METHOD:** 75 adolescents and their mothers of adolescent cancer survivors and their healthy control were participated in this study. YSR and K-CBCL were administered to assess internalizing and externalizing behavior problem of adolescents. For data analysis, only the same items in subscales of internalizing and externalizing behavior problem of these two instruments were used. **RESULTS:** In both adolescent cancer survivor group and healthy group, YSR scores of internalizing and externalizing behavior problem scales are significantly higher than CBCL scores of those scales ($p < .05$); In externalizing behavior problem scale, the discrepancy between YSR and CBCL in adolescent cancer survivor group is significantly higher than the discrepancy in healthy group ($p < .05$); In adolescent cancer survivor group, Pearson correlation between YSR and CBCL was not significant in internalizing and externalizing behavior problem scales ($p > .05$). However, in healthy group, scores of internalizing behavior problem scale from these two instruments were highly correlated ($p < .05$). **CONCLUSIONS:** The result of this study indicates that adolescents report more psychological and behavioral problem of themselves than their mothers. In healthy control group, adolescents and their mothers less discrepancy than adolescent cancer survivor group on psychological and behavioral problems of adolescents. **RESEARCH IMPLICATIONS:** In the study of psychological characteristics of adolescent cancer group, the discrepancy between adolescents' self report and maternal report should be considered when researchers interpret the results of YSR and CBCL. It is necessary to investigate other assessment instruments whether they contain similar discrepancy pattern to YSR and CBCL. Furthermore, if variables which intermediate this discrepancy are

examined, this discrepancy can be a predictor for estimating of psychological factors related to this discrepancy. **CLINICAL IMPLICATIONS:** When psychological treatment for adolescent cancer group is scheduled based on results of assessment instruments including YSR and CBCL, the discrepancy between adolescents' self report and maternal report should be considered and other assessment instrument for correspondent psychological factor should be conducted. **ACKNOWLEDGEMENT OF FUNDING:** This study has been supported by Yonsei university and Brain Korea 21.

P2.4.14

Self-and Parental Report on Quality of life in Korean Childhood Cancer Survivors

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BACKGROUND: Previous research findings repeated discrepancy between self report of childhood cancer patients/survivors and their parents and suggested to its pattern of discrepancy is different from healthy peers. The first goal was to investigate quality of life of Korean childhood cancer survivors compared to healthy peers. The second objective was to investigate consistency between self and parental report in Korean cancer survivors and healthy peers. **METHOD:** 177 pediatric cancer survivors (two-year post-treatment survivors) and their caregivers who were visiting a hospital for their biannual physical and psychological follow-up examinations. 332 healthy peers and caregivers in the control group were recruited through internet. Participants were divided into elementary school-age children group (8–12 years) and adolescent group (12–18 years). Participants completed the Pediatric Quality of Life Inventory 4.0 (PedsQL; Varni, Seid, and Kurtin, 2001). Both child and parent report versions contain 23 overlapping items. ANOVA and paired samples test administered to test survivors-peers group differences and self-parent discrepancy in quality of life report. **RESULTS:** Elementary school-age children group: Child survivors and their mothers reported poorer physical, social, school, and total function than controls ($p < .01$). Healthy control reported poorer physical function than their mothers ($p < .05$), while child survivors reported poorer physical, Social function and total function than their mothers ($p < .05$). Adolescent

group: Adolescent survivors and their mothers reported poorer school function than controls ($p < .05$). Healthy adolescents reported poorer physical, emotional, total function than their mothers ($p < .05$), while adolescent survivors reported no discrepancies. **CONCLUSIONS:** Child survivors experience poorer quality of life than their peers. There were no quality of life differences was founded for adolescent survivors except school function. Parental report of quality of life was closer to their child's report in child survivors than control. Conversely, Parental report of quality of life was closer to their adolescent's report in control than survivors. **RESEARCH IMPLICATIONS:** This research showed adolescent survivors report more similar quality of life level to controls than elementary school-age survivors. However, researchers should be considered other factors which influence survivors' quality of life, for example, age at diagnosis and time since diagnosis. In addition, there is a need to investigate factors which intermediate self-and parent discrepancies and cross cultural patterns. **CLINICAL IMPLICATIONS:** Clinicians should be aware that quality of life in cancer survivors was lower than their normal peers. There is a need to develop intervention to promote survivors' quality of life. For child survivors, it would be necessary to administer the quality of life both children and mothers since there is a significant difference between child and mother report. **ACKNOWLEDGEMENT OF FUNDING:** This study has been supported by Yonsei university and Brain Korea 21.

P2.4.15

Coping Skills and Social Support as Predictors of Pediatric Cancer Survivors' Parents' Stress Level

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BACKGROUND: It is well-known that social support and coping skills are closely related to parental stress. Several studies have shown that not only parents of pediatric cancer patients but also parents' of survivors tend to suffer from high levels of parental stress. The present study examined the effect of perceived social support and coping skills on parental stress of pediatric cancer survivors' parents. **METHOD:** Participants in this study were parents of 25 pediatric cancer survivors (survivors' age range = 3–12). Parental Stress Index (PSI; Abidin, 1990), The Ways of Coping Checklist (WCCL; Folkman and Lazarus, 1985), and The Multidimensional Scale of Perceived Social Support

(MSPSS; Zimet, Dahlem, Zimet, and Farley, 1988) were administered. For statistical analysis, General Linear Model (GLM) in SPSS 15.0 was used. **RESULTS:** Coping skills and perceived social support together predicted PSI total score significantly ($F(10,5) = 4.975$, Adjusted R Squared = .726, $p < .05$). Although it was not statistically significant, it was shown that coping skill and perceived social support together had a tendency to predict PSI scores of child domain ($F(10,5) = 4.505$, Adjusted R Squared = .700, $p = .055$). PSI scores of parent domain could not be predicted through coping skills and perceived social support ($p = .354$). **CONCLUSIONS:** Parents of pediatric cancer survivors' coping skills and perceived social support together can predict total score of parental stress. Although coping skills and social support were good predictors of PSI total score, they could not predict PSI scores of parent domain. The present study concludes that pediatric cancer survivors' parents' specific problem-solving skills, active coping, and emotional support are closely related to stress. **RESEARCH IMPLICATIONS:** Although present study revealed that coping skills and perceived social support together can significantly predict the total stress levels of parents of pediatric cancer survivors, future studies should replicate the study with more Ns. Other factors like demographic factors (e.g. age, gender) and treatment factors should be considered when predicting parental stress. **CLINICAL IMPLICATIONS:** To reduce parental stress among pediatric cancer survivors, CBT focused problem-solving and coping strategies could be beneficial. Furthermore, community help is necessary for pediatric cancer patients and survivors' parents to get emotional support. **ACKNOWLEDGEMENT OF FUNDING:** Brain Korea 21.

P2.4.16

Very Young Siblings of Children with Cancer Deserve Personalized Care

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BACKGROUND: The families of children with cancer focus their care on the patient alone throughout the whole life threatening period, which very often means several years. Despite the growing body of literature on sibling adaptation and coping, they are still labeled the 'forgotten children' because they experience significant psychosocial distress and are often isolated from support systems within and without the family. **METHOD:** While parents appear to notice that their 'healthy' children complain more about aches and pains, they often have little energy to attend to their needs. Physicians, psychologists and nurses have investigated and studied the adjustment and

coping difficulties that healthy siblings face when they have a brother or a sister suffering from a life threatening disease. Most of these studies, which are based on questionnaires and interviews, have been dedicated to school aged and to adolescent siblings. **RESULTS:** Very little attention has been paid to younger, healthy children, i.e., from 3 to 6 years of age, therefore, they may be overlooked in the process. Depression, anger, anxiety, feelings of guilt, social isolation, loneliness, jealousy, envy over the mother's special care for the sick child, worries, and fantasies even of monstrous creatures are frequent feelings that young siblings experience. **CONCLUSIONS:** Although not all of them develop behavioral or emotional problems, it is critical to identify which caregivers may successfully intervene. A high level of social support provides protection in the psychological adjustment of the very young siblings of children with cancer, with age and gender being modifying factors. **RESEARCH IMPLICATIONS:** Our experience shows that only trained infant school teachers can provide helpful psychological support and adjustment to the siblings of children with cancer, under the supervision of the psychologist caring for the adjustment of the whole family. **CLINICAL IMPLICATIONS:** Siblings of a very sick child need to be included in the family global care by the whole staff. It is important to use a family-centered approach in order to avoid a lack of adjustment and coping, post-traumatic stress, and the onset of side effects linked to misunderstood psychological distress. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.4.18

Child with Cancer: A Psychological Intervention Program on the Preparation for Medical Procedures

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BACKGROUND: Children's hospitalization is a complex condition which needs psychological intervention to promote patient's better behavior, facilitating their adaptation. Experimental and observational procedures were proposed to describe and assess an assistantship program for hospitalized children during medical procedures, observing the decrease of concurrent behavior (responses which can cause difficulties, delays or impediments to the medical procedure) and the increase of adequate behavior (responses which facilitate the medical procedure). **METHOD:** The Observational Scale of Distress Behavior (OSDB) was used to define and the register the infant behavior categories. This research was carried out with 20 children distributed in an experimental group ($n=10$) and a control group ($n=10$). Children from the experimental group were

submitted to the Activities Program which included the development of infant reading related strategies, simulations, relaxation techniques and fantasy. **RESULTS:** The data analysis demonstrated that the experimental group showed a more adequate behavior pattern contributing to the medical procedures (a decrease in concurrent behavior and an increase in acceptance behavior). Furthermore, the functional relationships in the hospital environment were better understood thus improving patient behavior. **CONCLUSIONS:** This study aims at contributing to the understanding of the behavior of ill children during their hospitalization period and it presents a proposal of intervention that includes coping strategies which help dealing with the illness and its treatment. **RESEARCH IMPLICATIONS:** Results from this study may subsidize researches in Health Psychology to the development of effective programs to attending children with cancer in hospitals. **CLINICAL IMPLICATIONS:** The study presents a proposal for children's psychological treatment when dealing with serious illnesses. **ACKNOWLEDGEMENT OF FUNDING:** CNPq—National Counsel of Technological and Scientific Development.

P2.5.1

Knowledge About Hereditary Nonpolyposis Colorectal Cancer; Mutation Carriers and Physicians at Equal Levels

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BACKGROUND: Identification and adequate management of individuals at risk for hereditary nonpolyposis colorectal cancer (HNPCC) is crucial since surveillance programmes reduce morbidity and mortality. We investigated knowledge about key features of HNPCC in at-risk individuals and physicians in surgery, gynecology and oncology. **METHOD:** Data was collected using a questionnaire which was answered by 67 mutation carriers and 102 physicians. The statements were related to colorectal cancer, heredity and surveillance and the physicians were also asked questions about cancer risks and surveillance strategies. **RESULTS:** Both groups answered questions on colorectal cancer risk, surveillance and genetic testing well, whereas knowledge about inheritance and risks for HNPCC-associated cancer was less accurate. Only 52% of the family members and 30% of the physicians correctly estimated the risk to inherit a HNPCC causing mutation. Among family members, young age. **CONCLUSIONS:** The finding of similar levels of knowledge about key features of HNPCC in at-risk individuals and physicians reflect the challenge physicians face in keeping up to date on hereditary cancer and may have

implications for the clinical management of HNPCC, as well as for professional relations with HNPCC family members. **RESEARCH IMPLICATIONS:** The findings provide novel insight into the knowledge level in physicians and individuals at risk of hereditary nonpolyposis colorectal cancer (HNPCC). These data are the first to demonstrate equal levels of knowledge in these group, which is likely to influence the balance between the medical and the individual perspective in the management of individuals at increased risk of cancer. **CLINICAL IMPLICATIONS:** Equal and in some instances better knowledge among members of hereditary cancer families, than among physicians responsible for the management, is likely to influence trust and satisfaction. These findings indicate dissatisfaction on behalf of the patients and are likely to reflect frustration among physicians. Physician behaviour may influence at-risk people's adherence to surveillance programmes; our findings strongly suggest that improved education in genetic medicine is needed for physicians responsible for diagnosis and management of at-risk individuals. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.2

What Capabilities Do Clinicians Need to Work Effectively and Sustainably with Refractory Suffering?: Experienced Palliative Care Clinicians' Perspectives

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BACKGROUND: The suffering (particularly refractory suffering) of patients and their families affects clinicians, who grapple personally and professionally with their own suffering in the face of the other's distress and their inability to relieve it. Yet this 'mutual suffering' (Graham and Clark, 2005) is often not articulated. Experienced palliative care clinicians have identified capabilities clinicians need to develop in order to provide effective care for those suffering, which is also sustainable for themselves. **METHOD:** Seventeen palliative care practitioners with at least two years of clinical experience were interviewed (13) or completed an online questionnaire (4). The sample was a purposive cross-section of disciplines involved in palliative care teams (10 nurses, 5 doctors and 2 allied health clinicians). Thematic analysis was conducted independently by the four research team members to identify the main themes. Cross sectional analysis was undertaken to cluster and label core themes that were interrelated and repeated. **RESULTS:** Capabilities identified involved personal strengths, skills, knowledge, understandings, and attitudes. They

include: knowledge about refractory suffering and one's own patterns of responses to suffering; a clinical approach to suffering which involves presence rather than 'fixing'; the ability to work within uncertainty, to engage with suffering and distress, and to deal with difficult emotions, such as anger; detachment, without losing empathy; courage, patience and gentleness; the ability to develop healthy strategies for maintaining balance and boundaries; clinical assessment and decision making skills and communication skills; a personal philosophy; a reflective capacity; and the ability to work in a multidisciplinary team. **CONCLUSIONS:** This study appears to be the first to interview experienced palliative care clinicians directly about their views on the capabilities needed for effective, healthy clinical practice with people with refractory suffering. The findings add to the literature discussion of three crucial capabilities: (1) the ability to work and make clinical decisions within uncertainty; (2) maintaining perspective; and (3) the paradoxical necessity of developing and using two seemingly oppositional groups of skills: ongoing clinical assessment and management skills and, at the same time, a letting go of 'controlling' suffering, and attentiveness to being therapeutically present with the sufferer. **RESEARCH IMPLICATIONS:** Future research is needed in the areas of: effective ways of building clinical organisational culture which acknowledges, supports and develops capacity in working with refractory suffering; determining the most effective supportive learning methods for capacity building in each of the capabilities required of clinicians in this area; the most effective clinical supervision and mentoring models for capacity building in working effectively and sustainably with refractory suffering. **CLINICAL IMPLICATIONS:** Refractory suffering takes experienced palliative care clinicians into uncertain, unfamiliar areas of practice. They are challenged by the felt need to 'fix' or resolve the suffering, yet recognise that this is often something beyond their control. Developing capacities to work well with refractory suffering requires emotional and clinical support and ongoing education. Clinical supervision, role modeling, mentoring, observation of colleagues and formal postgraduate study need to be explored as possible ways of achieving this. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by a project grant from the International Institute of Palliative and Supportive Studies.

P2.5.3

The Unique Project for Palestinian Patients in Oncology Department of the Tel Aviv Medical Center in Israel

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BACKGROUND: The number of Palestinian cancer patients receiving oncology treatments in the Sourasky Medical Center has recently increased. Israel's policy is to allow hundreds of patients who require daily life-saving treatments to have access to hospitals in Israel. During the absorption the need for special assessments was raised in the following areas: 1. Arabic-speaking; 2. Bureaucracy and logistic problems; 3. Lack of understanding of procedures and regulations; 4. Cultural issues; 5. Accommodation and food problems. **METHOD:** Our purpose was to develop different methods and services for the hospitalized Palestinians. 1. Printing information in Arabic regarding Department's procedures, regulations and information about of cancer, therapeutic options, side effects, etc. 2. Recruiting Arabic-speaking volunteers as mediators between patients and their families and medical staff. 3. Employing Arabic-speaking social worker for emotional support and combining between patients and community sources. 4. Spiritual support by the clergyman. 5. Opening a hostel in the hospital for families. 6. Enabling families to eat in the hospital dining room. 7. Monthly meeting for information managed by Head Nurse and Arabic-speaking social worker. **RESULTS:** The project has been successfully operated approximately one year. The Palestinian Authority patients and their families sense that we are aware of their special needs, as are the visiting delegations from around the world interested to solve these patients' problems. There is no doubt that the current cooperation between the staff and Palestinian patients and their families is much better. Unique individual needs are taken into consideration. **CONCLUSIONS:** This is the most important project. It shows how we can bridge between cultures, peoples, how can create and find a common language between the two nations with the situation of warfare between them. When it comes to severely diseases and life-saving treatments there is no reference to the origin or religion and we treat, save lives and respect each person as a person is. **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** None. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.4

Coaching as a Method to Clarify Choices for Cancer Patients

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BACKGROUND: Many cancer patients want to use their disease to make changes in their lives. Raising questions like; 'Am I living the life I want?' 'Am I having the right job?' 'How is the balance

between work, family and friends?' 'Can I make changes which will make my life more satisfying and make dreams come true?' **METHOD:** Coaching is a popular method to use questions to clarify choices and help finding new paths in life. Coaching might give people a feeling of control through the interaction with the coach. I have wanted to research if coaching is a suitable method for cancer patients to help them see if changes give answers to their wishes to remodel their life. Coaching sessions have been offered to cancer patients who have finished their treatment and want to go back to work and maybe make new choices in their life. The offer has been 1 to 4 coaching sessions with focus on returning to work. **RESULTS:** Patients benefit from coaching sessions. They bring items about work, e.g. 'should I follow my dream and find a new job?' 'Take a new education?' 'Work more or less?' 'Spent more time with my family?', Etc. Coaching helps them open up and see possibilities through finding contradictions, alternatives and questions about the present situation, the dream and the path to realisation. **CONCLUSIONS:** Coaching for cancer patients with finalised treatment is still new. The results are promising and one might wonder if it can be used to newly diagnosed patients or patients in treatment. It might be a god offer for some patients wanting to be in control. **RESEARCH IMPLICATIONS:** This is a practise based study with no control group, and reasonably new, but will be followed up by an analysis of patients about what the coaching actually meant to their situation. **CLINICAL IMPLICATIONS:** None. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.5

Burnout in Oncology in Flanders*: First Results of a Study Amongst 550 Professionals in Oncology.

***Flanders is the Dutch speaking part of Belgium**

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BACKGROUND: International research shows that oncology staff suffer more from stress and burnout than other health care professionals do. Burnout is prevalent amongst oncologists. The prevalence of emotional exhaustion, depersonalisation and low personal accomplishment is significantly higher among physicians, than among support staff in oncology. A national study on this subject was until now not conducted in Flanders. The Cédric Hèle

institute, Flemish institute for psychosocial oncology, (CHi), started with a pilot study in 2008. **METHOD:** The Chi spread questionnaires amongst 923 health care workers in oncology in Flanders. The questionnaire consisted of two parts. A first part with questions to determine demographic and job features of the participants. In the second part, the Dutch version of the Maslach Burnout Inventory, was used, the UBOS-C. UBOS-C is a self reporting scale, with 20 questions, divided in 3 sub-scales (emotional exhaustion, depersonalization and personal accomplishment). It is a valid and reliable instrument to measure burnout. **RESULTS:** 550 subjects participated in the survey (response rate of 59.5%). 12 subjects suffer from serious burnout, with a high degree of emotional exhaustion and depersonalisation and a low degree of personal accomplishment. 51.2% of the oncologists suffer from emotional exhaustion and 31.8% from depersonalisation. Emotional exhaustion was found in 13.8% of the onco-psychologists, in 20.9% of the social workers, in 22.2% of the specialist-nurses and in 20.8% of the nurses. We found the highest level of depersonalisation in oncologists (31.8%), next are nurses (21.5%), social workers (16.4%), psychologists (11.6%) and finally specialist-nurses (8.3%). Nurses suffer most from the lowest degree of personal accomplishment (17.6%), followed by social workers (14.9%), psychologists (9.6%), oncologists (6.7%) and specialist-nurses (5.7%). **CONCLUSIONS:** The Chi-research shows a problematic level of burnout-components in professionals in oncology, especially in medical oncologists. **RESEARCH IMPLICATIONS:** More research should be performed on the factors which can cause and prevent burnout. Chi only questioned professionals in Flanders. The French speaking part of Belgium was never studied. Examine the prevalence of the post-traumatic stress syndrome in oncology, is also interesting. The consequent confrontation with cancer and with the suffering and death cancer causes, could cause secondary traumatising. Only few research is performed in this subject, none in Flanders or Belgium. **CLINICAL IMPLICATIONS:** First there should be vigilance towards indications for burnout in oncology. Secondly action should be undertaken. Management of hospitals and policy makers should take into account that oncology professionals have a lot to endure and should think about prevention and support of burnout symptoms. International studies show that training and education in communication and other psychosocial skills in oncology, is an efficient tool in the prevention of burnout. Implementation of training could be one action. **ACKNOWLEDGEMENT OF FUNDING:** The Cédric Hèle instituut could be founded thanks to the support of the national

society 'Vlaamse Liga tegen Kanker' (the Flemish League against Cancer).

P2.5.7

Psychiatric Disorders in Patients suffering From Pancreatic Cancer

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BACKGROUND: Pancreatic cancer is strongly associated with high prevalence of psychiatric disorders, which demand clinical studying. **METHOD:** 38 inpatients admitted to Department for surgical treatment of hepatic and pancreatic cancer of Russian Cancer Research Center of N.N. Blokhin of Russian Academy of Medical Science. The sample included 22 females and males, age 24–74 years (mean age 53.5 ± 11.3 yrs) with verified diagnosis of pancreatic adenocarcinoma. 29 patients received surgical treatment, 9 patients received chemotherapy. All patients undergone psychiatric assessment with structured clinical interview based on ICD-10 criteria. **RESULTS:** In 19 (50%) patients affective episode was diagnosed according, including hypomania ($n = 12$) and mild/moderate depression ($n = 7$). Hypomanic episodes presented as mixed affective states and were characterized by elevated mood, motor and intellectual activity in combination with anxiety related to the circumstances of pancreatic cancer situation (diagnostics, treatment, etc.). Depressive episodes were presented with melancholic features including sadness, diurnal symptom variations, suicidal thoughts in combination with restlessness and dysphoric affect. Most patients (15 from 19) with affective episodes revealed clear psychopathology in family and personal history including affective and personality disorders associated with high risk for affective disorders. **CONCLUSIONS:** According to the data of this preliminary study pancreatic cancer is associated with high prevalence of affective disorders with endomorphic features and we can speculate that there is familial and personal predisposition to this type of psychiatric pathology contributing to the higher risk of affective episodes in pancreatic patients. **RESEARCH IMPLICATIONS:** The data presented support the relevance of further research aimed to the clarification of prevalence and spectrum of psychiatric pathology in pancreatic cancer patients. **CLINICAL IMPLICATIONS:** The results of the study will facilitate diagnostic and therapy of psychiatric disorders in pancreatic patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.8

Education Program of Medical Ethics and Physicians' Spiritual Growth

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BACKGROUND: Physicians caring terminal cancer patients are expected to supply spiritual care. The spiritual well-being of physicians is not only important to the spiritual well-being of their patients, but also related to medical ethical issues. We design a series of continuing medical education (CME) of medical ethics and physicians' spiritual growth. We want to understand the rate of satisfaction among the physicians completing the education program. **METHOD:** Based on the results of our previous qualitative study with deep interview with 27 physicians and focused groups with 28 physicians from September 2006 to April 2007, we designed eight courses for CME of medical ethics and physicians' spiritual growth, including (1) ultimate meaning of physicians, (2) skill of communication for physicians, (3) loss and grief of physicians, (4) how laws affect physicians, (5) physicians' viewpoints of life and death, (6) self care of physicians, (7) searching for profession by yourselves, and (8) providing spiritual care for patients by physicians. Every course was one hour. The participant scored every course after completing all eight courses by the highest satisfied as 5 point and the lowest satisfied as 1 point. All the data were analyzed using SPSS 15.0. **RESULTS:** There were 84 physicians participating in the series of CME. All participants completed all eight courses. The rates of satisfaction to every course were as following: 4.30 (SD = 0.59) for ultimate meaning of physicians, 4.27 (SD = 0.69) for skill of communication for physicians, 4.17 (SD = 0.71) for loss and grief of physicians, 4.12 (SD = 0.59) for how laws affect physicians, 4.19 (SD = 0.64) for physicians' viewpoints of life and death, 4.08 (SD = 0.57) for self care of physicians, 4.36 (SD = 0.55) for searching for profession by yourselves, and 4.34 (SD = 0.57) for providing spiritual care for patients by physicians. The rate of satisfaction to the whole series was 4.21 (SD = 0.48). **CONCLUSIONS:** The satisfaction

to the CME of medical ethics and physicians' spiritual growth was good approximately. Almost participants enjoyed the process to attend the CME. The series of CME should be useful for physicians caring terminal cancer patients. **RESEARCH IMPLICATIONS:** We suggest that it is necessary for physicians to attend the continuing medical education of medical ethics and physicians' spiritual growth. However, the further study should understand the spiritual well-being of physicians having been improved or not after completing the CME. **CLINICAL IMPLICATIONS:** The rate of satisfaction to every course and the whole series were good. It means every one of eight courses could be used alone. All courses should be useful for clinical physicians to learn to facilitate the understanding about medical ethics and physicians' spiritual growth. **ACKNOWLEDGEMENT OF FUNDING:** The study is one part of the project 'The construction of spiritual growth programs for physicians based on medical ethics of caring terminal cancer patients' supported by National Science Council of Taiwan (NSC 95-2516-S-195-003-MY3).

P2.5.9

Nicotine De-addiction Facility Needs in Rural Indian Community: NGO Initiatives in Phase-IV Community Project

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BACKGROUND: This is Phase-IV continuation of our NGO-Project in Indian-adolescents. Studied influence of counselling on reduction in tobacco-smoking eventually reducing lung-cancer-incidence. 218 deaths/year due to lung-cancer. Crude-Tobacco-smoking socially accepted in rural/tribal India. From May 2007 our NGO conducts project 'BIDI [Locally made crude-Indian-tobacco] OR HEALTH'. Aims to reduce tobacco-products-consumption & provide de-addiction guidance/counseling. **METHOD:** 11 villages from rural India included. Total-participants 511, age 14–24. Tobacco-addicts graded clinically. Counseling-effect monitored for four-months. counseled for cause tobacco-use, educational/social factors. conducted 20 follow-up-sessions during course of study. **RESULTS:** Of 511 tobacco-users 493 continued to participate. [18 dropouts]. 32% COPD & respiratory disorders, 12% Tuberculosis. 8 healthcare personals from rural-Govt-clinics trained in counseling with community-leaders. 431 participants showed positive-attitude towards quitting tobacco use. Of these 431, 410 smokers quit habit of tobacco. 21 able to abstain for short-period but eventually restarted habit. Post-project-surveillance showed need for community help & Rehabilitation.

Of 431 who responded positively majority [394] adolescents started using tobacco due to peer-pressure [84%], imitation of tobacco-advertising on media/films/TV [11%]. **CONCLUSIONS:** NGO-activists with scientific knowledge/expertise are only available resource for influencing cancer incidence in India. They act as channel to implement Supportive cancer care/prevention-programmes. NGOs should utilize this approach to reduce cost-factor in cancer-control-strategies & better de-addiction-facilities in rural/tribal areas where qualified Oncologists are rarity. Developing-nations have little manpower/resources/technologies in de-addiction. nicotine replacement therapies are expensive & available in metro-cities only. Government must carry out supportive-care-programmes with NGO-counsellors to bring down mortality/morbidity of lung-cancer. Anti-tobacco-activists trained in counseling provide better cancer care with reduced cost. We intend to form an Umbrella group of anti-cancer activists to workout more planned approach to this issue at IPOS-2009-Vienna-congress. **RESEARCH IMPLICATIONS:** Tobacco-deaddiction educators needs to be sensitized towards access to such newer & expensive methods in resource-poor-nations. Especially in resource-poor-developing-nations there is urgent need to make nicotine de-addiction facilities available. By interaction with senior-researchers at IPOS-Vienna-congress we shall carry back expertise/knowledge from 11th IPOS congress back into our NGO community in rural/tribal India. **CLINICAL IMPLICATIONS:** At 11th IPOS, I as young women from Indian Cancer-NGO shall exchange our concerns/experiences/difficulties about nicotine replacement-therapy with congress-participants. By my participation I will spread our activities in collaboration with conference participants. I need to learn international trends in tobacco de-addiction. Presentations by leading Lung-cancer researchers on issues tobacco smoking at Vienna-congress will also modify our future action plan of our Community-work. **ACKNOWLEDGEMENT OF FUNDING:** This was a project designed & conducted by volunteers of this cancer NGO in rural/tribal India. We did not receive any funding. All 12 volunteers, 2 nurses & one psychologists gave their free services for this project. All cancer patients were those who returned to villages after chemo/surgery in city hospitals. This was a unique effort 'As a Community study without any funding resource'.

P2.5.10

Electronic Health Records (EHR) for Oncology Patients

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BACKGROUND: Analysis of disease progression and treatment outcomes requires large amounts of time-sensitive data and causal connections. Most of these data exist in electronic form, but there are few instruments that allow extraction from different data bases, compression, and even collection on the single screen. **METHOD:** A National Standard 'The Electronic Health Record' developed based on the experience acquired by creation and implementation of our EHR system. This system allows integrated data presentations on a uniform axis of time and instant access to all information. The new system allows personal privacy and unites Internet-based life-long personal health records of patients with all clinical and administrative instruments. A system of representations of the clinical data using the Internet promises to be critical in the field of remote consultation and telemedicine, but its efficiency will depend on a degree of standardization in different medical institutions. **RESULTS:** The new system allows personal privacy and unites Internet-based life-long personal health records of patients with all clinical and administrative instruments. A system of representations of the clinical data using the Internet promises to be critical in the field of remote consultation and telemedicine, but its efficiency will depend on a degree of standardization in different medical institutions. **CONCLUSIONS:** If The world community of hematologists and oncologists will greatly benefit from uniform approaches to conducting EHR to improve efficiency of therapy, telemedicine, referrals and recruiting patients for clinical trails. **RESEARCH IMPLICATIONS:** Homeopaths included video record of doctor-patient conversation as a part of EPR. **CLINICAL IMPLICATIONS:** Homeopaths included video record of doctor-patient conversation as a part of EPR. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.11

Predictors and Correlates of Changes in Residents' Burnout Level: Influence of Person- and Work-related Variables

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BACKGROUND: It is well recognized that residents may experience burnout. There are however not enough studies which have

investigated person- and work-related variables associated with the development of residents' burnout. The aim of this study is to identify predictors and correlates—person- and work-related variables—of changes in residents' burnout in order to develop effective interventions to reduce their burnout. **METHOD:** Seventy-nine residents from various specialties included in a randomized controlled study which has failed to show the efficacy of a communication and stress management training designed to reduce burnout were assessed at an 8-month interval. Burnout (emotional exhaustion, depersonalization and personal accomplishment) was assessed with Maslach Burnout Inventory (MBI). Numerous person-related (socioprofessional, psychological and communicational) and work-related variables were collected at each assessment time. **RESULTS:** Linear regressions have been conducted. Person- and work-related variables explain 37% of the variance in changes in emotional exhaustion. Significant predictors were Locus of Control (Beta = .212; $p = .027$), stress to communicate in interview (Beta = .207; $p = .044$) and emotional-focused coping (Beta = .210; $p = .042$). A significant correlate was changes in lack of organizational support index (Beta = .381; $p < .001$). However, only person-related variables explain 9% of the variance in changes in depersonalization (changes in social support-focused coping: Beta = $-.292$; $p = .009$) and 12% of the variance in changes in personal accomplishment (work experience: Beta = .223; $p = .041$; changes in emotional-focused coping: Beta = $-.258$; $p = .019$). **CONCLUSIONS:** Identifying person- and work-related variables predicting or being associated with changes in residents' burnout is an essential step to further develop effective interventions to reduce burnout. Interventions focusing on residents' problem-focused and social support-focused coping and on supervisors' team working management may be suggested. **RESEARCH IMPLICATIONS:** Surprisingly, only one general work-related variable was associated with changes in residents' burnout. Further research should build questionnaires focusing on specific work characteristics of residents in order to identify work-related variables predicting changes in burnout over time. **CLINICAL IMPLICATIONS:** Nearly 50% of residents at baseline have high emotional exhaustion or depersonalization. Burnout prevention seems thus really necessary earlier in the medical curriculum. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

P2.5.12

The Significance of Age in Oncology—The Staff Perspective

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BACKGROUND: Studies indicate that cancer patients' age may affect the quality of their treatment. Yet, there is little knowledge of how and why age affects treatment quality. This study explores age-related differences in patient treatment at a Danish oncology department. **METHOD:** Qualitative analyses of eight semi-structured interviews with strategically selected staff members (nurses, doctors and psychologists) were conducted using a grounded theory approach. The interviews were coded through a process of meaning condensation and structured into core-categories: 'Values of equality and life script expectations' and 'differential treatment of younger and older patients'. The interviews were independently coded by four authors to increase validity. Subsequent negotiation identified differences and contradictions between staff attitudes and priorities in practice. **RESULTS:** All participants mentioned age-related differences in treatment. The differences mentioned were that younger patients received 1) had more treatment offers, 2) more consultation time with physicians, 3) were allocated physicians with higher seniority, and 4) that there was an increased focus on ensuring continuity in the staff assigned to them. The explanations given for these differences were 1) differences in patients' health conditions and 2) sympathy for younger patients' life situations and needs. When asked directly, whether there were differences in the way younger and older patients were treated, only one of the participants concurred, while seven dismissed. **CONCLUSIONS:** Normative expectations with regard to the life course may make serious disease in youth seem more tragic. Compassion towards the younger patients and their life situation may result in an unintended favoring of the younger patients. Furthermore, equality and life script expectations seem to be co-dominant values, and both appear to have impact on treatment quality. Values of equality are explicit and govern formal hospital guidelines, while values related to the staff's life script expectations are more implicit. It can be argued that such implicit values account for some of the differences in treatment quality. **RESEARCH IMPLICATIONS:** Large-scale quantitative studies would be relevant to examine whether the present findings

can be generalized to staff in other oncological settings. **CLINICAL IMPLICATIONS:** The results highlight the importance of expressing values explicitly to avoid cultural taboos in cancer treatment. Acknowledging both values of equality and life script expectations could help reduce uneven resource distribution and ensure optimal treatment across all age groups. **ACKNOWLEDGEMENT OF FUNDING:** Danish Research Council.

P2.5.13

The Significance of Age in Oncology—The Patient Perspective

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BACKGROUND: Fear of dying, suffering, and dependence on others are troubling the majority of all seriously ill patients. Patients may experience these issues differently, depending on their age and stage in life. The aim was to compare younger and older patients' cancer-related experiences, and to examine whether these patients experienced age-related differences in treatment and care. **METHOD:** Qualitative analyses of semi-structured interviews with younger and older cancer patients were conducted using a grounded theory approach. Eight younger patients aged 27–44 years and 10 older patients aged 70–82 years with various cancer diagnoses were interviewed. The interviews were coded through a process of meaning condensation and structured into core categories. The life script construct was used as an explanatory theory as to why older and younger patients differ in their experience of having cancer. **RESULTS:** Being diagnosed with cancer shocked the younger patients as they associated cancer with old age. They felt it was unfair that their lifespan could be shortened and that they could miss important life experiences. The older patients were grateful for their long life before cancer diagnosis. Both older and younger patients considered cancer in younger adulthood more tragic since the potential losses are greater and younger adults often have responsibilities for others. A subgroup of all patients believed that younger patients were favored in treatment, but no participants could recall any examples of age discrimination in the health care system. **CONCLUSIONS:** Older patients found comfort in the completeness of the life they had had. Acceptance that cancer can cause death was more difficult for younger patients. For younger patients, a violation of the order of the life script is associated with feelings of unfairness but also with an

increased willingness to fight the illness. Although approximately one third of the patients believed that younger patients were favored in cancer treatment and care, none were able to provide specific examples of ageism. **RESEARCH IMPLICATIONS:** Further studies of patients' age-related differences in treatment, care and cancer experiences are needed. Large-scale quantitative studies would be relevant to examine whether the present findings can be generalized. **CLINICAL IMPLICATIONS:** Acknowledgement of how the experience of having cancer differs with age may be useful in staff interactions with patients. **ACKNOWLEDGEMENT OF FUNDING:** Danish Research Council.

P2.5.14

Touch and Dance Therapy in the Prevention and Treatment of Burn Out

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BACKGROUND: Oncology and hospice staff members are especially vulnerable to the effects of burn out. They are working with patients who are in a permanent state of defenselessness without a hope of recovery. In this situation the emphasis in therapeutic work is often shifted to non-verbal methods that are more applicable and useful. Staff members working with people in the situation of constant crisis, may greatly benefit from the use non-verbal communication and its methods. **METHOD:** 15 hospice team members participated in 10 sessions of touch and dance therapy. The 30-hour-training consisted of the following parts: training of non-verbal communication-differentiation of touch; body boundaries, defense and preservation of our own boundaries in touches; mechanisms of defense and self-defense; the body as a shape: liquid and solid qualities; leading and following; how to cope with defenselessness and service; fears, blockades, tensions; solving and dissolving—accepting transience; verbality during touch—where does touch start and finish; equality and partnership in interdependence; closure and equalization, relief and letting go: everything changes; the cessation of attachments—the dignity of infinity, the infinity of dignity. **RESULTS:** Through the slow, gradual relief of their resistance, team members came closer to the understanding of the internal processes of patients. They achieved this through work with touch and through making certain bodily processes conscious. **CONCLUSIONS:** Non-verbal methods are new tools for members of a multi-disciplinary team working with everyday loss in coping with their experience and mobilizing their own resources. These methods are extremely important for those

professionals who work in a continuous emotional strain of a hospice ward. **RESEARCH IMPLICATIONS:** The important question for future research remains if dance therapy, compared to other therapeutic methods, is an effective tool in the prevention of burn out of staff working under extreme emotional pressure, or not. **CLINICAL IMPLICATIONS:** Health care staff working with severely ill patients are exceptionally vulnerable to the clinical symptoms of burn out. It is therefore the eminent task of palliative care services to provide counselling and psychological support to the members of their staff. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.15

Patients Needs and the Level of Their Satisfaction and the Mental Adjustment to Cancer

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BACKGROUND: The research was conducted in Warsaw Center of Oncology. The main goal was to identify the dependencies between the cancer coping strategies and patients' needs and the level of their fulfillment. The research was meant to help the Hospital Support Team to provide patients with more aimed help to address the issues lowering their QoL. Secondary goal was to test Patients Expectation and Satisfaction Questionnaire (PESQ) as a standard evaluation tool of Hospital Support Team. **METHOD:** The research was conducted using the questionnaire consisting of 3 parts: Mini-MAC scale measuring mental adjustment and coping strategies, VAS measuring actual, average and maximum pain last week and PESQ measuring patients needs in 9 main areas, their satisfactions and the need for improvement. Anonymous questionnaires have been given to the oncology wards patients that have been taken in hospital support team's care. The results were statistically examined for correlations between certain factors. **RESULTS:** 50 patients undergoing causal cancer treatment were examined. The average actual pain score was 3.37, average maximum 7.9 and average 5.1 which shows the difficulty to adjust pain treatment strategy at the early stage of treatment. Correlation analysis has shown the following results: destructive strategies based on fatalism and fear correlated negatively with the need for information and deciding about self; strategies based on fighting spirit and cognitive avoidance correlated negatively with the feeling of loneliness and maximum pain last week; importance of being cared about, time spent watching TV and the need to meet the family correlated positively with destructive strategies; cognitive avoidance strategy correlated positively with the

need of faith. **CONCLUSIONS:** The results of the research show that loneliness and uncontrolled pain can significantly lessen the chance for positive mental adjustment to cancer. Good control over pain together with being accompanied by both medical team and family steers the patients towards positive adjustment. We have observed that frequent watching TV is connected to negative strategies. The possible explanation is that TV often works as the substitute of real people that suggests loneliness as the root cause of negative strategies. People with negative mental adjustment to cancer do not expect information or to be decisive but to receive care and meet the family. **RESEARCH IMPLICATIONS:** The research has shown that PESQ is a powerful tool to assess patients needs and improve their quality of life. It proves useful with both palliative care and causal treatment patients. It can also be used to assess patients' mental adjustment as the needs and expectations named by the patient can predict the strategy and mental adjustment. **CLINICAL IMPLICATIONS:** Two most important factors influencing patients mental adjustment are control of the physical symptoms and solitude. The patients that feels left alone is likely to develop negative strategies even if the symptoms are controlled. At the same time uncontrolled pain greatly lessens the chance for positive adjustment event if the patient has good support. The work of Hospital Support Team coping both with symptoms and psychological issues can greatly improve patients quality of life. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.5.16

Stress, Burnout and Emotional Disorders in Technical Health Services Oncology

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BACKGROUND: The constructs mentioned above, have been in recent decades, the focus of much attention from researchers, however, becomes increasingly important, strengthen the knowledge, so that we can contribute more, but essentially better, with the intervention in health professionals in oncology. The observable evidence that those working to help and feel that the lives of others in their hands are permanently associated with levels of stress leading to burnout. **METHOD:** This study is a descriptive—cross, with a sample of 30 health professionals, 15 technicians of health from oncology and 15 health professionals from other (s) specialties. Since the sampling process is the type stratified because of the population is distributed by groups connected with the same characteristics to study. The collection of the

sample will be done, preferably in hospitals and in the IPO of Porto. Original instruments will be used, properly validated for the population and also the vital jackets, the prospect of linking the psychological with the physiological indicators. **RESULTS:** As is shown in other research, assume find significant evidence that the health professionals of Oncology can be found with higher levels of stress than the health professionals in other specialties. And, to include the registration done by vital jackets, we find that the data reinforce the results. This means that assume find congruence between the physiological and psychological indicators to the daily experience of situations of high stress. **CONCLUSIONS:** The health professionals in oncology are a group at risk due to high stress situations that are faced with daily. The perception of stress and that this affects the professional and personal lives of these professionals is highly evident. Leads us to suggest that the intervention has to stop being just an idea and become a real implementation. When we talk about the stress that these are technical subjects, and how this is affecting their lives, we must point out that patients also end up being at risk. **RESEARCH IMPLICATIONS:** This research has important implications to the observation through the psychological and physiological indicators of high levels of stress and burnout that the health professionals in oncology present, the central objective, is to draw up a draft speech. In order to focus on improving the quality of life of these professionals and provide them with skills to know that autonomously manage their tasks, thus minimizing the effects of daily situations experienced as stressful. **CLINICAL IMPLICATIONS:** This information will be important in management of health teams. **ACKNOWLEDGEMENT OF FUNDING:** Instituto Superior da Maia.

P2.6.1

Psychological Characteristics, Motivations and Needs of a Sample of Cancer Patients: A Preliminary Study

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BACKGROUND: The main purpose of this study is to compare and integrate the Clinical Activity, focused on offering psychological support to cancer patients, and the Study Activity focused on the doctor-patient relationship, examining the figure of cancer patients, in order to optimise the clinical evaluation on the basis of their needs as they emerged during the study activity. **METHOD:** To the 28 subjects who joined this Project, in addition to the series of tests for the clinical evaluation of patients requiring psychological support, made up

of SF-36, Mental Adjustment to Cancer, Psychological Distress Inventory, Hospital Anxiety and Depression Scale, there is now a new tool focused on recording the special requirements emerging from the doctor-cancer patient relationship, Need Evaluation Questionnaire for Patients. **RESULTS:** There are no significant correlations between the primary needs of the cancer patient and his psychological features, so the emerging needs are typical of cancer patients but are not connected with their individual personalities. This suggested that we focus on the analysis of these needs, trying to discover whether the perception of a specific need considered significant is linked with the importance given by the patient to another need. The need perceived by a patient towards the doctor is also linked to those towards the hospital. We have now identified a significant correlation between these two needs. **CONCLUSIONS:** This result implies the need that both the Sanitary Institution and the medical team have to be able to interpret and identify the expectations and needs of the patients. An adequate relationship between medical team and cancer patient is therefore indispensable for thorough therapeutic care. The result is useful both for Clinical Practice and for Research Activity. **RESEARCH IMPLICATIONS:** These results suggest a formative course turned both to the oncological doctors and to the medical equipe with the aim to obtain the maximum from the relationship with the patient, cause an adequate and efficacious relationship will tend also to have very important impact on the vision who the patient has about the institute where they work. **CLINICAL IMPLICATIONS:** Considering these results will be possible take care of the patient from a global point of view, seeking to satisfy the needs he/she first perceive so to improve his Quality of Life giving him a thorough therapeutic answer. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.2

Psychological Issues in Oncology Care: A Multi-centric Study on Burnout

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BACKGROUND: The general purpose of this study is to evaluate the frequency and the level of the burnout among health employees working in an Oncology department. Coping styles will be also investigated as the different reactions to stressful situations and needs raised by health employees in relation to the working environment. **METHOD:** The research has been realized with the cooperation of three Oncology departments in four different Hospitals. Doctors and nurses were asked to fill out a form with personal data and to take a

series of tests composed by three questionnaires: 'Maslach Burnout Inventory' (MBI), 'Coping Inventory for Stressful Situations' (Ciss-2), 'Need Evaluation Questionnaire for Medical Doctors' (NEQ-MD). **RESULTS:** Oncology department employees have a higher level of emotional exhaustion. These category of employees also experience a high degree of satisfaction. We also noticed that within the same department (Oncology), institutions and working teams are influencing their staff. On the other hand, there were no significant outcomes raised in connection to the different tasks of the Oncologists and nurses. The reaction to stress of our sample is action-oriented coping. The need of better timing and setting in the visits, more frequent clinical training, supervision and psychological support, cooperation and interaction with colleagues emerged. **CONCLUSIONS:** Oncology department employers are inclined to wear out and dry up emotionally due to an overload of work generated by the emotional tension generated by in the aid relationship. This result implies the need to improve relationships between workers and institutions for a better and faster identification of expectations and employee needs. **RESEARCH IMPLICATIONS:** To extend the need evaluation to oncological patients with the aim of evaluating the presence or absence of an associations between them and employee needs. That proves to be important in order to improve the quality of service offered to patients and the management of the employees' working environment. **CLINICAL IMPLICATIONS:** The results suggest the need to create support interventions for a better management of working stress and emotional tension generated by the aid relationship, as well as a better accessibility to clinical training courses for a constant updating, and in the end promote the participation in supervision groups of clinical cases in which to share and compare one's personal work experience. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.3

Influence of the Cancer Stigma in Coping with Diagnosis and Treatment

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BACKGROUND: For a long time, giving the diagnosis of cancer was considered something cruel and inhuman. Many times, doctors would prefer that patient should not know the name of the

disease, in order that, they would not lose hope. Doctors believed that there was no treatment available for cancer. Having in mind such social representation, the present study main goal was to know the influence of such representation in the reaction to diagnosis during the treatment. **METHOD:** Participated in this study 100 patients, of both genders (39% male and 61% female), with the age between 17 and 86 years (median of 55 years), with 17 types of cancer. Those patients were accompanied in a specialized center in cancer, in the capital of Brazil. The research project was authorized by an ethics committee. The procedures of gathering data included in the consent of the patient and application of a structured interview during treatment. A content analysis of answers was made, with help of the software SPSS 16.0 and ALCESTE. **RESULTS:** The content analysis of reports identified three categories of representation of cancer, that maintained themselves during the treatment: serious and fatal disease (88%), serious disease, but treatable (9%) and disease similar to any other one (3%). In relation to reaction to diagnosis; 40% of the patients became afraid and worried; 24% became desperate; 16% had a pessimist attitude; 10% were discontented; 7% denied; 3% became frustrated. The analysis of the ALCESTE showed a relation between the cancer concept and the way patient react to diagnosis. This relationship is influenced by the history and personality of each patient. **CONCLUSIONS:** The fact that the increase of survival may change the cancer into a chronic disease did not diminish the stigma imposed by the historic perspective. Till today, this disease is connected to death, which compromises the coping of patients. The social representation favored negative reactions to diagnosis, similar to those related by the patients. Thus, we can infer that the initial concept of cancer does not change independent of chances of being cured. This concept is latent while the situation is favorable and it manifests itself when an expected event appears and that confirms the initial representation of this disease. **RESEARCH IMPLICATIONS:** The relationship between cancer and death brings up the need of new educational programs that may soothe the historic stigma and negative appeal of the media. Furthermore, it asks for studies that investigate the influence of that relationship in the behavior, as for example: early diagnosis—fear of the disease inhibits the looking for medical assistance; coping with a diagnosis and treatment; hyper precaution with health, obsessive thoughts and hypochondria patients in remission. **CLINICAL IMPLICATIONS:** Knowing the patient's concept about his own disease favors a minimization of possible negative or positive fantasies that may compromise the coping of patient and adherences to treatment. Such perception may be related with distress, anxiety and

depression - answers expected from the person who has cancer. Such knowledge, can favor the adequate assistance to patients because of the understanding of suffering and doubts present in the phases of disease. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.5

Psychosocial Online Counselling in Breast Cancer Patients

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BACKGROUND: Positive psychosocial effects have been suggested from the use of online based counselling in different patient groups, but studies focusing on cancer populations are rare. The aim of this study was to explore the psychological and behavioural impact of online support in breast cancer patients. Furthermore we inquired into the immediate effect of e-mail writing on patients' emotional states. **METHOD:** Data were collected from 165 breast cancer patients (mean age = 47 years) who participated in a web-based e-mail service for 2 months. Patients were assigned to a treatment and control group. Psychosocial outcome variables (psychological distress [BSI], coping with illness [MAC], and health-related quality of life [QLQ-C30, QLQ-BR23]) were assessed in a 2 × 2 repeated measures design. Positive and negative affectivity were self-assessed immediately before and after e-mail writing (PANAS). **RESULTS:** All patients revealed a high level of therapeutic needs. Despite distress, poor coping, and reduced quality of life 77% refused offline psychosocial support. No significant MANOVA interaction effects could be found for the effectiveness of online counselling relative to the control group. In contrast to recent studies our patients experienced e-mail writing mediated positive emotional reinforcement. After e-mail communication patients reported immediate significant increases in positive affectivity ($p = .02$). **CONCLUSIONS:** The findings indicate the helpfulness of online counselling for getting in touch with psychosocially under-served patients while highlighting some limitations, i.e. low amount of e-mail contacts and simultaneous high degree of co-morbid psychopathological symptoms which are possibly responsible for the lack of intervention effects. Further research is needed to examine psychosocial effects of online counselling for breast cancer patients. **RESEARCH IMPLICATIONS:** Systematic description of factors regarding data of online based psychosocial support in cancer rehabilitation and its respective weight could help to improve the training of oncologists and

psychotherapists to examine and provide online counselling in further studies. **CLINICAL IMPLICATIONS:** It might be helpful for breast cancer patients to use the internet as a means of obtaining psychosocial support in coping with illness. Improved internet-based interventions such as training programs via chat and/or video conferences could aid for optimizing oncology's professional systems of psychosocial care. **ACKNOWLEDGEMENT OF FUNDING:** Supported by Komen Deutschland e.V., Verein für die Heilung von Brustkrebs.

P2.6.6

Description of a Formative Psycho-Educational Course for Multi-Professional Teams

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BACKGROUND: An integrated ongoing formation for operators and volunteers has been planned in the frame of the formation program of the Oncology Department-Lodi, to the purpose of defining synergic and positive approaches as a multi-professional team. Formation is aimed at improving operators' sensitivity and consciousness of the oncologic patient's personal life and emotions. Side-objective was to create a culture of humanization inside the hospital departments, by attracting people's attention and sensitiveness. **METHOD:** Photographs through the treatment-related means and places in the Oncology Division at Casalpusterlengo Hospital were taken and then assembled in a photo-exhibition, completed by a short-movie showing imagines of details, scenes and objects, that are part of the daily activity of clinical staff and volunteers, whereas from the viewpoint of a patient, a relative or visitor they signify the new, the different, as well as questions, doubts and fear. **RESULTS:** The worth of using photos and video consists in allowing the operators to dwell upon the detail, which is the background of the context in which every day they are intensively involved, whilst for patients and concerned people it is the foreground, therefore inducing emotions. **CONCLUSIONS:** Reflecting upon humanization in Oncology Departments is a point of duty for all the clinical team, but above all it makes it possible to start a culture of break-off from prejudices, and gives an opportunity of analysis, suggesting that a Department of Oncology is not only a site to fear. **RESEARCH IMPLICATIONS:** The artistic component allowed defining in a new and not only didactic way the starting-point for an active reflection upon the humanization theme. **CLINICAL IMPLICATIONS:** At psycho-oncological level, the

implementation of formative courses for multi-professional teams allows, in a systemic clinical perspective, a better organization and assistance in the treatment-site contexts. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.7

Indian Cancer NGO's Efforts to Resolve Psychiatric Issues of Cancer Affected: Alternative Medicine System Can be Useful?

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BACKGROUND: Psychiatric care inaccessible in rural/tribal parts of India. Cancer affected patients die agonizing death without trained Psychiatric/palliative care. Depression, fatigue and poor self-perception after chemotherapy co-linked. Our Non-Govt-Organization's [NGO] Psychiatric-volunteers decided to determine criteria of Psychiatric care. Nurses also analyzed impact of complimentary-system-medicine [CAM]. **METHOD:** In last 4 years, From Phase I to Phase II, we covered 276 Patients with cancer who returned to villages after taking treatment in city-specialized-hospitals evaluated for fatigue [mean period 27 weeks. 81% males, 19% females. 251 completed follow-up in two steps [total 36 weeks]. 16 died during study, 9 failed for follow-up. Psychiatric care requirements determined by std-Protocol. Feedback by patients taken after every 12 weeks about quality of Psychiatric care & what psychosocial support patients need. **RESULTS:** Better Psychiatric care improved QOL in 87%. Use of CAM gave relief to 21% cancer patients received Hypnotherapy [53%], Bach flower remedy [23%], acupressure/acupuncture [71%]. Nurses observed & evaluated CAM along with CAM-Administrators. 23 patients did not take any recourse suffered more from fatigue/muscle-lethargy. Significant reduction in fatigue, weakness with use of locally available complimentary-Indian-medicines. **CONCLUSIONS:** Advanced Cancer-sufferers from developing-nations neglected due to lack of proper Psychiatric care. Home based Psychiatric care is still a luxury for few. Sufferers from rural/tribal areas have no palliative/supportive care to speak of. If Resources permit we plan to conduct Psychiatric training workshops in 16 villages for primary-health-care-workers. Still We have taken lead on sensitive issue of psychological-health. We will share this issue with Psychiatric-specialists from developed nations at IPOS-Vienna. From 12th-IPOS-Vienna-congress We Share/carry-back experiences in India to improve QOL of cancer-sufferers from our isolated communities. **RESEARCH IMPLICATIONS:** Developing-nations there is urgent need to familiarize them to mental trauma/humiliation suffered by

cancer diagnosis. By interaction with senior-researchers at IPOS-Vienna-congress we shall carry back expertise/knowledge from IPOS congress back into our NGO community in rural/tribal India. **CLINICAL IMPLICATIONS:** At 11th IPOS I as NGO-representative shall exchange our concerns/experiences/difficulties about psycho-social needs of cancer-sufferers with congress-participants. IPOS-participation will spread our activities in collaboration with conference participants. Analysis of international trends in psycho-oncology & its correlation with our study will help clinicians develop a plan to tackle such issues in developing-nations. Presentations by leading cancer researchers on issues of breast cancer at Vienna-congress will also modify our future action plan of our Community-work. **ACKNOWLEDGEMENT OF FUNDING:** This was a project designed & conducted by volunteers of this cancer NGO in rural/tribal India. We did not receive any funding. All 12 volunteers, 2 nurses & one psychologists [Abstract presenter] gave their free services for this project. All breast cancer patients were those who returned to villages after chemo/surgery in city hospitals. This was a unique effort 'As a Community study without any funding resource'.

P2.6.8

Unity is Strength: How Psycho-oncology Societies May Improve Their Mission and Vision

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BACKGROUND: Italian Society of Psycho-Oncology is addressing its last years' activities to the integration with other Associations involved in the spread and support of Cancer Care Humanization. First, we have built a sharing system of experiences between health workers and teams from different regions of our country, also taking advantage of conferences and study days. We show how is possible to create a sharing 'emotive box' to broadly improve the psycho-oncology mission and vision. **METHOD:** Regional Groups (Emilia Romagna, Tuscany, Marche) and Republic of San Marino Group are setting up meetings and study days about psycho-oncologic items in order to identify shared operational modalities. In these groups we have a prevalence of psychologists and oncologists. Focus is definition of the best cancer

care pathway in terms of attention for the needs of patients and their families. The strong presence of psychologists involved in education and supervision may facilitate the search for a space where we can elaborate our experiences and meanings we have. **RESULTS:** From this early experience we have obtained usability of a common heritage of knowledge, confrontation and possible synergies between different regions and realities, sharing means of intervention in psycho-oncology. Moreover, health-workers can find by meeting another—but close to us—the possibility of an adaptation and a repair. **CONCLUSIONS:** Inside the Italian Society of Psycho Oncology there are some regional sections which are motivate to work together in order to improve their mission and vision adapting shared means of intervention along the care pathways of cancer patients. This modality of integration is to become applicable in relations with other National Scientific Societies (e.g. AIOM, SICP,...). We have realized by the comparison of different psycho-oncology realities that it's necessary an high competence to perform the supervision of the groups. It was therefore created a wealth of experience in supervision interchangeably among colleagues. **RESEARCH IMPLICATIONS:** Identification of different but efficient psycho-oncology tools used, will be an opportunity to enhance the visibility of Italian and International Psycho-Oncology Associations which shall have also more chances to develop protocols for clinical research with appropriate statistical power. For example it will be possible to start with a large multicenter study about the utility of the 'Photo Voice' tool in a psycho-oncology setting. **CLINICAL IMPLICATIONS:** We expect that the networking of these relationships between experts in 'Care Relationship', could have positive effects on the pathways for the care of cancer patients and the global clinical approach to patients and their families. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.9

Cognitive-Behavioral Therapy in Children with Brain Tumors

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BACKGROUND: The psychological and behavioral problems caused by brain tumors in children and adolescents mainly include Internalizing behavior, social withdrawal, anxiety and depression. The goal of this study is to differentiate

the psychological and behavioral problems across age ranges and verify the efficacy of cognitive-behavioral techniques in the treatment of these disorders in order to identify specific therapeutic plans. **METHOD:** The study comprised 76 patients divided into 3 age ranges (0–6 years; 7–13 years; >14 years). Their clinical and demographic data (age at onset, type of tumor, age at radiotherapy) were collected. All the patients received a psychological evaluation through the CBCL Age 4–18 (Child Behavior Checklist) and the VABS (Vineland Adaptive Scale—Expanded Form). Eleven (11) patients (mean age: 10.4 years) received individual and group cognitive-behavioral therapy for 6 weeks. A statistical analysis was performed. **RESULTS:** A significant gradual increase in the scores of the CBCL 'Internalizing' Scale was observed with increasing age. A similar increase in the patients' awareness was noted. In point of fact, anxiety and depression are more frequent in the 3rd age range. Younger children show a poorer performance on all the VABS domains, in particular Communication Skills. A significant improvement was observed on the CBCL Internalizing Scale ($p = 0.07$) and Total Problems Scale scores ($p = 0.08$) as well as on the VABS Daily Living Skills ($p < 0.05$), Communication Skills ($p < 0.05$) and Social Skills scores ($p < 0.05$) after the psychological intervention. **CONCLUSIONS:** The main psychological and behavioral problems affecting children surviving brain tumors vary according to the age range and increase with increasing age. The psychological intervention based on cognitive-behavioral techniques proved effective in treating these disorders, in particular Internalizing problems and social adjustment difficulties that impact the social unease of these patients to a greater extent. **RESEARCH IMPLICATIONS:** Few studies specifically dealing with the treatment of tumor-related behavioral sequelae were published in the literature. Therefore, there are no guidelines informing treatment. The results of this study suggest that cognitive-behavioral treatment could have beneficial effects, however further studies with larger samples are needed to verify its efficacy. **CLINICAL IMPLICATIONS:** The psychological and behavioral problems in children surviving brain tumors are frequent sequelae and can often affect compliance to tumor treatment as well as the rehabilitation success. Their evaluation and treatment are essential in order to facilitate the children's adjustment to the disease and their treatment as well as their re-entry into school and society. **ACKNOWLEDGEMENT OF FUNDING:** We gratefully acknowledge the financial support of AIRC (Associazione Italiana per la ricerca contro il Cancro).

P2.6.10

Cognitive and Emotional Role Taking and Relational Skills in Children Surviving Brain Tumors

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BACKGROUND: Children surviving brain tumors frequently present with social adjustment disorders, often caused by Internalizing difficulties and limited residual abilities. The relationship between these disorders and the cognitive and neuropsychological deficits that are typical of these patients is not investigated in the literature. This relationship is the focus of this study, which also looks at the effect that the ability to infer mental states in others has on relational skills. **METHOD:** The children participating in this study received the following protocol: cognitive evaluation (WISC-R), neuropsychological evaluation (Wisconsin Card Sorting Test, Rey Figure Test, Continuous Performance Test), social adjustment assessment (Vineland Adaptive Behavior Scale and Child Behavior Checklist 4–18), assessment of emotional role taking (facial expression recognition, association between faces and contexts, emotional tone comparison through vignettes) and cognitive role taking (False Belief Paradigm, Causality test and Inference test). The evaluation outcomes were compared with the clinical and demographic data. **RESULTS:** The study comprised 42 children surviving brain tumors, aged 4–14 years. No relevant cognitive impairment was found, while specific attention and visuo-perceptual disorders were observed, with significant relational difficulties. A poor performance on the emotional and cognitive role taking tests was observed, in particular in patients with supratentorial tumor. These problems are associated to neuropsychological deficits as well as communication and socialization difficulties. No significant association with the children's cognitive level was found. **CONCLUSIONS:** The social skills impairment and the ensuing relational difficulties typically reported in children surviving brain tumors seem to be aggravated by the acquired inability to appropriately infer the mental and emotional states of others, understand social situations and adjust one's behavior accordingly. This finding seems to be more common to children with supratentorial tumor. A possible explanation for this is the malfunctioning of cortical structures. More specifically, of frontal lobes, which would determine cognitive difficulties impacting abilities essential for the tasks and the activities typical of social life. **RESEARCH IMPLICATIONS:** This study

explored the relationship between emotional empathy and social functioning. It is an 'attempt' that deserves to be replicated in other studies in order to better define the link between social difficulties in children with cognitive and neuropsychological impairments due to brain tumors and disordered cognitive and emotional role taking. It is necessary to administer measures specifically designed to detect relational difficulties to larger samples and compare acquired brain lesions of different etiologies. **CLINICAL IMPLICATIONS:** Social difficulties are the main problem of this population upon re-entry into community. The need for an appropriate rehabilitation treatment soon becomes evident. A targeted intervention to enhance cognitive and emotional role taking can have a beneficial effect on the social functioning of children surviving brain tumors. **ACKNOWLEDGEMENT OF FUNDING:** We gratefully acknowledge the financial support of AIRC (Associazione Italiana per la ricerca contro il cancro).

P2.6.11

Effects of an Early Structured Psychoeducational Intervention in Breast Cancer Patients

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BACKGROUND: Greer showed that hopelessness-helplessness, as mental adaptation to cancer, caused an increase in relapse or death at follow up for breast cancer patients. Fawzy applied to melanoma patients a structured psychoeducational group intervention, showing an amelioration of psychological well being, of NK immunological reactivity, a decrease in recurrence rate and a longer survival time. The aim of this study was consequently that to apply the same group intervention to women with early breast cancer. **METHOD:** The group intervention consisted of six weekly structured group sessions, lasting 2.5 hours, with three to seven participants, which were led by the same psychotherapist. Each session was made with the presence of a cancer surgeon, oncologist, radiotherapist or of a physiotherapist, except the first and last one which were made in the presence of the group leader only. The psychological reaction to the disease, and its possible modification by the intervention, was determined using the Mini Mental Adjustment to Cancer Scale (Mini-MAC), at recruitment into the study, and at the end of the psychoeducational treatment. **RESULTS:** The intervention caused a significant reduction of anxious preoccupation, whereas the other areas of Mini-MAC were not significantly modified. Anxious preoccupation did not spontaneously decrease in the time taken by the

intervention, which was initiated 16 to 82 days after surgery. The subjects which began the psychoeducational treatment earlier (24.5 days from surgery) provided results not different from those which began the intervention 80.5 days after surgery. The significant reduction of anxious preoccupation caused by intervention which was observed in the whole sample, was significant for both the subgroups of patients with early or late psychoeducational intervention. **CONCLUSIONS:** Anxious preoccupation appeared to be a characteristic of the mental adaptation to early mammary cancer. A significant reduction of anxious preoccupation was observed after psychoeducational intervention in the sample of patients. This reduction cannot be attributed to a spontaneous evolutions in time of cancer coping strategy, since the base level score in the group with early intervention does not significantly differ from that of the patients receiving a later treatment. Moreover, a similar significant reduction of anxious preoccupation was observed in the subgroups of patients who received either the early or the late intervention. **RESEARCH IMPLICATIONS:** The brief psychoeducational group intervention, as originally devised and applied to malignant melanoma patients by Fawzy, appears to be effective in women with early breast cancer. Among the coping strategies examined, anxious preoccupation was significantly attenuated. **CLINICAL IMPLICATIONS:** Coping styles influence psychological adjustment to the disease in cancer patients, and a brief group psychoeducational intervention appears to improve psychological adaptation to the disease in newly diagnosed breast cancer patients. The results of the present investigation encourage a deeper examination of psychological group support for subjects with non advanced mammary carcinoma, with the aim to improve the effects this treatment on the problem-solving skills, stress management, and general psychological well being of the patients. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported by the 'Programma di Ricerca Scientifica di Interesse Nazionale of Italian Ministero dell'Istruzione, dell'Università e della Ricerca' entitled 'Phenotypic and genotypic characterization of mental adaptation to cancer and of the response to the treatment with antidepressant drugs in oncology (Anno 2007—prot. 20074XMRSE)'.

P2.6.12

Emotional Aspects of Caregiving: A Research with Caregivers of Cancer Patients

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BACKGROUND: The aim of this study was to detect the presence of symptoms of anxiety and depression on caregivers of cancer patients and in respect to the variables: age, gender, time of care, type of cancer, family relationship with the patient and quality of life of caregivers. The preoccupation with caregivers is because he is indispensable to the emotional equilibrium of cancer patients, needing likewise emotional support. **METHOD:** Research was carried in a municipal public hospital in the state of Sao Paulo, Brazil. Participants were 32 caregivers of cancer patients, aged 20 to 77 years ($M = 45.3$ e $DP = 12.8$), 69% female e 31% male, most were married (65.6%) and family relationship with the patient (97%). Sociodemographic data and information about quality of life were obtained by structured interview. For detect the presence of symptoms of anxiety and depression, was used Hospital Anxiety and Depression Scale (HADS). The Data compilation and analysis were performed using SPSS v.16.0 software. **RESULTS:** Participants presented higher levels of anxiety (56.3%) than depression (21.8%). The women presented higher scores to anxiety (83.3%). 43.8% of caregivers were in this function for less then 6 months. This influenced favorably in the maintenance of life quality (53.1%) and possibly in the lower incidence of symptoms of anxiety (71.4%). Caregivers with family relationship with the patient reported felt useful in caregiving (65.6%). There were no significant differences between the age and type of pathology of patient in relation to symptoms of anxiety and depression. Moderate association between anxiety and depression was found ($r = 0.576$; $p = 0.001$). **CONCLUSIONS:** Results showed that the caregivers showed high probability of manifest symptoms of anxiety who tend to arise after some time like caregivers. This symptom must be treated appropriately, given the trend to emerge also symptoms of depression, which weaken the caregiver physically and emotionally. Thus, it is important the adoption of strategies aiming to lessen the anxiety and suffering of caregivers so that it can provide adequate support to the patient. **RESEARCH IMPLICATIONS:** Due the caregivers showed high probability of manifest symptoms of anxiety, it is believed that is necessary to develop studies to enhance understanding of main causes for the anxiety and also intervention programs aimed at to alleviate the suffering. Suggests also development research with caregivers that exercising this role longest (6 months) that the majority of participants (43.8%) of this research. **CLINICAL IMPLICATIONS:** The role of caregiving implies almost full dedication to the patient. The caregivers need to place which allows hearing and receptiveness from difficulties experienced, so that can feel understood face to their anguish. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.13

Preventing Psychiatric Morbidity in People with Cancer

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BACKGROUND: The diagnosis and treatment of cancer have been shown repeatedly to be associated with high levels of psychiatric morbidity. In the United Kingdom, despite substantial investment by the National Health Service, and others, morbidity has remained very high. Indeed, for breast cancer, the prevalence of morbidity appears to have increased. This raises two important questions. First, can psychosocial and psychiatric morbidity be prevented? Second, if prevention is possible, how is this best achieved? **METHOD:** Three randomised controlled trials (RCTs) were conducted within an Oncology Health Service (OHS) that was fully integrated with other parts of the oncology services. In all cases, the 'control' intervention consisted of 'treatment as usual' within the OHS. By comparing the prevalence of psychosocial and psychiatric morbidity in the control groups with published data from other centres, a measure of the effectiveness of this model can be obtained. **Study One:** locally advanced breast cancer, $N = 96$ (48 in control group). **Study Two:** early breast cancer, $N = 183$ (62 in control group). **Study 3:** colorectal cancer, $N = 151$ (37 in control group). **RESULTS:** **Study One:** Using DSM-III-R criteria, the prevalence of psychiatric morbidity after 18 weeks of neoadjuvant chemotherapy was 4%. Using a cut-off of >10 for the subscales of the Hospital Anxiety and Depression Scale (HADS), the prevalences for clinically significant anxiety and depression were 2.2% and 0%, respectively. **Study Two:** Using DSM-IV criteria, the combined prevalence of anxiety and depression 24 weeks after diagnosis was 2%. The HADS prevalences for anxiety and depression were 10% and 2%, respectively. **Study Three:** Thirty-six weeks after the diagnosis of colorectal cancer, the HADS prevalences for anxiety and depression were 3% and 0%, respectively. **CONCLUSIONS:** Compared to the prevalence of psychiatric morbidity reported for comparable populations of patients with cancer in the United Kingdom and elsewhere, including those participating in RCTs, the control group levels in all three studies was consistently very low. Moreover, they are also very low when compared to community samples that do not have

cancer. A strength of the study is that both psychometric and clinical evaluation was carried out to estimate prevalence. **RESEARCH IMPLICATIONS:** The data highlight the need to consider carefully morbidity levels in control groups when interpreting the results of interventions within the context of an RCT. The lower the level of morbidity in the control group, the more difficult it will be to demonstrate an intervention effect. Moreover, because the effect size of an intervention depends on the difference between the control and experimental groups, meta-analysis may be problematic. **CLINICAL IMPLICATIONS:** The above evidence shows that much psychiatric morbidity is preventable by allowing self-initiated access to an integrated oncology health service. **ACKNOWLEDGEMENT OF FUNDING:** Cancer Research UK and the HTA programme.

P2.6.14

Art Therapy for Patients with Haematological Cancer in the Ambulatory Aftercare

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BACKGROUND: An art therapy program was developed and tested at the department of Social medicine at Leipzig University. It was developed especially for the situation of cancer patients in aftercare. The influence of the art therapeutic intervention on the psychological distress, coping and the quality of life is examined. The beginning of the study was in 2007 and it still runs until 2010. **METHOD:** The intervention consists of 22 meetings and takes place once a week. Included are patients with haematological cancer who have finished their acute treatment and whose cancers were less than 5 years ago. The data were collected with the following standardized instruments: EORTC QLQ-C30 (quality of life questionnaire), HADS (psychological distress), FKV (coping). The intervention group is controlled by a comparison group of patients with treatment as usual (control group). The interviews were carried out personally before the intervention. Two follow-up-interviews take place after the intervention and half a year later. **RESULTS:** Regarding to the quality of life a significant improvement of the 'social function' can be shown for the intervention group ($N = 18$) in the process. The psychological distress remained unchanged. In the coping a significant decrease of the depressive coping style could be recognized at the intervention group. In the control group ($N = 51$) there are no changes determinable. Further the participants pointed out an active problem-oriented coping style more frequently before the course. After the intervention this difference was

significant. **CONCLUSIONS:** The art therapy aftercare can be offered for all patients who cope actively with their cancer, but also for those who are psychologically distressed. One major result for the participants is an emotional stabilization. **RESEARCH IMPLICATIONS:** Art therapeutic interventions for cancer patients seem to be widely accepted especially as far as rehabilitation is concerned. Positive effects of art therapy are described in several studies. However the results differ in many cases also due to the different concepts of the interventions. The complexity of art therapies limits the determination of changes in the psychological distress, coping and the quality of life with standardized measurements. **CLINICAL IMPLICATIONS:** This underlines the importance of offering psycho-oncological care which provides more than acute treatment and rehabilitation. Art therapy interventions can make an important contribution to the emotional stabilization of cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** The study is funded by the German José Carreras Leukaemia Foundation.

P2.6.15

Self Selection for Psychosocial Intervention by Patients at a Cancer Center Screened by Distress Thermometer as the '6th Vital Sign'

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BACKGROUND: Psychosocial intervention for patients screened by Distress Thermometer (DT) as the '6th vital sign' has significantly increased staff's workload. The effectiveness of such intervention may be poor if patients are unmotivated. Yet, if the DT scores are sufficiently high, but patients indicate no need for intervention, will there be a risk that their needs are neglected? This study proposes to assess these patients and determine whether it is prudent not to intervene. **METHOD:** Between June and October 2007, 67 consecutive new outpatients at a cancer center in Taiwan, who had DT scores ≥ 8 , indicated that they did not need help from our Psychosocial Team. These patients were contacted by an experienced social worker by phone and/or in person one to three weeks after their visits to the clinic. Information regarding their concerns and their previous mental health care were collected. Another DT score was obtained. The need for further psychosocial intervention and how it could be provided were evaluated. **RESULTS:** About 1/4 of the patients were no longer highly distressed when contacted, as the initial difficulties, which were related to the uncertainty of

diagnosis or the hospital visits, have subsided. For the other 3/4 of patients, further psychosocial intervention was deemed necessary. 66% from the latter group were to be hospitalized for cancer treatment wherein the '6th vital sign' would continue to be checked on a weekly basis, followed by proper assistance should DT scores become high. The remaining 34% would be followed by another institution for cancer treatment or would continue previous mental health treatment. **CONCLUSIONS:** For outpatients with high DT scores at a cancer center in Taiwan, it is feasible for them to choose not to request psychosocial intervention from the hospital. This choice has not led to significant negligence of their needs, which, if necessary, will be addressed once they become inpatients, or later on by their previous mental health professionals. **RESEARCH IMPLICATIONS:** This study involved a small sample of patients over a span of 5 months. Future study should consider assessing higher numbers of patients over a longer period of time. **CLINICAL IMPLICATIONS:** Clinicians in the distress management may consider outpatients' self selection for psychosocial intervention. This will allow hospital staff to focus on providing much needed services to those who ask for help. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.16

Anxiety and Depression Involved in the Wait for Surgery of Malignant Melanoma: A Preliminary Study

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BACKGROUND: Even though malignant melanoma accounts for only 4% of total neoplasias, its malignant potential is high, and it is considered aggressive due to the possibility of metastasis. This study aims at investigating the presence of anxiety and depression involved in the wait for surgery, and knowledge about the disease. **METHOD:** 10 patients, males and females, diagnosed with malignant melanoma regardless of stage, who were waiting for surgery (widening of margins, sentinel lymph node biopsy, and/or lymph node dissection), and are being followed-up by the surgeons of the team. The investigation was performed at the First Aid Station of the Oncology Surgery Group of the 'Divisão de Clínica Cirúrgica III', by means of semi-directed interview, designed to gather information about socio-demographic aspects, knowledge about malignant melanoma, and psychosocial aspects related to the disease; Hospital

Anxiety and Depression Scale (HAD), and Clinic Evaluation Guide PRIME—MD (depression mode). **RESULTS:** All the patients (7 females and 3 males) revealed knowledge about melanoma and its aggressive potential. However, they showed expectations of cure (7/10) and recovery (6/10) after surgery. The development of the disease was related to Sun exposure (1/2), in addition to genetic factors and poor diet. Malignant melanoma prevailed among the 6 patients with family history of cancer (4/6). The self-reported emotions associated to the wait were anxiety, suffering, and fear (6/10). The presence of anxiety was identified (4/10), and Major Depression Disorder prevailed in 7 patients, and 2/7 had thought about suicide. **CONCLUSIONS:** The investigation of anxiety and depression involved in the wait for surgery indicated a prevalence of anxiety and depression. This result, associated with the self-reported emotions (anxiety, suffering and fear) and the knowledge of the disease and its aggressive potential, seem to be involved with the expectation of cure and recovery which was associated to surgery. Thus, the period of wait for surgery brings intense distress. **RESEARCH IMPLICATIONS:** The investigation of anxiety and depression involved in the wait for surgery and the knowledge about the disease in the general hospital population with diagnosis of malignant melanoma is of interest, due to the need for more Brazilian work on the subject and the increasing number of ongoing international studies, leading to a better understanding of psychological factors associated with malignant melanoma, especially anxiety and depression, which showed to be relevant in this study. **CLINICAL IMPLICATIONS:** This is a pilot study, and the results obtained can serve a basis for the development of new forms of intervention and for the possibility of work together with malignant melanoma patients, especially concerning anxiety, depression and suicide. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.17

Efficacy of Levels of Screening for Distress and Referral to Psychosocial Resources in Newly Diagnosed Breast and Lung Cancer Outpatients: Preliminary Results of a Randomized Controlled Trial
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BACKGROUND: Distress has been identified as common in cancer patients, with approximately 35% of all patients experiencing significant disturbance. The Screening for Distress program at the Tom Baker Cancer Centre in Calgary, Alberta,

Canada used computerized online screening to assess and triage patients to appropriate resources. In 2006 a comprehensive clinical trial of Screening for Distress for all newly diagnosed lung and breast cancer patients was launched, called the Personal Well-being Checklist. **METHOD:** This study was a three-armed randomized controlled trial with computerized assignment into one of three conditions: 1) Minimal screening; 2) Full screening or 3) Full screening plus personalized triage. Patients who were new to the institution or new to provider were screened at their first appointment with the Distress Thermometer (DT), fatigue and pain thermometers, common problem checklist, and the Psychological Scan for Cancer part C (PSSCAN), as well as a number of relevant demographic variables. Patients were re-assessed three months following their initial screening for subsequent distress and awareness and usage of psychosocial resources. **RESULTS:** 1282 lung and breast patients were screened and 1081 re-assessed at follow-up. A total of 48.4% (breast) and 62.4% (lung) of patients indicated significant distress at baseline. Commonly identified problems included fatigue, sleep difficulties, and worry about family and friends. There were no significant group differences in distress at 3-months based on triage level overall. For the breast group, distress decreased significantly more in the full screening conditions compared to minimal screening. Across groups, those patients who received referrals to psychosocial services had greater decreases in depression and anxiety at the 3-month follow-up than those who did not receive referrals. **CONCLUSIONS:** These preliminary results suggest that screening combined with appropriate referral to psychosocial resources may be effective in reducing distress, anxiety and depression in newly diagnosed breast and lung cancer patients. Current trials are underway assessing all patient groups with longer follow-up periods. **RESEARCH IMPLICATIONS:** This work suggests that it's important to track referrals and use of services when exploring decreases in distress, anxiety, and depression over time. **CLINICAL IMPLICATIONS:** This study suggests that it may be beneficial to connect patients to referral resources early in their care to help decrease anxiety and depression 3 months later. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded through a grant from the Alberta Cancer Foundation Research Initiative Program.

P2.6.18

Shop Talk: A New Therapeutic Game for Youth Living with Cancer and Other Life-Threatening Illnesses

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BACKGROUND: When working with children and adolescents living with cancer, psychosocial professionals benefit from an array of tools that allow the expression of feelings, concerns, hopes and fears. While having ‘fun’ shopping at 10 stores, ShopTalk helps critically ill children discuss difficult or ‘forbidden’ topics. This poster will describe the development of ShopTalk, its use within an individual session or group setting, along with clinical indications and future research goals. **METHOD:** ShopTalk was designed for children between the ages of 7–16. Each player ‘customer’ rolls the die, and moves their shopping bag into a store of their choice. The player next to the ‘customer’ reads the top card and asks whether the ‘customer’ would ‘like to buy’. The ‘customer’ has 2 options—‘buy’ the store’s product by answering the question or to say ‘just looking’. While playing the game, the therapist can validate a child’s concerns and to illustrate adaptive ways to master different situations. The object of the game is to visit and obtain products from all 10 stores. **RESULTS:** Over several years, each player was encouraged to create a new question that the developers missed. The new questions then became part of the game and informally ‘tested’ over time. Thus, the content reflects the concerns of children/adolescents living with a potentially life-threatening illness. The questions in each store are grouped by a unifying theme, reflecting the stores name (for e.g. Food for Thought) and address a wide range of issues including family dynamics, peer relationships, adherence, body image, anxiety, and future goals. Therapists can choose which questions to include based on the individual player(s) needs. Almost all children have asked to play ShopTalk upon repeated visits. **CONCLUSIONS:** ShopTalk is the first therapeutic game created to provide children and adolescents with various malignancies the opportunity discuss the emotional and behavioral impact of their illness in a safe and fun atmosphere. Since the prototype for ShopTalk was developed, the game has been successfully used with children/adolescents living with cancer and HIV infection in both individual and group sessions. Starting February 2009, the game will be available, free of charge, to pediatric psychosocial oncology providers. **RESEARCH IMPLICATIONS:** The benefit of empirically-based interventions is well understood. Studies designed to help clinicians understand which children/adolescents benefit from therapeutic games, determine at what point in the disease or psychotherapeutic process that such games should be introduced, and can clarify how ShopTalk is most helpful (anxiety reduction, increase therapeutic alliance, improve communication, improve self-esteem) are needed. The psycho-oncology community would benefit from interventions that have been tested, prior to introducing them to those they care for.

CLINICAL IMPLICATIONS: Child life, recreation therapists, psychologists, psychiatrists and social workers use therapeutic tools to help children/adolescents undergoing treatment for a medical illness cope with its demands. ShopTalk is an exciting new tool, with questions in both English and Spanish, that can be widely used in oncology settings. While playing a game, defensiveness often dissipates and the likelihood of sharing previously anxiety-arousing material increases. Moreover, ShopTalk can set the stage for deeper therapeutic intervention in subsequent sessions. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported [in part] by the Intramural Research Program of the NIH, National Cancer Institute, Center for Cancer Research.

P2.6.19

Cancer Information & Support Centers in Japan—How Are They Used?

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BACKGROUND: To standardize and equalize access to and quality of medical care, Japanese government decided to increase the number of the designated cancer care hospitals (DCHs) to 353 from 32. Each DCH is obliged to establish the Cancer information & Support Centers (CISCs) although most of them are general hospitals treating various diseases. The purposes of this research are to describe how CISCs are utilized and examine what kinds of information and support should be provided. **METHOD:** Three-hundred-and-seventeen CISCs in Japan filled the questionnaire on the CISC basic data and recorded all the consultation sessions from 28th February to 5th March, 2008. Trends of the response from the 32 hospitals which have been originally the members of Japan Association of Clinical Cancer Centers (JACs) and other newly designated hospitals were compared. **RESULTS:** The number of the consulting records per CISC ranged from 1 to 400 (mean 20.2). JAC-member CISCs have more consultations than non JAC-member CISCs. The mean numbers of the consultations were 82.8 and 13.3, respectively weekly. JAC-member CISCs tended to have more staff members, provide many booklets on cancer, be recognized by other staff members in their hospital, and widely announce their activities available to patients. There was no consistent difference between JAC members and others in lengths of consultations and the reported contents of their consultation. **CONCLUSIONS:** The data showed that the utilization of the CISCs is limited

in most of the non JAC-member CISCs, and the low awareness of the CISCs' activities among patients and their families as well as the hospital staff members might explain why. **RESEARCH IMPLICATIONS:** This study was based only on self-reported records from the information specialists, and their consultations should be further examined also from the standpoint of patients, including needs reported by patients reported. Such processes will lead to identifying gaps between needs and available services and help information specialists improve their capacity and skills for consultations. **CLINICAL IMPLICATIONS:** To increase awareness of CISCs and utilizations of their services, sharing their skills among JAC-member CISCs and others might be helpful. One of major roles of the National Cancer Center to support newly established CISCs by describing best practices and providing information kit such as cancer booklet. **ACKNOWLEDGEMENT OF FUNDING:** This research is the second analysis with the permission from the Japanese Society for Palliative Medicine who collected the original data.

P2.6.20

The Profile and Outcomes of Cancer Patients Referred to a Specialist Psychology Service

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BACKGROUND: Specialist psychology services for cancer patients aim to assist with the emotional, social, and existential concerns that can occur with cancer. Few studies have analysed outcomes for patients referred to such services. It is important to ensure these services are accessible and that treatments provided are effective. This study describes the outcomes for cancer patients referred to a psychology service for cancer patients. **METHOD:** Data were collected for all referrals to the psychology service at the Peter MacCallum Cancer Centre over a 16-month period. Information was collected via a database for psychologists to routinely enter information, including patient demographics, cancer information, outcome of the referral, psychological assessment results, number of sessions attended, and details of each session including Global Assessment of Functioning (GAF) scale rating. The GAF scale provides an indication of each client's overall level of functioning and psychological symptom severity. **RESULTS:** Referrals were received from a range of professionals. Patients referred to the service tended to be younger and female, when compared to hospital statistics. Of the clients assessed, 35% met DSM-IV-TR criteria for a psychiatric disorder. Sixty percent of clients were described with one or

more co-morbidities, commonly coping/adjustment/distress, relational problems, and physical symptom management. GAF ratings indicated that clients significantly improved during attendance at the service. Several factors predicted the percentage change in GAF scores between the first and last sessions attended. Clients who had lower baseline functioning, attended more sessions and/or were female showed greater improvement in symptoms. **CONCLUSIONS:** This study indicated that client's functioning/symptoms improved whilst attending the psychology service. Several factors significantly contributed to improvement in symptoms between first and last sessions. Results also detail the activities of the psychology service, and better understand patients' needs (including service uptake and diagnostic patterns) which can assist in the planning and development of the psychology service, including resources and staff expertise to match clients' needs. **RESEARCH IMPLICATIONS:** The study demonstrates the utility of a database to routinely collect information about patients referred to a specialist psychology service for cancer patients. **CLINICAL IMPLICATIONS:** Most patients referred to the service attended at least one appointment. This rate of service uptake may be an indicator of consumers' perception of usefulness of a specialist psychology service for cancer patients. It is recommended that similar services monitor referrals rates and outcomes of these referrals (e.g., number of sessions attended by clients, diagnostic patterns), to identify resources to match these needs. **ACKNOWLEDGEMENT OF FUNDING:** This study was completed as part of the principal author's doctoral thesis. No additional funding was received for this research.

P2.6.21

A Qualitative Analysis of Expectations and Outcomes of Cancer Patients Referred to a Specialist Psychology Service

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BACKGROUND: Specialist psychology services for cancer patients aim to assist with the emotional, social, and existential concerns that can occur with cancer. Few studies have evaluated client expectations and outcomes of such services using qualitative methods. This study used qualitative methods to investigate clients' perception of change while attending a psychology service for cancer patients and the role of client expectations in their appraisal of the service. Participants also provided suggestions to improve the service. **METHOD:** A total of 15 clients of the psychology service were interviewed. Qualitative data were

collected via a semi-structured interview with each participant. Each interview was approximately 40–60 minutes. Interviews were audio-tape recorded and transcribed verbatim. Transcripts were then coded using a checklist, by identifying the common themes in participants' narratives. Relationships were identified between themes from participants' narratives. Coder consistency (reliability of the coding checklist) was 90% agreement between coders. This indicates that the checklist was a reliable tool for coding participant's interviews. **RESULTS:** The results of this study identified that participants perceived improvements in their coping, and that participants attributed improvement in coping to attending the psychology service. Results also indicate a relationship between improvements in coping; the influence of cancer-related stressors, and supportive factors such as the psychology service; and participants' experience of the psychology service, including the influence of participants' expectations on their subsequent experience of the service. Further suggestions for improvements to the service were provided by participants, including the need for more specific information about reactions to cancer and planning for death. **CONCLUSIONS:** The results of this study indicate that participants experienced benefit from attending the psychology service. Results also provided an understanding of how these benefits were achieved. For example, factors contributing to changes included the skills of the psychologist and the importance of offering a specialist service to meet the specific needs of cancer patients. Together with suggestions to improve the service, these results assist in producing practical recommendations to support the development of the psychology service. **RESEARCH IMPLICATIONS:** This study has demonstrated that information from interviews can provide useful data when evaluating a psychology service, in terms of participants' perceptions of change, experience of a psychology service, and the role of client expectations. **CLINICAL IMPLICATIONS:** Many helpful characteristics identified by clients reflected characteristics of the relationship with the psychologist, including process skills and feeling comfortable to talk in sessions. Feedback from participants also highlighted the important role of expectations in their subsequent experience of the service. This highlights the importance of clarifying client expectations early in psychotherapy, particularly if clients are unclear about the boundaries within multidisciplinary teams, such as between psychologists and medical staff regarding medical issues. **ACKNOWLEDGEMENT OF FUNDING:** This study was completed as part of the principal author's doctoral thesis. No additional funding was received for this research.

P2.6.22

Problem Solving Training for Hematopoietic Stem Cell Transplantation Patients

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BACKGROUND: This pilot study aims to develop a theory-based short-time training for patients involved in hematopoietic stem cell transplantation treatment and to evaluate the feasibility of a manual based problem solving training in a clinical setting. Cancer patients with reduced problem solving skills have a higher level of depression and anxiety (Nezu *et al.*, 1999). Problem Solving Training has been described by Nezu *et al.* (1999) in the Home Care Guide for Cancer. **METHOD:** The presented training is based on the problem solving theory (D'Zurilla and Goldfried, 1971; Nezu, 2004). The training starts four days after stem cell transplantation at the beginning of the critical phase. In four sessions patients are trained to cope not only with special demands associated with stem cell transplantation, but also with daily demands. Purpose of the training is to enable a patient to solve a current problem and thereby to relieve possible stress. All patients with autologous and allogeneic hematopoietic stem cell transplantation would be included. Requirements for patients are a minimum age of 18, a good German comprehension, and an average intellectual level. Changes in patients' outcomes are investigated in a pre-post-follow-up-design with 20 patients in a treatment group and 20 in a non-trained control group. **RESULTS:** The manual 'Problem Solving Training for hematopoietic stem cell transplantation patients' was developed from October 2008 to January 2009. The trial in clinical setting is led at the University Hospital Carl Gustav Carus Dresden (Germany) since January 2009. The first scientific results are expected for April 2009. Expected outcomes are an increased locus of control (internal locus of control), adaptive coping strategies, better sense of coherence, increased life satisfaction and well being, as well as decreased anxiety and depression. **CONCLUSIONS:** Goal of this pilot study is to develop theory-based short-time training for patients during hematopoietic stem cell transplantation and to evaluate the feasibility of a problem solving training in a clinical setting. In a second step the effectiveness of this short-time training will be tested. **RESEARCH IMPLICATIONS:** Own prestudies with 80 patients during hematopoietic stem cell transplantation have shown that 8–10 days after transplantation a patient goes through a critical phase (state). This includes physical as well as mental state. The pilot study should use a Problem Solving Training following

through this critical phase with hospitalized patients. The study will show which parameters will have influence on this course. **CLINICAL IMPLICATIONS:** Purpose of the training is to enable a patient to solve a current problem and thereby to relieve possible stress. Expected results are reduction of anxiety and depression, intensification of personal and social resources, personal well being as well as better quality of life and self-efficacy. **ACKNOWLEDGEMENT OF FUNDING:** The project is financed by the German José Carreras leukemia foundation.

P2.6.23

A Validation of the NCCN Distress Thermometer in a Portuguese Oncology Centre

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BACKGROUND: Psychological Distress is considered a major difficulty for cancer patients, and it's associated with poor coping and other psychosocial impairment. Based on this aspect, NCCN developed guidelines regarding the correct assessment of cancer patients' distress using a screening instrument that is simple and easily administered, the Distress Thermometer and Problem List. **METHOD:** Sample: 250 patients, including a group of breast cancer patients and a group of patients undergoing chemotherapy. **Instruments:** Distress Thermometer and Problem List, HADS. **RESULTS:** Study in progress. **CONCLUSIONS:** At this moment we can't present any conclusions because we are processing information. **RESEARCH IMPLICATIONS:** We've been using the Distress Thermometer and Problems List as a screening tool for our Breast Cancer patients after diagnose, and we think it is appropriate to validate the cut point that we've been using, allowing the use of this instrument with our total population, and determining a cut of point to the Portuguese population. **CLINICAL IMPLICATIONS:** Assessing cancer patient's distress and providing psychosocial interventions tailored to their needs. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.24

A Clown's Art at an Oncology Ambulatory

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BACKGROUND: Within the dramatic arts the ability to make someone laugh is an art by itself,

enabling a field of comprehension over life capable of joining together contradictory or repressed ideas. To link this art to the humanizing process in the assistance to the patient with cancer was the aim of this study, attempting to rescue the relationship between the professionals of the oncology ambulatory and its users, as well as these latter among themselves. **METHOD:** This study was carried out at the Oncology Care Center of Dr. Mário Gatti Municipal Hospital, in the city of Campinas, Brazil. Two clowns who were part of the 'Surgeons of Joy' group with the 'Visit of Joy' program walked through the ambulatory installations weekly, interacting with health and administration professionals, patients, relatives or followers, involving them in activities such as: songs, jokes, games. Professionals and interns of Psychology accompanied them in order to evaluate the effect of their humanizing strategy. **RESULTS:** Professionals, users, relatives and/or followers actively and spontaneously participated in the games and songs, showing approval and pertinence to the proposal. The joy, the laughter, the amusement proved effectiveness to the improvement of the ambulatory environment, bringing an atmosphere of relaxation, integration and harmony. **CONCLUSIONS:** It is possible to conclude that the rescuing of the joy and the laughter in an environment surrounded by pain, fear and suffering represents, besides other actions, a step toward a more humanized care, in consideration of the individual in his/her totality, in search of a complete assistance. The respect to the needs and subjectivity of the patients, relatives and professionals involved in this attempt led to the discovery of ways that stepped on simple and relevant possibilities of relaxation, as the return to an innocent and pure child's happiness. **RESEARCH IMPLICATIONS:** Given the great need to create strategies that provide full care to the patients with cancer, their relatives and professionals involved, it is important to enable projects that seek actions to bring welfare and improvement to the ambulatory services of oncology. We believe in the possibility of studies and researches that aim at the scientific comprehension of the psychological implications resulting from projects such as this one. **CLINICAL IMPLICATIONS:** This study intends to subsidize projects of intervention that may promote welfare, amusement and optimism among patients, relatives and professionals, once we believe in their positive repercussion in the emotional state of the ones involved. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.25

The Romanian View of Psychological and Psychosocial Support for Cancer Patients

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BACKGROUND: Psychological and psychosocial support (PPS) is widely considered an important component of palliative care, yet, PPS use for cancer patients in our country is insufficiently explored, and even its definitions are often contradictory or incomplete. The purpose of this paper is to inventory various aspects of PPS reported by healthcare professionals to be important, in order to ensure a better quality of life to cancer patients and their families. **METHOD:** Twenty-five Romanian specialists working with terminal cancer patients (of which 14 regularly attended Balint support groups) responded to a set of 3 open questions within the frame of a 'Delphi process' of defining keywords representative for PPS in palliative care. The keyword sets were separately analyzed and categorized, both for the specialists attending Balint groups and the non-Balint-attending ones. In order to provide a substantial quantitative and qualitative analysis, a homogeneous classification system for keywords provided by both groups was created. The influence of participation to Balint groups on physicians' views was also analyzed. **RESULTS:** Five keyword categories were identified: 'cancer's psychological impact' (CPI), 'communication', 'objectives', 'coping strategies', 'psychosocial support'. Comparative analysis showed that both groups had similar distribution of answers on CPI (keywords describing adjustment disorders progressing towards threshold mental disorders), on problem-focused coping strategies and on specialized patient-oriented psychotherapeutic interventions. Balint-attending-specialists provided a significantly higher ($p < 0.01$) number of keywords for communication, for affective objectives of PPS and for social support outcomes. The majority of the non-Balint-specialists' keywords referred exclusively to physicians as typical providers of PPS, while Balint-attending-specialists often mentioned other professionals. Both groups emphasized family and staff as receivers of support. **CONCLUSIONS:** Common vision could indicate a low sensitivity to patient's psychological symptoms of 'normal-adjustment' to cancer before becoming adjustment-disorders/mental disorders, and could also indicate Romanian physicians' need for problem-oriented coping strategies in dealing with cancer, as they focus more on the individual aspect of PPS, and less on the patient as part of the family. Balint-attending-physicians' different perceptions emphasize the role of these support-groups in developing empathy and in pointing participants towards patient/family care. Due to their inter-disciplinarity, these sharing-sessions are essential in structuring the concept of PPS in oncology, and in creating the premises for institutional organization of PPS. **RESEARCH IMPLICATIONS:** The asymmetrical perception by physicians of medical staff as the exclusive providers of PPS correlates with the lack

of a framework for PPS in palliative care in developing countries; this corresponds to the lack of a multidisciplinary oncology team, which, in Romania, is usually composed solely of doctors and nurses. We suggest that further research would aim to analyze both common elements and differences in oncology specialists' vision between developing countries and developed countries. **CLINICAL IMPLICATIONS:** Aside from being a qualitative analysis, our research displays an analytical dimension, because the method itself is based on reflection about difficulties that patients encounter in fighting cancer, and about ways in which PPS can be developed to help dying patients handling difficult situations. Since physicians need guidance, feedback and support, just as much as factual knowledge in oncology, support groups could provide an important safe and confidential area for unburdening and improving activity. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.26

Appraisal of a Systematic Psychological Follow-up for Patients Suffer From Cancer

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BACKGROUND: In 'Cliniques Universitaires Saint-Luc' located in Brussels, ten psycho-oncologists are integrated at the cancer centre. We wish therefore to provide cancerous patients with a systematic psychological follow-up which will help them in psychologically structuring the disease. However, we still ignore whether such approach could be beneficial to the patients. Our study aims to assess the impact of a systematic psychological care of the patients on their understanding and adaptation to cancer. **METHOD:** We ponder on the interest of this type of care by evaluating the structuring against the repression (vs re-evaluation) capacity of the patient (ERQ) and the level of distress (anxiety and depression) of patients using several questionnaires (STAI and BDI) at various stages of the medical treatment: (1) before the surgical operation, (2) after the first treatment of chemotherapy, and (3) at the end of the first cycle of chemotherapy. Questionnaires relating to socio-demographic information and a satisfaction scale of the psychological follow-up will also be proposed. Our study includes two groups of patients: (1) a control group, which will not meet a psychologist during his medical treatment and (2) a test group which will systematically meet a psychologist through the various stages of the treatment. **RESULTS:** Preliminary data is based on approximately fifty control and fifty test patients. **CONCLUSIONS:** Before 2009

psycho-oncologists, in 'Cliniques Universitaires Saint-Luc', were involved in various stages of the disease at the request of the medical teams. We wish to assess if a systematic follow up could help cancerous patients and prevent them from suffering from psychiatric ailments. We will propose some results in June. **RESEARCH IMPLICATIONS:** We will study the influence of psychological follow up on the structuring against the repression (vs re-evaluation) capacity of the patient and the level of distress of cancerous patients at various stages of the medical treatment. Further research will be dedicated at identifying more specifically the type of intervention most efficient to improve patients psychological status. **CLINICAL IMPLICATIONS:** If our assumption is proved, systematic assistance of a psychologist will enable us to improve adaptation of patients to cancer and prevent them from suffering from psychiatric ailments. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.27

Educational Programme 'Learning to Live with Cancer'—Psychological Aspects of Education for Cancer Patients and Their Families

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BACKGROUND: The diagnosis of cancer almost regularly creates a crisis requiring adaptation to catastrophic information. Negative psychological states such as stress, anxiety, depression are associated to the diagnosis and treatment of cancer. Cancer experience is a negative life event that requires an enormous amount of effort from patients and their families in order to adapt to the multiple challenges posed by the disease. Cancer patients often suffer from stress-related symptoms, including anxiety, irritable mood and demoralization. **METHOD:** Educational programme (EP) 'Learning to live with cancer' at the National Institute for Oncology and Radiology in Serbia is included in the holistic therapy of cancer patients since 1998. The aim of cancer patient's education is to demystify facts about cancer as a threatening disease, to explain the risk factors and possibilities of contemporary treatment and improve Quality of life, thus eliminating bias and misconceptions about cancer as incurable disease. As a member of multidisciplinary team, the psychologist gave two lectures: 1. Talking about cancer—cancer as personal and family distress and crisis, and (dis)functional mechanisms of reactions, and 2. Coping strategies—crisis as chance for personal developing. During the psychological lectures or workshops for patients, we preferred interactive work with patients and their loved one. **RESULTS:**

The great majority of our patients experienced and quoted deny, depression, disappointment, fear, hopelessness and emptiness as a significant distress signs at the beginning of cancer treatment. **CONCLUSIONS:** The diagnosis of cancer and cancer treatment can cause distress, emotional turmoil and different psychosocial disorders. Taking into consideration different psychological reactions of cancer patients can be helpful for organizing adequate psycho-educational and psychosocial support, and psychotherapy for cancer patients and their families. Understanding the psychosocial aspects of cancer and its treatments has become an important and necessary part of cancer care. **RESEARCH IMPLICATIONS:** Recognizing patient's psychological needs and organizing adequate psychological support are very important steps in integrating psycho-oncology in holistic anticancer treatment in Serbia. Further studies should continue to develop and test and validate new rapid instruments and measures for detecting significant emotional distress in cancer patients. **CLINICAL IMPLICATIONS:** Our results indicate that is important to increase the investigation about patients psychological reactions, distress and especially, coping strategies, which can improve the well-being of cancer patients and integrate this in the current oncological treatment. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.28

The Integration of Women with Breast Cancer through Employment

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BACKGROUND: To promote the insertion of women with breast cancer in society and workplace by overcoming social, physical and psychological barriers. **METHOD:** Individuals sessions which analyse their personal needs through the Andalusian Employment Services and the programme A Lot of Live for (Mucho por vivir) of the Asociación Española Contra el Cáncer (AECC), Almería (Spain). **RESULTS:** Since 2005 there has been a wide circulation of this programme in Almería and its province. The fourth phase in 2008/09 has had very positive result. Of a total of 57 participants, 26 are in full employment, 10 are in process of looking for work, 11 are in training, 3 are going to form their own business, 4 are in medical treatment, 2 gave up for personal reasons and one needs to occupy her free time with activities. Thanks to the satisfaction expressed by the participants, wide were able to note and improvement in their personal life and we saw that they were able to successfully cope in both their social and family circles. **CONCLUSIONS:** The programme is being effective and contemplates inclusion of women

affected by breast cancer. The possibility of adapting the actions of each group is what guarantees the success that we have obtained. A multisectorial approach is fundamental and defines the importance of the AECC in mediating and coordinating its users-SAE-society. **RESEARCH IMPLICATIONS:** Our study shows chronic patients' attitudes towards job search, how job affects psychological health, employers' attitudes towards disadvantaged groups' job insertion. **CLINICAL IMPLICATIONS:** Through this program our organization is dealing with social aspects, effects on self-esteem and new abilities training. **ACKNOWLEDGEMENT OF FUNDING:** Funding in part for Andalusians Employment Services.

P2.6.29

Integrating Psychology and Spirituality at the End-of-Life Care

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BACKGROUND: With an increased focus on multidisciplinary care, psychologists are being called to work within palliative care teams. The objective of the present report is to describe the support care activity carried out by the psychologist in the palliative care of the Fuenfria Hospital. **METHOD:** Spirituality is often a salient issue for palliative individuals, and has significant implications with respect to psychological functioning. Attending to the spiritual needs of palliative individuals is important to fulfill one's ethical responsibilities as a psychologist. This poster describes the incorporation of protocols that include the spirituality domain into psychological end of life care. **RESULTS:** The development of Psychological Support Protocols including spiritual aspects in our Palliative Care Unit arose from the need to respond to particular kinds of problems and issues which relate to the interpersonal, subjective, and cultural differences to the experience of suffering and the end of life. The application of these protocols for the patient and their family can only be undertaken in an interdisciplinary way that will allow us to have an integrated and holistic vision of each patient from the time of their admission. **CONCLUSIONS:** In order to integrate spiritual issues within the psychological assessment and treatment process, clinicians should receive training related to: 1) spiritual issues that are salient for the palliative population; 2) ways of properly assessing and discussing spirituality as well as underlying worldviews with patients. In dealing with spiritual issues within palliative care that require explicit spiritual intervention techniques, psychologists are advised to seek support from others professionals (priest, for instance). Psychologists should collaborate and consult with others

professionals of the hospital and the community, as appropriate, to enhance the spiritual care of the patient. Psychologists should engage in self-reflection regarding their religious beliefs, values, and faith commitments. **RESEARCH IMPLICATIONS:** More research should be addressed in order to seek ways to integrate the spiritual care into psychology training and practice could be an essential endeavour in a multicultural society. **CLINICAL IMPLICATIONS:** The multidisciplinary palliative care team should include psychologists with skills in assessing spiritual and existential issues of patients and their families, in order to both provide both holistic care at the end of life and lead the training of the team members. It is also important keep in mind that the integration of spirituality into psychological practice may not be pertinent for all patients. If a patient indicates that this is not an area of interest, it should not be further pursued. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.30

Factors Involved in Non-attendance of Cancer Patients to Doctor's Appointments: Interface with Social Support, Depression, Anxiety, and Beliefs. A Preliminary Study

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BACKGROUND: Compliance can be understood as the acceptance of the therapy proposed and its appropriate follow-up. Non-compliance to the treatment proposed can lead to worsening of health and as a consequence pose even bigger difficulties for public health. The goal of this study was to investigate the factors involved in non-attendance of cancer patients to doctor's appointments. **METHOD:** 50 patients, males and females, diagnosed with cancer, who did not attend doctor's appointment at the First Aid Station of the Oncology Surgery Group, 'Divisão de Clínica Cirúrgica III' were interviewed by telephone over a period of six months, by means of semi-directed interview, designed for characterizing the sample, Hospital Anxiety and Depression Scale (HAD), and Clinic Evaluation Guide PRIME-MD (depression mode). Patients were asked to provide verbal informed consent to take part in this survey. Statistical analysis was performed with the Program SPSS version 14.0, using descriptive statistics to characterize the sample and the variables of the scales selected. **RESULTS:** The sample comprised 50 patients, 64% females and 36% males, aged between 20 and 79 years, with incomplete education (50%), married (54%), and unemployed (74%). Even though 68% considered

the disease serious, 72% believed in cure. The presence of anxiety (34%) was detected, as well as Major Depressive Disorder (30%), and 14% had thought of suicide. The price of transportation was mentioned as a drawback for attendance to doctor's appointments (42%). However, the self-reported reasons for non-attendance were forgetfulness (30%) and other concurrent matters. 68% said they were upset about being absent, and were afraid of being excluded (28%). **CONCLUSIONS:** Even though the reasons patients gave for being absent were forgetfulness and other concurrent matters, they also mentioned the price of transportation as a drawback. This problem seems to be related with the reality of the sample, where unemployment prevails. The emotions associated with non-attendance revealed some suffering and fear of being excluded, which can represent possibility of self-blame and punishment by being excluded. The factors involved in non-attendance of cancer patients to doctor's appointments investigated in this study revealed the presence of anxiety and depression. **RESEARCH IMPLICATIONS:** According to statistical data of the First Aid Station studied, 56 of the 259 appointments scheduled for April 2008 were non-attended. This justified the interest in the investigation of factors involved in non-attendance to doctor's appointments and procedures, in order to reduce non-attendance to a minimum and provide proper treatment, as the study identified anxiety and depression, in addition to suicidal ideation in the sample. **CLINICAL IMPLICATIONS:** The study on non-compliance to cancer treatment, considering non-attendance to doctor's appointments as an indication of non-compliance of cancer patients to the treatment, is relevant because doctor's appointments can be considered moments when patients can report complaints, be listened, receive diagnosis, prognosis, referrals, indications for follow-ups, among others. Thus, this moment can mobilize different emotions. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.31

The Influence of an Educational Intervention Program on Patients with Early Breast Cancer on Depression and Anxiety

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BACKGROUND: The purpose of this study was to investigate the influence of a specific psychosocial educational group intervention ('Learning to live with Cancer' program; G. Grahn, Eur J Cancer Care 1996)

on depression and anxiety in early breast cancer patients. **METHOD:** Fifty-one postmenopausal patients with operated primary breast cancer stage I-III, within two years of diagnosis, were entered into this open randomized trial. Patients were randomized to either receive an eight-weeks-psychosocial intervention upfront or after a waiting period of six months. A group with immediate psychosocial intervention, a control waiting group during its waiting period and healthy volunteers were compared using standardized questionnaires: BDI (depression) and STAI (state and trait anxiety), as well as a semi-structured interview. All participants were evaluated at three different time points: baseline (t1), after an eight-weeks-period (t2), follow-up after further eight weeks (t3). To test the efficiency of the intervention program, repeated measures MANOVAs were computed for each group. **RESULTS:** For the intervention group ($n = 29$), significant improvements were found for state anxiety (t1: 30.2 ± 8.2 ; t3: 25.9 ± 9.4 ; $p = .011$) and trait anxiety (t1: 33.9 ± 7.9 ; t3: 26.6 ± 11.1 ; $p = .000$). In line with these results the depression scores improved after the intervention but not significantly. Patients in the control waiting group ($n = 22$) showed no significant changes over the three time points. For the healthy volunteers ($n = 26$) the depression scores remained constant over the time whereas state and trait anxiety changed significantly. **CONCLUSIONS:** The efficacy of the 'Learning to live with Cancer' intervention program to significantly improve state and trait anxiety in patients with early breast cancer warrants inclusion of this program in the daily clinical practice. **RESEARCH IMPLICATIONS:** The complexity of this study with the intervention-group and the two control-groups (waiting-group, healthy control group), the methodological challenges may play a valuable contribution for conducting studies relating the influence of psycho-social intervention programs. **CLINICAL IMPLICATIONS:** The specific structured educational program and its influence on depression and anxiety is of high interest for the clinical work. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the Austrian National Bank Fund grant 11139 and by the 'Verein für Krebskranke an der Med. Uni Klinik Graz'.

P2.6.32

Prevention of Emotional Stress in Children with Cancer

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BACKGROUND: Anxiety and stress are the most common psychological disorders that occur in cancer patients, but when we talk about children

levels of anxiety and stress that this disease generates, those are much higher. Therefore it is important to seek different tools in order to prevent or mitigate when it's possible the levels of anxiety and stress experienced by children who have some type of cancer. **METHOD:** The first thing we are going to do is observe the stress levels that children have, for this we will an interview with parents and apply a sequency of psychological tests as the CAS child, etc. Then we developed a program of psychological intervention, based on the game as the base for the development of the child, designed to prevent or relieve the emotional stress generated by the disease. **RESULTS:** The result indicates that children who suffer from some type of cancer to develop over time high levels of stress, which are not good. Once the family and the child receive the diagnosis, it is important to start as soon as possible to apply different psychological strategies that will help us to prevent the occurrence of high levels of stress and anxiety, and in those cases where the level of anxiety is already present, these strategies are useful for us to reduce it. **CONCLUSIONS:** To conclude we can say that psychological intervention programs focused on improving self-esteem of children, provide them the capacity to face their personal situation, help them to interact properly with their family and friends, promote their welfare and comfort, giving security in themselves and in the care they are receiving, and so on, would be useful tools to prevent stress in children who suffer from some form of cancer. **RESEARCH IMPLICATIONS:** Knowing that there are some intervention strategies that are effective to prevent or reduce stress levels in children with cancer, is important, however it is necessary to continue the research on this topic to find strategies and identify which one is more effective and define in what depends their effectiveness, and know what conditions are ideal for the application of each of the strategies. **CLINICAL IMPLICATIONS:** If we know that some intervention strategies are effective on a psychological level to prevent the emotional stress in children with cancer, we know how to use them or if we tell the family that have the possibility to get that help in a specific place that will help them before the anxiety and stress levels of the child get high and damaging. **ACKNOWLEDGEMENT OF FUNDING:** Early Warning Unit (UAT); A.Ga.D.I.R.; University of Santiago de Compostela (USC).

P2.6.33

Can We Predict Who Accepts and Who Declines Professional Help for Emotional Complications of Cancer? A Path Analysis Using the Help Thermometer

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BACKGROUND: Desire for professional help is an important paradigm in the care of patients with psychological distress. We previously reported that 36% of those distressed on the distress thermometer wanted help and that 10/26 people who wanted help had major or minor depression compared with 16/104 of those who did not want help (Chi squared = 6.9, $p < 0.02$). **METHOD:** Using data from 129 patients (mean age was 57.7 years and their mean time from diagnosis 7.3 months) attending a local chemotherapy suite, we measured help using the Help Thermometer from the Emotion Thermometers (ET) 5 domain screen. The advantage of the help thermometer is that it grades desire for professional help on a continuum from 0–10. Multiple regression and path analysis were used. AMOS5 (for SPSS) was used to generate the paths and calculate Standardized regression weights. **RESULTS:** On multiple regression on distress on the DT was significantly association with help. Using path analysis variables most associated with desire for help were: 1. distress (DT = SMW 0.271) and 2. anxiety (HADS-A = 0.225) and depression (HADS-D = 0.122). However even collectively variables explained on 42% of variance in desire for help. **CONCLUSIONS:** Desire for professional help is increasing seen as an important method in assessing patients for possible psychological treatment. Predicting who wants help is difficult. All variables combined only accounted for about 40% of variance. The most important predictors (of those tested) were distress and anxiety. **RESEARCH IMPLICATIONS:** Improvements in testing for desired help are needed as well as research examining predictors of who accepts vs declines professional help. **CLINICAL IMPLICATIONS:** Clinicians should ask specifically about the patient's wish to receive offered help as well as the help (treatment) preferences. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.34

Feasibility and Implementation Issues of a Multi-centric Multimedia Intervention to Provide Informational Support to Individuals Newly Diagnosed with Cancer

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BACKGROUND: This pilot study seeks to document the feasibility of implementing an innovative web-based information support tool, as a complement to usual care among patients newly diagnosed with cancer. Interactive information support tools support patients through the cancer trajectory as they offer readily available, easily updated and complementary informational support. However,

even as promising means for meeting the informational/psychosocial needs of patients, their implementation generates challenging obstacles which will be presented and discussed. **METHOD:** The study employs a pre-post prospective intervention design implemented in various cancer centres across Canada. Within each centre, patients being treated for melanoma or colorectal cancer are offered unrestricted access to a web-based tool (Oncology Interactive Navigator (OIN)) for a period of six weeks. A mixed design approach (qualitative/quantitative) is used to capture key factors that may modulate individuals' reliance on the tool as well as its impact on psychosocial adjustment to cancer. **RESULTS:** The research team faced a number of challenges in the process of designing and implementing the OIN including: (A) choosing the most sensitive outcome measures; (B) customizing the OIN per cancer centre; (C) introducing the OIN to the various stakeholders within cancer centres; (D) garnering enthusiasm for the project; (E) securing working alliance among all the health care professionals (HCP) involved in implementing the study (nurses, physicians, volunteers, psychologists, social workers, and hospital administrators). Finally, (F) ensuring that all patients meeting the study criteria were approached and offered the OIN intervention required that a research assistant be on site for extended periods. **CONCLUSIONS:** The present study not only highlights the challenges in feasibility of conducting a nation-wide cancer-related intervention study but also the challenges associated with the implementation of complementary oncology information support strategies such as the OIN. Successful implementation required considerable material and human resources including health care professionals across multiple cancer sites in Canada. In lieu of a centrally focused management of the entire study, the significance of communication and the employment of team-oriented, cancer site-specific coordination is unveiled. It was observed that each center presented a unique configuration of both opportunities and obstacles. **RESEARCH IMPLICATIONS:** Often overlooked, feasibility and implementation issues should be explicitly integrated in the process of designing an intervention study. Considering the collaborative role played by clinicians and administrative personnel, it is important that researchers be cognizant of the specific situation of all resources in the execution of intervention studies. The mixed methods approach was also essential for capturing a comprehensive perspective on the initial contributions of such an information support strategy. **CLINICAL IMPLICATIONS:** Given the very short time allowed and the density of difficult information to treat, cancer patients often leave their clinical consults without thoroughly fulfilling their information needs. This

underscores a need for additional information support media. The provision of reliable, comprehensive and easily accessible information support to patients through the OIN is an invaluable complement to the HCP-mediated information dissemination. The successful implementation of such information support strategies is dependent on HCP-mediated integration into clinical practice. **ACKNOWLEDGEMENT OF FUNDING:** The Canadian Partnership Against Cancer is funding this pilot study.

P2.6.35

The Influence of Short-term Multidisciplinary Intervention on Quality of Life and Mental Health in Cancer Patients

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BACKGROUND: The purpose of this work was to assess the health impact of participation in the one week multidisciplinary therapeutic intervention on quality of life (QoL) and mental state of patients with cancer. **METHOD:** The study comprised 279 cancer patients (268 women, 11 men) aged 22–80 years ($M = 56.49$). The intervention was both educational and therapeutic character, lasting 7 days, each group involved on average 16 people. The program involved seven professionals: a psychologist (24h—providing group and individual interventions based on rational behavior therapy as applied in the Simonton Program), activities to improve mobility (10h), lessons on proper nutrition (6h), classes provided by an oncologist (4h), art therapy (2h), choreotherapy (2h) and classes by a social worker (2h). The study was of a linear character, including two measurements—before the intervention and after 6 weeks of its completion. The following questionnaires methods were used: SF-36 and HADS. **RESULTS:** After completing of the multidisciplinary program the following changes were observed in the QoL scales of SF-36: Role-Physical ($p < 0.001$), Role-Emotional ($p < 0.001$), Bodily Pain ($p < 0.001$), Vitality ($p < 0.001$), Mental Health ($p < 0.001$), Social Functioning ($p < 0.001$) and General Health ($p < 0.01$). Also a significant improvement in the psychological functioning and the decrease of anxiety ($p < 0.001$) and depression ($p < 0.001$). Particularly strong improvements were observed in patients who had shown higher severity of anxiety and depression prior to the participation in the program ($p < 0.05$). **CONCLUSIONS:** Participation in the multidisciplinary educational and therapeutic intervention for cancer patients had beneficial effect on the QoL and the over all mental

state of cancer patients. **RESEARCH IMPLICATIONS:** It would be valuable to expand the observations to the control group who were on the waiting list. Another interesting area is to explore which elements of the program had the most beneficial effects and how to match them with to the needs of individual patients. **CLINICAL IMPLICATIONS:** A short, one week multidisciplinary intervention that was educational and psychotherapeutic in nature can be a valuable aid to cancer patients in achieving higher QoL. **ACKNOWLEDGEMENT OF FUNDING:** This study got financial support from the Polish Ministry of Labor and Social Policy within the Program of the Government Civil Initiatives Fund and the Ministry of Health in Poland as well as the resources the Association to Support Oncology UNICORN.

P2.6.36

Psychological Distress, Attitude Towards Psychosocial Support and Need for Disease Related Information Among Patients with Prostate Cancer

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BACKGROUND: 88% of men with prostate cancer (MPC) suffer from cancer- or treatment-specific problems and approximately 50% of MPC are afflicted with psychological distress or anxieties (Mehnert, 2007). Despite these reports research shows that while 29% of patients feel the need for psychosocial support, only 9% actually receive it (Voogt, 2001). More research on the need for psychosocial support and disease related information (as another kind of 'support') is necessary for MPC. **METHOD:** Patients from a consecutive sample of MPC (C61 according to ICD-10; $n = 86$) were asked to fill in a questionnaire at the end of their rehabilitative treatment. The questionnaire refers to 1. sociodemographic and clinical characteristics, 2. psychological distress (HADS), 3. attitude towards, use of and access to psychosocial and related services, 4. need for disease related information, 5. sources of information (esp. internet). 54 patients took part in the study, $n = 48$ (89%) with a completed questionnaire. **RESULTS:** Half of the MPC have used at least one psychosocial support source. A consultation concerning social medical issues has been attended by 18% during the course of the disease. All other forms of support/services have only been used rarely. Although approximately 20% of the patients exhibited clinically relevant depression and/or anxiety scores, only 8% of the patients received psychotherapeutic treatment and/or psychological consultation. However 70% of the

patients name that they are not in need of psychotherapeutic support. Only 6% of the patients state a need for psychotherapeutic support. Already 64% of the patients want to receive as many information about the disease as possible. The main source of information is the dialogue with the physician. Still, 30% of the patients asked use the internet as a source of information. **CONCLUSIONS:** Problems and distress related to MPC results in a need of psychosocial support. However, this support is not used in the amount that seems recommended. These results underline the importance of easy access to psychosocial support and the appropriation of disease related information as many MPC want to receive as much information about the disease as possible. The main source of information is the dialogue with the physician. Additionally, communication with family members, information brochures, newspapers/magazines and the television are stated as information sources. Furthermore, the internet gaining importance as a source of information. **RESEARCH IMPLICATIONS:** Further research is needed to specify the reasons for the lack of acceptance of psychosocial support offerings by MPC. How can these services be designed, so that they are actually used by the patients? Do new technologies (i.e. the internet) give new opportunities to close the gap in the supply? **CLINICAL IMPLICATIONS:** Catamnesis-analysis show an increase of distress and problems instead of a steady success of rehabilitative procedures after inpatient treatment for MPC. This could be due to the low patient participation in psychosocial support programs. An improvement of currently available interventions could be of use here. Low-threshold offerings (which for example focus on the supply of information) could help the patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.37

The Integrated Support System for Cancer Patients

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BACKGROUND: This programme is the result of the cooperation of psychooncologists (from the Polish Psychooncology Society) with cancer patients and volunteers working in the UJ Foundation. **METHOD:** Programme consists of two fields of activity: 1. Psychological support for the cancer patients with great level of psychological distress. 2. Training in communication skill for doctors and patients. Ad. 1. A. Nurses of oncology wards will be trained in: measuring the distress of cancer patients using the distress thermometer. B. The patients with score 5 or more will be qualified to the distress group. They will be offered to make a contact with a psychooncologist (supported psychologist).

RESULTS: Ad. 2. The training programme for psychooncologists (so called supported psychologists) was also created—these people. A. After training will offer psychological support for the patients from distress group. B. The programmes of the workshops on communication skills were created for two groups: 1. Doctors and medical students; 2. Cancer patients. These programmes contain: 1) cases for discussion (based on medical practice), 2) movies based on various scenarios' 'good talks' and 'bad talks': doctor vs patient and patients vs doctor. **CONCLUSIONS:** These programmes will be introduced first to 3 oncology units (Gliwice, Poznan, Warszawa) and then to all big oncology units in Poland. **RESEARCH IMPLICATIONS:** (required). **CLINICAL IMPLICATIONS:** (required). **ACKNOWLEDGEMENT OF FUNDING:** (required).

P2.6.39

The Psycho-Sexual Effects of Treatment Modality in Gynecological Cancer

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BACKGROUND: Gynecological cancer and various oncological treatments often cause significant psychological trauma and sexual dysfunction, which need to be identified and quantified for appropriate support and rehabilitation. **METHOD:** Three hundred women from ages 25 to 55 (in two groups, 25–40 and 40–55) who had undergone various oncological treatments for cancer of cervix, ovary, GTT and endometrium were studied. The psychological stress factors were quantified by questionnaire and standard psychological tools. The sexual factors were quantified by the frequency of intimacy with partners after treatment, and this frequency was compared with their self reported frequency of intimacy at their pre-diagnosed state (control group). **RESULTS: Stress:** Acute at diagnosis but moderate to mild stress persisted even after three to eight years of disease-free state. **Fear of recurrence:** Gradually became less with increased duration of disease-free state. **Physical intimacy:** *Diminished in both age groups than during pre-diagnosed state. *Primary curative surgery caused minimum psychosexual problems. *Patients receiving chemotherapy (cancer ovary and GTT) were less affected. *The radiated group (generally cancer cervix) were more affected. *The worst affected were those, who had undergone surgery, radiation and chemotherapy combined. *Sexual morbidity was 26% for 25 to 40 years and 34% for 40 to 55 years. **CONCLUSIONS:** This study showed that Gynecological cancer patients mainly suffer from- fear of recurrence and loss of femininity and fertility (in younger women). Patients who had undergone fertility sparing surgery needed

special psychological support before undertaking pregnancy. Nulliparous patients, who were handicapped by radical surgery also needed extra care. The anxiety and fear of recurrence diminished with increasing duration of disease free state. Sexual dysfunctions needed medical (vaginal dilation, use of hormones in selected cases, lubricants) and psychological intervention and support to regain relationship with partner. The partners also needed psychological support and reassurance for attaining a healthy sexual life. **RESEARCH IMPLICATIONS:** Continuous research is necessary for identifying problems of women who suffered from gynecological cancer and had undergone treatment for giving appropriate support and rehabilitation. The treatment modality may have to be modified—mainly fertility preserving and less mutilating surgery needs to be considered. **CLINICAL IMPLICATIONS:** If the psycho-sexual problems of the gynecological patients are identified, quantified and addressed properly with necessary measures, the patients will be able to lead a much better and normal life at disease free state. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.40

Efficacy of a Communication and Stress Management Training on Residents' Stress to Communicate, Self-efficacy and Burnout Level: A Randomized Controlled Study

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BACKGROUND: Residents experience several work-related stressors (e.g. intense work demands). They also experience stress to communicate with patients and consequently lack of self-efficacy beliefs in interviews with patients. These stressors may contribute to the development of residents' burnout. The study aim is to assess the efficacy of a communication and stress management skills training program on residents' stress to communicate, self-efficacy beliefs about their communication and stress management skills, and burnout in a randomized controlled design. **METHOD:** Residents from various specialties, after a first assessment time, were randomly assigned to a 40-h training (intervention group) or to a waiting list

(control group), according to a computer generated randomization list. Stress to communicate and self-efficacy were assessed with self-reported scales elaborated for the purpose of this study. Burnout was assessed with Maslach Burnout Inventory. Other questionnaires assessed some person-related (e.g. anxiety) and work-related (e.g. job stress) variables. These scales were filled in at baseline and after training for the intervention group, and 8 months after the first assessment time for the control group. **RESULTS:** The final sample included seventy-five residents. Group-by-time repeated measures analysis of variance showed a significant decrease in residents' stress to communicate ($p = .001$) and a significant increase in their self-efficacy beliefs about their communication ($p < .001$) and stress management skills ($p < .001$). No significant group-by-time changes were noted in burnout. Residents had a high level of job stress and also a low quality of work life, particularly concerning arrangement of work schedule and atmosphere with superiors. **CONCLUSIONS:** While the training program reduced residents' stress to communicate and enhanced their self-efficacy, it did not reduce their burnout. The positive results of this training program may encourage its compulsory organization in the medical curriculum. **RESEARCH IMPLICATIONS:** Assessing the impact of a training program associating person- and work-directed interventions may be suggested in order to reduce residents' burnout. **CLINICAL IMPLICATIONS:** Changes in residents' stress to communicate and self-efficacy beliefs may have positive implications on residents' use of effective communication skills and thus on patients' satisfaction with the interview. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

P2.6.41

Best Practices and Challenges in Psychosocial Oncology in Hungary: Outcomes of a Professional Exchange Summit

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BACKGROUND: Hungary has the highest cancer incidence and mortality rates in Central-Eastern Europe (WHO, 2006). The growing numbers of

people with cancer are faced with an inadequate health system and few skilled professionals to address the increasingly complex medical and psychosocial needs of people with cancer. The goals of the Hungarian summit meeting were to convene psychosocial oncology professionals to exchange current best practices and identify challenges that must be addressed. **METHOD:** The National Association of Social Workers, the largest social work membership organization in the world, was the project organizer. Psychosocial oncology professionals were identified by Hungarian leaders in the field. A planning committee was formed and convened in Budapest (July 2008) to identify summit content and additional participants, who could apply through a competitive grant process to attend the summit meeting held in Nyiregyhaza (November 2008). Twenty-five professionals attended, including social workers, psychiatrists, psychologists, oncologists, nurses, volunteers, and cancer survivors. Local community professionals and social work students from the University of Debrecen, College of Health Faculty, also attended. **RESULTS:** Hungarian and American psychosocial oncology professionals presented content on best practices in the areas of hospital, community/home health, and hospice care. Also a nominal group process identified challenges in providing psychosocial oncology care from among six discussion areas: elderly, children, ethnic minorities, survivorship, families/volunteers, professional networking. An overarching theme in the discussion was the quality and timeliness of care including access to psychosocial care. The areas of greatest need for action included: improving communication; collaboration between medical and psychosocial professionals; network-building among social workers and other professionals; volunteer training; and public education about psychosocial care. **CONCLUSIONS:** The summit meeting provided a forum for Hungarian participants to exchange information about current best practices in psychosocial oncology with each other and with American colleagues. Discussion was held about common concerns regarding psychosocial oncology care in Hungary and the beginning formation of a professional network was facilitated. These leaders developed a 'call to action' and a set of imperatives on which to base future efforts to improve care of people with cancer. Summit leaders, participants and professionals not able to attend, are now working to put the summit outcomes and imperatives into action. **RESEARCH IMPLICATIONS:** Overall, the evaluation of the summit meeting was very positive. The participants were pleased to meet and be able to discuss areas in which they believed good work was being along with identifying challenges faced in providing psychosocial oncology care. The nominal group process used to identify the 'call

to action' offered an opportunity for reflection and identification of important areas that need attention. Progress in addressing the imperatives should be monitored periodically. **CLINICAL IMPLICATIONS:** The exchange of best practices and training models provided an opportunity to compare practices between Hungary and the U.S. Education and training for psychosocial oncology care has begun in Hungary but further efforts to enhance content and accessibility is needed. A beginning network of professionals was formed, ready to collaborate on the action areas with the aim of improving the timeliness and quality of cancer care throughout Hungary. **ACKNOWLEDGEMENT OF FUNDING:** The summit meeting was supported by a grant from the Bristol Myers Squibb Foundation to the National Association of Social Workers.

P2.6.42

A Group Education and Skills Intervention Aimed at Improving Cognitive Functioning in People Treated for Cancer: A Pilot Study

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BACKGROUND: This project aimed to evaluate whether a group psychological intervention could improve cognitive performance in people who have completed treatments for cancer. It was hypothesised that group cognitive rehabilitation would improve objective cognitive performance, subjective cognitive function and quality of life. **METHOD:** 6 participants who had previously completed treatments for adult onset cancer took part in a group cognitive behavioural intervention in February 2009 conducted by a clinical psychologist and a psychologist-in-training. The 'Re-Cog' intervention, developed for this study, involved four 2-hour group sessions and between session homework. A participant manual and clinician manual were developed. Sessions involved education, skills training and skills practice on the topics of 'Aging, health, cancer and cognitive function', 'Memory', 'Attention', and 'Fatigue, emotions and cognition'. Participants completed neuropsychological assessments and self-report measures of subjective cognitive function, quality of life, and emotional distress at pre-treatment and post-treatment. **RESULTS:** Results will be presented for pre- and post scores on neurocognitive assessment (the Repeatable Battery for Assessment of Neuropsychological Status and Trailmaking Test), self-reported cognition (Multiple Abilities Self-Report Questionnaire), quality of life (European Organisation for Research and Treatment of Cancer Core Quality of Life Questionnaire), distress (Kessler-10), illness perceptions (Illness Perceptions Questionnaire—Revised), and patient satisfaction. **CONCLUSIONS:** Results will show for the first time whether a

brief group intervention can improve cancer survivors' subjective or objective cognitive performance. If successful, the pilot study will be extended to a larger trial. **RESEARCH IMPLICATIONS:** This project will assist with finding out the extent to which cognitive difficulties experienced by a proportion of cancer survivors are remediable in a manualised group treatment format. **CLINICAL IMPLICATIONS:** If successful, the program is designed in a format that would be easy to disseminate. It is manualised, relatively brief, designed for delivery in a group, and intended for use with cancer survivors who have mixed tumour types. **ACKNOWLEDGEMENT OF FUNDING:** Funding for this project was provided by Griffith University Research Grant GURG-36603.

P2.6.43

'What Did We Get Out of It?' Perceptions of Participants in Cognitive Existential Couple Therapy (CECT) for Men with Early Stage Prostate Cancer and their Partners

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BACKGROUND: Men with early stage prostate cancer and their partners were invited to share their perceptions of taking part in a theoretically derived therapy program (CECT) shortly after they had completed the final session. The intention was to identify key aspects of the intervention, both in terms of content and process, which would allow us to explore the relationships between participants' perception of importance and longer-term outcomes to the intervention at six-month follow-up. **METHOD:** We conducted semi-structured interviews with the men and their partners shortly after they had completed the six-session program. The interviews were each of one hour duration and the interview protocols allowed sufficient flexibility for the interviewers to follow any themes or leads that the participants introduced. The use of qualitative content analysis enabled us to identify manifest and latent content in the interviews. **RESULTS:** Memory of specific content details was sparse. Impressions of the content were more global and referred to general themes rather than specific aspects of the topics covered. Participants were more enthusiastic in their endorsement of the

process, and identified several key benefits that resulted, in their views, from taking part in the therapy sessions. **CONCLUSIONS:** Participants' immediate recollection of the content covered did not reflect the carefully prepared and theoretically justified manualised treatment protocols that had been developed for the study. Common therapeutic factors, such as the importance of establishing a safe, supportive environment, were much more salient to the participants. The theoretical and practical implications that these findings might hold for evidence-based work of this nature in psycho-oncology are explored. **RESEARCH IMPLICATIONS:** If the process-related themes that were identified as important by participants are indeed related to long-term outcomes, then it will potentially have implications for the way researchers develop intervention programs. It could affect the balance reached between emphasis on specific content and attention to therapeutic common factors in theoretically driven psycho-social interventions. **CLINICAL IMPLICATIONS:** The use of manualised therapies for psycho-social interventions in psycho-oncology is important to ensure evidence-based treatments are widely promulgated. The results suggest that therapeutic common factors, often manifested through the qualities of the practitioner, are also important contributors and have to be carefully considered when preparing to introduce psycho-social interventions of this nature. **ACKNOWLEDGEMENT OF FUNDING:** The pilot was supported by the Pratt Foundation and the RCT is to be funded by *beyondblue*.

P2.6.44

Pilot Study of the Meaning-Making Intervention (MMi) for Family Caregivers of Patients with Advanced Cancer

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BACKGROUND: Making sense of a situation can facilitate psychological adaptation to the caregiver role (Holland and Lewis, 2000; Schachter and Coyle, 1998). Recently, a Meaning-Making intervention (MMi) that addresses the search for meaning in cancer was deemed effective in a randomized control trial to facilitate patients' adaptation to a new cancer diagnosis (Lee *et al.*, 2006). We hypothesized that an adapted version of the MMi could also be helpful for family caregivers of people with advanced cancer. **METHOD:** Through team discussions and clinical encounters

with 7 caregivers of patients newly diagnosed with advanced cancer, the MMi was progressively adapted to reflect their struggles associated with the dual reality of witnessing a relative's cancer and their current role in providing care. We also evaluated the impact of the intervention on caregivers' existential well-being, anxiety, depression, burden, purpose in life, optimism and self-efficacy at 48 hours and 1 month follow-up. A Wilcoxon Signed Rank Test was conducted on each outcome, comparing pre- and post-intervention scores. **RESULTS:** Forty-eight hours following the MMi, there were trends towards: an increase in quality of life as measured by the QOLTI-F (Quality of Life in Life-Threatening Illness-Family Caregiver) (baseline mean:6.4; SD:1.0; post-intervention mean:7.2; SD:1.2; $p = 0.06$); a decrease in caregiver burden as measured by the Caregiver Burden Scale (CBS) (baseline mean:38.0; SD:8.3; post-intervention mean:33.7; SD:7.6; $p = 0.06$); and an alleviation of depression on the Center for Epidemiologic Studies Depression Scale (CESD-R) (baseline mean:18.5; SD:9.0; post-intervention mean:13.6; SD:6.5; $p = 0.08$). The number of family caregivers above the cutoff score for clinical depression on the CESD-R decreased from 5/7 to 2/7 immediately following the intervention. **CONCLUSIONS:** The MMi has been adapted for the first time to family caregivers and appears to help them adjust to their relative's cancer. **RESEARCH IMPLICATIONS:** Further testing is warranted to explore the clinical effects of the MMi-caregiver version. **CLINICAL IMPLICATIONS:** The MMi-caregiver version seems a promising avenue to help family caregivers cope. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded by the Weekend to End Breast Cancer 2006 for the Jewish General Hospital. Dr Henry was funded by two postdoctoral fellowships during her tenure, one from the National Cancer Institute of Canada (NCIC), and the other from the Canadian Institutes of Health Research/NCIC Strategic Training Program in Palliative Care Cancer Research.

P2.6.45

The Effect of a Self-Efficacy Intervention on Objective Measures of Physical Activity in First- and Second-Degree Relatives of Colon Cancer Patients

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BACKGROUND: Research has shown that physical activity (PA) reduces the risk of colon cancer (Friedenreich and Orenstein, 2002). Given the

protective benefits of PA, research is needed testing innovative ways to increase the adoption and maintenance of PA among individuals with an elevated risk of colon cancer. This study examined the effect of a self-efficacy (i.e., task and self-regulation) intervention on PA in relatives of colon cancer patients undertaking a 9 month home-based PA program. **METHOD:** Following a 12-week structured exercise program, relatives of colon cancer patients ($N = 107$; $M = 45.7$ years, ± 8.7 ; 91.0% first-degree relatives; 67.3% female) participated in a 9 month home based PA program. Participants remained in the same randomized condition: self-efficacy (intervention) or nutrition (attention control). The intervention group received monthly emails that focused on self-efficacy information (e.g., task, scheduling, barrier, relapse), while the attention control group received nutrition information. Physical activity (i.e., energy expenditure; EE = daily kcals/min/kg) was objectively assessed using Actical[®] accelerometers at 1 week following the exercise program, and at 1, 3, 6, and 9 months. **RESULTS:** A factorial repeated measure ANOVA revealed a significant time effect for EE, $F(1, 56) = 3.43$, $p < .05$; $\eta^2 = .20$. Specifically, EE systematically declined over the 9 months. No interaction effect $F(1, 56) = .41$, $p = .80$; $\eta^2 = .03$ was found. However, the intervention group ($M = 755.26$, $SE = 44.19$; 772.59 , $SE = 71.27$; 792.23 , $SE = 62.17$; 686.15 , $SE = 40.02$; and 664.60 , $SE = 50.38$) had higher EE at all time points compared to the attention control group ($M = 721.84$, $SE = 35.74$; 704.85 , $SE = 41.95$; 667.26 , $SE = 42.95$; 618.28 , $SE = 35.23$; and 633.68 $SE = 41.50$, respectively). **CONCLUSIONS:** An intervention grounded in both task and self-regulation efficacy was modest in assisting relatives of colon cancer patients adopt and maintain their PA in a 9 month home-based PA program. **RESEARCH IMPLICATIONS:** This research trial is the first to document whether an intervention grounded in self-efficacy theory can influence objectively measured PA patterns. Although differences in PA favored the intervention group, the effect size was nonetheless small. Another large cohort is currently being recruited in an attempt to improve statistical power and strengthen the research findings. **CLINICAL IMPLICATIONS:** Results demonstrate that colon cancer relatives can continue to engage in levels of free-living EE that exceed recommended guidelines for colon cancer protection (Lee, 2003) as well as for other health benefits (Warbutron, Nicol, and Bredin, 2006). Empirical-based evidence showing that PA can be enhanced and more importantly maintained in those 'at risk' of colorectal cancer is essential before longitudinal prospective studies can be conducted that evaluate the protective benefits of PA. **ACKNOWLEDGEMENT OF FUNDING:** The authors would like to thank the

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P2.6.47

Psychological Defense Mechanisms for the Patients with Childhood Cancer and Their Family Members

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BACKGROUND: Childhood cancer could instill traumatic stress especially for the parents and, of course, it is big challenge for hall family. This abstract is a reflection of work in two Pediatric departments: Fanarjian National Oncology Centre and Centre of Hematology, both are located in Yerevan, Armenia. The aim of this study is to discover those psychological defense mechanisms among children, adolescent and their family members that are developed after confirmation of childhood cancer. diagnosis. **METHOD:** We designed two types of questionnaire (for children and parents/care giver/family members). So, interview was conducted with both groups: children and care givers. A total of 25 children (aged 3–17) years old and 21 mothers plus 5 care givers (4 of which cases were family members: 3 grandmothers and on sister) were participating in our study. We used observation, analysis of questionnaire and projective methods such as: draw your illness, non-existing/imaginary animal, my family... We divided sample group in two age related subgroups: A -12 children (aged 3–10) and B-13 children and adolescents (aged 11–18). **RESULTS:** Group A: cancer diagnosis is related to a very simple, sometimes insignificant reasons, such as 'I ate lots of ice-cream, chips, etc, that's why...' and appropriately the solution could be 'not eating ice-cream, or chips.' Group B: adequate such as: 'my problem is lymphatic nodes, tumor, leukemia require chemotherapy'. 90% of all cases are using religious ritual-sacrificial offering. People were scarifying animals, even people (blood sacrificing) and later on many cultures created non-blood sacrificing with giving out bread, fruits. When hope is diminishing, in comparison with the initial stage of treatment symptoms are aggressive less controllable. **CONCLUSIONS:** Splitting as a defense mechanism in a way of life before the diagnosis and after. For children from Group A Cognitive modeling is insufficient and reflected in vague reality and the sense of reality is still under the construction, cognitive intelligence is not clear. Group B use medical terms, but not the ward 'cancer'. Maybe the reason is one of the defence mechanisms repression, denial, etc... or even lack

of information. Belief: that children do not need to know everything about their illness as one of the strategies to protect children mentally and emotionally. RESEARCH IMPLICATIONS: Non medical approaches, such as religious rituals are also part of defensive architecture of patients and family members. CLINICAL IMPLICATIONS: We value the organization of psychological defence of the patients and their family members and for clinicians it is relevant to understand defensive strategies of both: patients and family members. ACKNOWLEDGEMENT OF FUNDING: None.

P2.6.48

Screening for Distress, the 6th Vital Sign: Longitudinal Trends in Distress and Common Problems Over a Six Month Period

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BACKGROUND: Significant distress is found in approximately 35–45% of all cancer patients. Few studies have followed the course of distress from the time of diagnosis onwards. Patients were longitudinally screened for distress at their first visit to the cancer centre and at 3 and 6 month follow-up. Trends for distress and other common problems experienced by patients are presented. **METHOD:** New patients attending the Tom Baker Cancer Centre in Calgary, Canada completed a screening that included the distress thermometer, problem checklist, pain and fatigue thermometers, nutrition questions, the Psychological Scan for Cancer Part C (PSSCAN), and relevant demographics. Patients were contacted at 3 and 6 month post initial screening via e-mail or telephone and completed the same measures. **RESULTS:** A total of 1328 patients participated in the study and 3 and 6 month data is available for 930 (69.9%) and 876 (65.9%) patients respectively. The mean distress score for the group decreased over time from 3.9 to 2.8 to 2.6 on a scale of 0–10. The two most common problems at baseline were worry about friends and family and sleep with 41.6 and 33.3 endorsing those items, respectively. Family conflict, changes in appearance, spirituality, and sleep were the only items to be endorsed more frequently at 3 months than at baseline. Pain and fatigue scores remained relatively unchanged. **CONCLUSIONS:** The symptoms and concerns patients experience change over time. This research highlights the need for routine monitoring over time and treatment of concerns commonly endorsed such as sleep, worry about friends/ family, pain, and fatigue. **RESEARCH IMPLICATIONS:** Research on distress over time is limited. This study suggests that the

time of screening can influence concerns and distress levels reported. **CLINICAL IMPLICATIONS:** For clinical practice it is important to routinely monitor distress and common problems since concerns may shift with time. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded through a grant from the Alberta Cancer Foundation Research Initiative Program.

P2.6.49

Integration of Psychosocial Medical Research: What Are the Similarities and Differences Among the Psychosocial Issues Affecting Individuals with Auto-immune Diseases Compared to Cancer?

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BACKGROUND: The importance of examining chronic illnesses from a biopsychosocial perspective has been well-documented, but existing research has fragmented our understanding of psychosocial experience by disease type. Though diagnosis, prognosis, progression, and awareness differs between the disease classes, similarities exist in the levels of depression and need for social support in individuals with autoimmune disease and cancer. In this presentation, research on individuals with autoimmune diseases will be presented and contrasted with findings from psychosocial oncology. **METHOD:** Survey results from 175 individuals with connective tissue autoimmune diseases (e.g. rheumatoid arthritis, lupus, multiple sclerosis, and myositis) will be discussed and compared to findings from similar studies conducted on individuals with cancer. These individuals completed an online survey measuring the effects of depression, social support, self-efficacy, and disease severity on well-being and their level of health-promoting behaviors using well-validated measures that have also been used in oncology samples. Comparative data on the CES-D and MOS-SSS will be discussed. **RESULTS:** For individuals with autoimmune diseases, it was found that disease severity and social support are not related, suggesting that an individuals' ability to access and utilize social support is unrelated to the severity of their autoimmune disease. Second, a significant relationship was found between self-efficacy and depression suggesting that individuals who believe they can handle the consequences of their disease report lower depression or individuals with lower depression believe they can handle the consequences of their disease. Third, it was found that depression and social support both added significant contributions to the regression model predicting well-being and healthy behaviors. **CONCLUSIONS:** Regardless of the specific type of chronic illness that an individual is diagnosed with, it is important to reduce levels

of depression, increase social support, and enhance disease-related self-efficacy to improve overall well-being and willingness to engage in health-promoting behaviors. The disease-specific factors and symptoms appear to be less significant in examining psychosocial health. The biopsychosocial theory has relevance for discussing chronic physical illness across disease type and for individuals with multiple diagnoses. Depression and social support are significant biopsychosocial factors in understanding the experience of oncology and autoimmune disease patients. **RESEARCH IMPLICATIONS:** Efforts to streamline psychosocial research will be mentioned. Analysis of the compartmentalization of psychosocial research by disease type will be shared and suggestions for how to learn from other areas of medical research and ways to become more integrated will be part of the presentation. Psychosocial measures that have applicability for multiple disease classes will be discussed. **CLINICAL IMPLICATIONS:** Clinicians will benefit from understanding the similarities and differences between people with autoimmune diseases and those with cancer. The progression of disease-related anxiety and depression in cancer patients is different from individuals with autoimmune diseases due to the differential levels of social awareness of the diseases, periods of relapse and remission, and the terminal nature of the diseases. Dual diagnosis issues will also be addressed. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.50

Interest in a Group Psychotherapy Program Among Philippine Breast Cancer Patients and its Correlative Factors

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BACKGROUND: A wide variety of psychosocial interventions are available for cancer patients, among which, group psychotherapy (GPT) programs have made improvements in cancer patients' quality of life, coping abilities and emotional distress. Few research data are available describing Philippine breast cancer patients' interest in GPT. This study aims to enumerate the factors related to whether Philippine breast cancer patients would be interested in a GPT program or not, as well as the reasons for such. **METHOD:** 135 breast cancer patients recruited from the University of Santo Tomas Hospital Benavides Cancer Institute (USTH-BCI) were asked to answer a survey questionnaire about their demographic, clinical, and psychosocial status, as well as whether they would be interested in joining a GPT program (based on Fawzy's model) and why. The inclusion

criteria were: (1) Breast cancer outpatients currently being treated at the USTH-BCI, (2) Breast cancer patients at any stage of the disease, (3) Above 18 years old, and (4) Can read and write in English. Patients were excluded if they were: (1) Currently diagnosed with any psychiatric disorder, and (2) Currently taking any psychiatric medications. Ethical approval for this research was received from the USTH Hospital and the University of Tokyo ethical committees. **RESULTS:** Of 135 patients approached, 123 patients returned completed surveys (response rate 91%). The patients' mean age was 51.1 (S.D.10.5). 61% were unemployed, although 77% had finished higher education. 65% were married. Majority were in Stages II and III (49% and 26%, respectively). 104 (85%) women indicated interest in GPT. Patients were mostly interested in learning coping skills (79%) and gaining knowledge or information in dealing with cancer (69%). For program content, patients were 'Very interested' in learning about cancer recurrence (96%) and current treatments (94%). Bivariate analyses showed that interested patients were younger, more likely to be married, and were more likely to have already used complementary therapy for breast cancer. Logistic regression analyses showed that married women were more likely to be interested in GPT (OR 3.302, CI 1.069-10.198). **CONCLUSIONS:** There may be a considerable, unmet need for psychosocial support among Philippine breast cancer patients, and there is a potentially high interest in GPT among them. This may reflect an active coping trait among those interested, or inadequate communication channels with their closest sources of support. Married Philippine breast cancer patients are more likely to join a GPT program, and this is possibly due to socio-cultural factors and psychological attributes as a result of roles within the family structure. Religion may also play a role as a source of psychosocial support. Philippine cancer patients interested in GPT are similar to and yet unique compared with other populations. **RESEARCH IMPLICATIONS:** To the authors' knowledge, this is the first such research that has attempted to give a clearer picture regarding interest in GPT among Philippine breast cancer patients. Further, this research broadens the picture of the appeal and applicability of group psychotherapy programs in an Asian population, and highlights the influences that socio-economic and cultural factors may play in the perception of such programs in the Philippines. **CLINICAL IMPLICATIONS:** Although many Filipino cancer patients who seek treatment for cancer undergo the usual medical care, up to 80–90% of them also use some form of complementary therapy, including support groups. However, psychosocial care is not incorporated in routine cancer care in cancer centers in the

Philippines, and patients are not routinely screened for psychosocial distress. This research points to the need for psychosocial support as part of the holistic care for Philippine breast cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.51

The Need for and Use of Psychosocial Care, Peer Support, and e-Health in Head and Neck Cancer Patients and Their Partners

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BACKGROUND: The goal is to investigate the need for and use of psychosocial care, peer support, and e-health in head and neck cancer (HNC) patients and their partners. **METHOD:** 85 HNC patients in the first year after treatment and 71 partners were asked to complete a questionnaire on the need for and use of psychosocial care, peer support, and e-health, the Hospital Anxiety and Depression Scale, the Utrechtse Coping List, and the EORTC C30 and HN35 (patients) and SF36 (partners) health related quality of life questionnaires (HRQOL). Sociodemographic and clinical parameters, HRQOL, and distress were compared to the need and use of care and support. **RESULTS:** In patients (and partners), 84% (92%) did not want or use psychosocial care; 9% (2%) wanted and used psychosocial care, 6% (6%) wanted but did not use care (1% of the patients did use care but did not want this). In patients (and partners), 83% (94%) did not want or use peer support, 9% (2%) wanted and used support, and 6% (4%) wanted but did not use support. 63% of the patients and 59% of the partners used the internet, mainly for information seeking and communication purposes. Gender (females), tumour stage (higher), treatment modality (more intensive), and HRQOL and psychosocial functioning (lower) appeared to be associated with the need for psychosocial care, peer support, and e-health. **CONCLUSIONS:** The need for and use of psychosocial care and peer support among HNC patients and their partners is limited. E-health appears to be used more frequently in both patients and partners. **RESEARCH IMPLICATIONS:** More research is needed into the cognition and attitudes of patients regarding psychosocial care and support. Barriers may be the belief that distress is a normal reaction to cancer diagnosis and treatment, the fact that symptoms of depression as weight loss or sleep disturbance are often being described to cancer or treatment, and the long

treatment period after which cancer patients do not wish to visit other health care providers. **CLINICAL IMPLICATIONS:** A stepped care approach including e-health may provide useful alternatives. Stepped care algorithms are based on clinically proven, best-practice pathways to care over a series of steps, while taking into account patients' preference. The steps involve watchful waiting, guided self-help (via the internet) and other brief therapies, followed by more intensive psychological interventions or medication. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.52

Remodelling Clinical Pathways in a Regional Oncological Network According to Patients' Experience

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BACKGROUND: This research is part of a wider system for the assessment of healthcare services within the Tuscan Regional Healthcare System (RHS) (Nuti, 2008) and is also related to the Tuscany Cancer Institute (ITT), a public clinical governance body responsible for oncology standards. The aim of this work is to remodel current oncological pathways on the basis of patients' psychological needs, of the factors determining the perceived quality and the variations between Local Healthcare Authorities. **METHOD:** Semi-structured interviews were conducted with clinical leaders of local oncology services, to understand current clinical pathways of breast and rectal colon cancer. Then a semi-structured focus group was designed to analyse the perceived quality through the eyes of 'users' (Krueger, 2000). A registered clinical psychologist acted as a facilitator using a standard storyboard to explore the patients' experience in the 4 stages of the disease, according to a list of 7 descriptors. A randomized and stratified sample of patients was selected considering also 3 main inclusion criteria; 30 groups, from a minimum of 8 to a maximum of 12 patients, were planned from January to March 2009. A local facilitator helped for proper logistics and for the patients' agreement to join the research. **RESULTS:** At the time of this abstract, we have conducted 10 focus groups with a participation of 96% of the invited patients. The focus group structure seems appropriate to favour the active participation of all the convenors (Kitzinger, 1995) and to explore the 4 stages of the 2 diseases according to the descriptors. Variations between Local Health Authorities seem quite relevant both for the psychological support and the patient-clinician relation: only in one case the healthcare authority provided psychological support before

and after surgery and treatment; some patients also reported examples of a 'cold and distant' attitude of the clinicians communicating the diagnosis and the following clinical pathway. The other descriptors resulted more coherent with the ITT standards and with a positive perception in all the 4 groups. **CONCLUSIONS:** The focus group is an important tool for qualitative studies and for the assessment of perceived quality of healthcare services. This research shows it is particularly suitable for the assessment of oncology services, as the psychological aspects of cancer care can better emerge in the interactions within a group of people sharing a common experience rather than with an individual interview or questionnaire. After all, patients involvement is a value in the quality improvement perspective. The final results should help a further development of patient-centered standards and a the standardization of a tool for the periodical assessment of the clinical pathway outcomes. **RESEARCH IMPLICATIONS:** Focus group proved to be an effective tool to catch experience of people who shared similar pathways (Barbour, 2008). First results support the idea of assessing oncological pathways involving patients, as their perspective (in terms of perceived outcome) is a complementary result. Evidence from focus groups gives inputs to redesign oncological pathways on the basis of quality and humanization of care, as patients ask for more continuity of care rather than just for more care. **CLINICAL IMPLICATIONS:** Focus groups revealed medical errors, adverse events, new interventions or additional waiting times. The issue of communication with patients and families proved to be sensitive for compliance to treatments. This method also enable mutual support and therefore favor social networks. Patient recognize to be able talk to and listen people with similar problems, especially for breast cancer. Although involvement of patients is not easy (Classen *et al.*, 2000), the research attracted an excellent participation. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.53

An Investigation of Levels of Psychological Distress (Depression and Anxiety) and Unmet Needs Amongst People Diagnosed with Head and Neck Cancer

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BACKGROUND: Studies demonstrate that patients with head and neck cancer experience elevated psychological distress, and that distress

and quality of life change during treatment. However, little is known about the psychological distress amongst Australian patients. This study assesses the psychosocial functioning of people with head and neck cancer before and after chemotherapy and/or radiotherapy. The study also examines the validity of the Depression Anxiety and Stress Scale (DASS-21) to screen for distress in this population. **METHOD:** This is a longitudinal, observational study of the prevalence of depression, anxiety, and stress in patients with head and neck cancer receiving chemotherapy and/or radiotherapy with curative intent. One-hundred participants will be recruited from outpatient clinics at Peter MacCallum Cancer Centre. Patients complete questionnaires before and after treatment. The questionnaire battery includes a: demographic questionnaire; DASS-21; HADS; and FACT-HN. The DASS-21 is a widely available, brief screening tool for depression, anxiety and stress. A sub-set of patients following treatment will complete a structured clinical interview (SCID-I) to assess mood and/or anxiety disorders, to compare these results to DASS-21 scores. **RESULTS:** To date 70 patients have been recruited. The results of this study show rates of depression and anxiety symptoms in a head and neck cancer population who are receiving chemotherapy and/or radiotherapy of curative intent. At the completion of the study, the psychometric properties of the DASS-21 in this population will be assessed, including comparison to the SCID-I which is a standardized clinical interview that is considered the 'gold-standard' to assess for specific mood/anxiety/stress symptoms. Changes in the DASS-21, HADS, and FACT-HN scales before and after treatment will also be examined. **CONCLUSIONS:** This study will report on the prevalence of depression and anxiety in this Australian head and neck cancer population, and will test the validity of the DASS-21 against the SCID-I. It will also report on any changes found in continuous measures of anxiety, depression, stress, and quality of life between pre- and post-chemotherapy and radiotherapy. **RESEARCH IMPLICATIONS:** If this study demonstrates, as expected, increasing rates of psychological distress over the treatment period, we intend to use findings to develop a specific psychosocial intervention for head and neck cancer patients undergoing radiotherapy of curative intent. This intervention will then be evaluated in a Randomised Controlled Trial. **CLINICAL IMPLICATIONS:** Results will provide a detailed clinical picture of rates of distress in this population, before and after treatment. Based on this information, recommendations for service delivery will be discussed to meet the changing psychosocial needs of patients with head and neck cancer during their treatment. This includes the utility of the DASS-21 as a screening tool for depression,

anxiety, and stress in patients with head and neck cancer. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded by beyondblue, an Australian Government funded organization that aims to provide a national focus and community leadership to increase the capacity of the broader Australian community to prevent depression and respond effectively.

P2.6.55

'I Wish I Was a Punk Rocker with Flowers in My Hair'—Establishing a Metastatic Breast Cancer Support Group-3 Year Evaluation

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BACKGROUND: There are no official statistics on women diagnosed with metastatic breast cancer in Australia each year. However it is estimated that 2500 women nationally live with Stage IV breast cancer. A metastatic diagnosis is devastating for women and their families. In contrast to psychosocial support for early breast cancer there are few options available for women with metastatic disease. Breast Cancer Network Australia lists only 10 such support groups nationally with 3 groups in NSW. **METHOD:** Research shows that supportive-expressive groups are helpful in improving quality of life and reducing psychological distress for women living with metastatic disease. In 2006 the authors established a monthly open group based on Spiegel's supportive-expressive group therapy (SEGT) model. The model aims to facilitate the expression of relevant emotions and direct discussion of difficult subject matters. Participants were recruited through prior contact with the facilitators and included trained peer support volunteers. Initially participants had stable disease responding to treatment and a wide age range although disease progression and deaths have altered the group dynamic over the history of the group. **RESULTS:** An average of 9 women attend each month and in total there are 40 registrations since commencement of the group in 2006. The women completed an anonymous qualitative evaluation of the group at the end of 2006, 2007 and 2008. All women either 'strongly agreed' or 'agreed' that sharing feelings and experiences was helpful; that they felt less isolated; that it was important to interact with other women in the group; that the facilitators understood the issues facing women with metastatic breast cancer; and that they would recommend this group to other women. **CONCLUSIONS:** After 3 years the group remains vital and cohesive and has survived significant challenges including death and disease progression of members. Facilitator experience and group feedback has led to refinements in the model and adaptations to meet the challenges of working

with a metastatic population over the longer term. The group meetings are now the central platform of other forms of psychosocial support developed for those women who do not wish to confront a group environment. The rewards of this group work for facilitators and participants ameliorate the significant challenges. **RESEARCH IMPLICATIONS:** Given the lack of support options for patients' with metastatic disease and the increased potential numbers of women facing the challenge in the next decades, there is an urgent need to explore this and other models to provide support services for this population. The authors experience establishing and maintaining this group over a three year period is a useful body of information for researchers to stimulate ongoing investigations of unmet need and appropriate support services. **CLINICAL IMPLICATIONS:** Medical management of metastatic breast cancer will extend life expectancy and hence the ongoing need for support for women and their families living with a serious prognosis of time limited illness. There are significant challenges in facilitating such a group and the experience of the facilitators should encourage other health professionals to offer support to this group of women. Additionally, positive patient evaluation should encourage clinician confidence in referring women to appropriate support services. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.57

Psychosocial Adaptation to Cancer: A Proposal for an Comprehensive Task-model Approach

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BACKGROUND: In Canada, the survival rate for all cancers combined is at present 51%. A primary consequence of this evolution is that individuals diagnosed with cancer are encouraged to learn how to adapt over the long term. It is crucial to gain an in-depth understanding of how this process of adjustment unfolds. The purpose of this presentation is to describe a comprehensive task-based model that describes the psychosocial adaptation process to major chronic illness. **METHOD:** In order to achieve this objective, we reviewed the four task-based models: those of Moos and Tsu [Moos RH, Tsu DV. Coping with physical illness. New York: Plenum Medical Company; 1977], Cohen and Lazarus [Cohen F, Lazarus RS. Coping with the stress of illness. In: Stone CG, Cohen F, Adler NE, editors. Health psychology: a handbook. San Francisco, CA: Jossey-Bass, 1979, p. 217–54], Corr [Corr C. A task based approach to coping with dying. *Omega* 1992;24:81–94] and Samson [Samson A. L'appart de la carrière au

modèle théorique des tâches d'adaptation à la maladie chronique. *Can J Couns* 2006;40:4–16]. **RESULTS:** We propose a comprehensive task-based model that gives a comprehensive description of the process of psychosocial adaptation to chronic illness. This model incorporates 5 key elements: personal history and social context; cognitive appraisal; adaptive tasks; coping skills; and outcome. **CONCLUSIONS:** This model allows for a systematic analysis of a particular situation: first by situating the patient within the context of a personal history; second, by determining the nature of the cognitive appraisal of the illness; third, by identifying the tasks to be accomplished and the coping skills needed to accomplish these tasks; and finally, by assessing whether the patient is moving towards a positive or negative outcome. **RESEARCH IMPLICATIONS:** The framework described by the comprehensive model offers researchers the opportunity to study individuals with specific chronic illnesses such as cancer, or specific types of cancer, to better understand the unique and unifying experiences of individuals facing a specific medical condition. Such research has the potential to shape therapeutic interventions aimed at optimizing patient outcome and quality of life. **CLINICAL IMPLICATIONS:** The comprehensive model provides health professionals with a broader and more holistic conceptualization of the adaptation processes in chronic illness. It provides the clinician with a novel framework for understanding how a particular individual faces the universal challenges of chronic illness and the factors influencing psychosocial adjustment. By identifying key tasks, coping strategies, and the centrality of cognitive appraisal, the model opens the possibility for targeted enquiry and optimization of intervention to achieve successful adaptation. **ACKNOWLEDGEMENT OF FUNDING:** University Of Ottawa.

P2.6.58

The Feasibility and Use of Music Imagery During Intensive Chemotherapy

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BACKGROUND: Patients being treated for hematologic malignancies with intensive chemotherapy in protective environments experience increased distress related to both disease and treatment. There is an overwhelming need to determine what, if any, interventions are feasible and beneficial to these patients. Anecdotal reports describe qualitative benefits to music imagery

interventions. Therefore, the goal of this study was to determine the feasibility and potential benefits of a music imagery intervention for patients hospitalized in a protective environment. **METHOD:** After consenting and completing baseline measurements, patients were randomized to receive standard care or standard care plus music imagery. Standard care consisted of hospitalization in a HEPA-filtered room with restricted access to visitors for administration of intensive chemotherapy followed by supportive care including prophylactic and empiric anti-biotics, transfusion support, and needed nutritional support. Music imagery sessions included educational and experiential components led by a board-certified music therapist twice weekly over the hospital stay. Patients were encouraged to use the music imagery independent of the music therapist. Outcomes were assessed weekly, post intervention, and at an outpatient follow-up clinic visit. **RESULTS:** We defined feasibility as consent rates, completed music imagery sessions, and questionnaire completion. Forty-nine out of 78 patients consented. Seventy-two percent of all music imagery sessions were completed. The questionnaire completion rate was 60% with illness severity and early discharge being the primary reasons for missing data. Targeted outcomes included positive and negative affect, fatigue, and anxiety. Both groups improved over time (all $p < 0.001$). However, negative affect appears to have moderated intervention efficacy as a subgroup of individuals with low baseline negative affect reported less anxiety at discharge than individuals with low baseline negative affect receiving standard care. **CONCLUSIONS:** While patients experience a high level of distress during induction chemotherapy, they are willing and able to engage in a randomized intervention trial while receiving treatment in isolation. Consent and intervention completion rates for this trial indicate that further research in this area is feasible. Additionally, our findings are consistent with previous studies indicating that patients acclimate to the hospital as evidenced by improving mood and fatigue scores from baseline to follow up. Finally, the intervention was beneficial to individuals who scored below the median on negative affect scores, while those who scored above the median experienced no intervention benefit. **RESEARCH IMPLICATIONS:** Patients in this study improved regardless of group assignment, indicating that, on average, patients naturally acclimate to hospitalization. This requires that interventions need to be powerful enough that differences between randomized groups are detectable. Interventions and outcomes that are driven by a logical theoretical framework will assist in meeting this threshold. Finally, the theoretical framework should also be used to design a suitable control condition to account for attention and other

potentially important factors. **CLINICAL IMPLICATIONS:** In practice, music therapists and other health care providers use a combination of receptive and interactive music interventions to address therapeutic goals and to teach coping strategies. Newly diagnosed patients who are experiencing elevated levels of distress may prefer receptive modalities; however, meta-analyses indicate that interactive music interventions are more beneficial for certain outcomes. Highly distressed patients may need structured receptive interventions that provide support and target arousal reduction until they can tolerate more interactive strategies. **ACKNOWLEDGEMENT OF FUNDING:** The project described was supported by Grant number 5F32AT001144-02 from the National Center for Complementary and Alternative Medicine and the Burdette-Kunkel Award from the Walther Cancer Institute. Its contents are solely the responsibility of the authors and do not necessarily represent the official views of the National Center for Complementary and Alternative Medicine, National Institutes of Health.

P2.6.59

Navigating Cancer Treatment A Patient-Centered Approach

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BACKGROUND: A cancer diagnosis is experienced as a life-threatening event. However, although cancer is the second leading cause of death in the United States after cardiovascular disease, it is no longer a death sentence but rather a chronic illness for many cancer patients. Research shows 'tangible support' for patients is critical. Social work interventions at a New York State community hospital have been designed with that focus. **METHOD:** After analysis of recent empirical research and detailed interviews with cancer survivors, a presentation was developed for social workers to sensitize staff, especially related to initial interactions with newly diagnosed cancer patients. The format was intentionally open-ended to encourage sharing and candid discussion. Subsequently the same presentation was shown to newly diagnosed patients, followed by open-ended group discussion. Social work staff then adjusted their approach to newly diagnosed patients, focusing specifically on practical needs/supports and then sought feedback on outcomes. **RESULTS:** Staff sensitivity for patients' existential life situation significantly increased through the viewing of the patient-centered perspective on cancer. A model was developed for clinical interventions with cancer patients. 'Tangible support' acquired new significance when viewed as an anchor and grounding for patients' coping capacity.

CONCLUSIONS: Factors defined by patients in this hospital (and corroborated in other studies) that are important in coping with a new cancer diagnosis include: 1) building a network of family, peer and professional support; 2) learning how to access information on options, disease process and treatment alternatives; 3) defining effective coping mechanisms; 4) understanding the importance of reaching out for help when facing emotional uncertainty. **RESEARCH IMPLICATIONS:** Front line clinical staff benefit from opportunities to step back from day to day tasks in a non-judgmental, patient-centered learning space. Staff also profits from applying empirical research to practice—and testing out the impact of defined interventions. The knowledge base of the profession is thus expanded. More targeted studies are recommended. **CLINICAL IMPLICATIONS:** Remaining sensitive to the needs of newly diagnosed cancer patients requires vigilance and a consistent willingness to listen to what patients are saying and be responsive to their 'tangible needs' for support. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.60

Group Music Therapy for Women with Breast Cancer: A Mixed Methods Study

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BACKGROUND: Psychosocial interventions have become an integral part of healthcare treatment in order to address cancer patients' emotional states and quality of life. Music therapy has gained significant recognition as a psychosocial therapeutic intervention in cancer care. This paper will describe a six week music therapy program designed to support the needs of women living with breast cancer. Case vignettes are used to illustrate the potential of music therapy in this area. **METHOD:** This mixed methods design involves collecting quantitative data on anxiety, depression, coping and quality of life, pre and post test, and qualitative focus groups designed to understand the patient's experience of music therapy, which is conducted on completion of the interventions. Session data such as musical interactions, patient conversations, and observable behaviour is gathered alongside psychometric measures. The study is designed for twenty four patients, who receive weekly group music therapy sessions over 6 weeks lasting for 1 hour. Data will be presented on at least eight participants who have completed the program. **RESULTS:** Data on at least eight participants and results on early analysis will be presented. Quantitative data on anxiety, depression, coping and quality of life indicates non significant results at this point in the study.

Qualitative data analysis indicates the following emergent themes: isolation, the impact of cancer on identity, the impact of cancer on relationships, the effects of treatment, living and coping with uncertainty, and life after treatment. **CONCLUSIONS:** Preliminary results indicate that music therapy for women with breast cancer addresses and reduces feelings of isolation, it offers psychological and peer support, and practical techniques for coping with the effects of treatment. These results were gained from the qualitative interviews. Preliminary quantitative data analysis indicates non-significant results, however it must be emphasized that the study is mid-way through data collection. **RESEARCH IMPLICATIONS:** The literature suggests women with early breast cancer women have higher needs, greater anxiety, and are more likely to comply with a group therapy program than women with advanced breast cancer. However this author has found these findings do not translate to smaller rural areas. This paper will also present the realities of conducting real world research in smaller rural areas. **CLINICAL IMPLICATIONS:** The literature suggests that the impact of music therapy on nausea, vomiting, anxiety, depression, coping, and quality of life is positive, and the current study aims to enhance knowledge through a mixed design approach, in which both quantitative and qualitative measures can be collected and compared. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.61

Locked Up—A Comparative Analysis of Therapeutic Motivation

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BACKGROUND: The client's attitudes and motivations drive forward or hold back the psychotherapeutic process. Convicts participating in individual and group thematic drug abuse therapy on the one hand and cancer patients on the other seem like two groups who have little in common. Therapeutic experience shows that these two groups represent poles apart in therapeutic motivation and attitudes towards the therapist. How does it appear in the therapeutic process and how does it affect its outcome? **METHOD:** We treated convicts participating in a so-called alternative drug therapy in prison once a week. Simultaneously, we had cancer patients come to psychotherapy to the psycho-oncology service of our hospice unit. Both groups were treated in both individual and group settings. We observed and explored significant similarities (being 'locked up' either from the out- or the inside) and vast differences in the initial position, the readiness to ask for help, the cooperation and the therapeutic changes in the members of the two groups. **RESULTS:** Despite the

similarities in their initial position, we found basic differences in all the examined variables. The vast dissimilarities in the personality factors, attitudes, socio-economic factors, and motivation result in a variety of differences in the topics, the emotional atmosphere, and the difficulties of therapy. While the main motivation for participation in the convict group is restricted to avoiding a particular punishment (additional time in prison if they do not cooperate), members of the cancer group generally exhibit much higher level of motivation and cooperation and at the same time show a wider variety in their motivational background. Therapeutic efficiency, however, remains questionable in both groups, albeit for quite different reasons. **CONCLUSIONS:** Initial socio-economic situation, personality factors, basic attitudes and motivation have a decisive effect on the future therapeutic process. Therapeutic goals, emotional atmosphere, cooperation of the clients are the main factors that determine the efficacy of the intervention. Diminished and exaggerated motivation, albeit leading to different trajectories, may both be problematic in the therapeutic process. **RESEARCH IMPLICATIONS:** A major question of future research is the therapeutic motivation of clients suffering from different emotional and mental disorders. What is the right therapeutic approach to each special disorder? **CLINICAL IMPLICATIONS:** Drug using convicts and cancer patients truly represent two extreme cases of attitudes towards therapy and motivation. We need to better examine motivational issues at the beginning and during the entire course of the therapeutic process. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.62

Special Aspects of Psychooncological Treatment in Orthopaedic Patients with Bone Tumour

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BACKGROUND: Depending on the kind of cancer around 25% of patients suffer from psychological problems like a manifest depression or an anxiety disorder. This does not only affect the patient's QOL but also increases the mortality rate. **METHOD:** In orthopaedic patients psychological difficulties can arise for two different reasons: 1. cancer related questions like surviving, suffering, and living healthy, 2. questions related to the challenge after orthopaedic surgery affecting people's physical functioning and thus their range of movement as well as their body image. Whenever surgical treatment is necessary patients start questioning their personal independency as well as mobility and their activities of daily life. **RESULTS:** The underlying problem of these functional related aspects of cancer but also of the

question of the chance of surviving or of finding a healthy behaviour and life style seems to be that people think and act future orientated. Whenever cancer is related to fear, pain, suffering, loss of control and a painful death, thoughts about the future can take away any motivation to participate actively in medical and rehabilitative treatments. **CONCLUSIONS:** The connection between thoughts, emotions and behaviour is in general the same: memories that are connected with negative emotion are avoided while people are seeking memories with positive emotions. Thus behaviour providing positive emotions will be remembered. Positive emotions are linked to motivational aspects. The special aspects of psychooncological treatment in orthopaedic patients are 1. that whenever new movement schemata have to be developed the psychological treatment can focus on technical aspects of physical functioning, thus separating cognitive and emotional aspects that are connected with cancer. **RESEARCH IMPLICATIONS:** 2. Technical aspects can also be applied for questions related to cancer, e.g. what can influence the cell-growth. 3. any successful movement after surgery goes with positive emotions that are additionally linked to the medical team that discussed this with the patient. **CLINICAL IMPLICATIONS:** Theoretically this should increase the patient's compliance. These aspects seem to be worth pointing out due to the fact that they allow easily that difficulties can be discussed on a cognitive level without being disturbed by emotions like anxiety or depression. Until now no psychooncological guidelines for the field of orthopaedic surgery exist therefore studies focusing psychological treatment in patients with a bone tumour are needed. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.63

General Oncology Hospital of 'Agi Anargiri' Athens, Greece. The 'Odyssey' of the Hospital Staff After the Catastrophic Earthquake of 1999

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BACKGROUND: In the 7th of September 1999 an earthquake occurred in Athens, leading to a massive disaster which caused the evacuation of Agii Anargiri Oncology Hospital. The patients were transferred to other hospitals. 'Agi Anargiri' was constructed from the beginning and its departments were transferred to the new hospital again in July, 2008. This study aims to describe the emotions the hospital staff experienced from the moment the earthquake took place till now. **METHOD:** A qualitative questionnaire was

handed out to the hospital staff in order to explore their feelings about this experience. The questionnaire included open questions about their emotions during the earthquake, the evacuation of the hospital, the previous nine years in other hospitals and recently, at their return to the new hospital. **RESULTS:** Most of them faced great difficulty in answering the questions and described several symptoms after their experience such as flashbacks, difficulties in remembering, high levels of stress, fatigue and anger. The symptoms above still obstruct their everyday work in the hospital. **CONCLUSIONS:** This study was conducted in very difficult situations. It is very important to mention that these pieces of research are rare so there may be very useful in the future as physical catastrophes are very often lately. **RESEARCH IMPLICATIONS:** Furthermore, interventions in disasters may lead to further research and cooperation between mental health professionals of several countries in case of emergency. **CLINICAL IMPLICATIONS:** The negative aspects that were mentioned above in the hospital staff, may help mental health professionals to understand several facts of the consequences (both clinical and social) that massive disasters bring in mental health so that they can educate themselves in order to recognise the range of emotions and to be able to identify when professional help is indicated. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.65

Psychodrama Groups with Depressed Cancer Patients

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BACKGROUND: Cancer patients very often experience psychiatric disorders such as depression, anxiety and/or adjustment disorder. Expressing feelings and needs are not always easy for these groups. Sharing experiences has an important healing impact on patients' psychiatric illnesses. Psychodrama group therapy is a valuable choice with its fast and long-lasting impact on increasing awareness and facilitating expression of feelings. **METHOD:** Cancer patients who had admitted Psychiatry Department of Ankara Oncology Research and Training Hospital and diagnosed as depression with or without anxiety were included in different psychodrama groups since three years. Breast cancer patients and testis cancer patients were included. **RESULTS:** Most of the patients who were interested in those group sessions were women with breast cancer. The low drop out rates were remarkable. The patients' benefit from the group sessions were evaluated by both clinical and pre/post tests. Being informed about illness was

one of the most important needs of patients. **CONCLUSIONS:** The psychodrama group therapy is not a widely used one for cancer patients. This presentation underlines its priorities and power and weak aspects. **RESEARCH IMPLICATIONS:** Group therapies should be taken as a part of routine therapy procedure for depressed cancer patients and research projects about this should be motivated. **CLINICAL IMPLICATIONS:** Psychodrama group therapy can be programmed as an important part of psychiatric treatment of cancer patients along with the medication, family support and individual interviews. **ACKNOWLEDGEMENT OF FUNDING:** None.

P2.6.66

Perceived Social Support in Cancer Patients: When and How?

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BACKGROUND: The social network of the cancer patient is as important as the treatment procedure in coping with the illness. When social network is the basic means to reach the social support, the perceived social support and the way of giving support are the main issues to be worked on. This presentation will include the types and effects of social support and the results of each. **METHOD:** The research results about perceived social support of cancer patients in Turkey were reviewed and compared with the practical and international data on the basis of transcultural aspects. **RESULTS:** The social support is an important issue to protect/regain mental health in cancer patients. However, the level of perceived social support might be different from the known support ways and individual evaluations for the patients should be made. Although the tight family relations in Turkish families seem as source of strong social support, this might be bothering the patient if not on the right dose and right time. The timing and the type of support needed may differ for each patient. **CONCLUSIONS:** When working on the social support of the patients, the needs should be evaluated personally and reviewed periodically according to the changing circumstances such as; illness stage, family interactions, etc. Cultural issues and illness perception of the patient should be taken into account for a whole support. **RESEARCH IMPLICATIONS:** The perceived social support should be searched in different family relations and social networks to be able to find some common specific points. **CLINICAL IMPLICATIONS:** The psychosocial treatment programmes should include a deep inspection of patients perceived social support and the present sources for this. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.1

HPV Vaccination. The Strategy of a Communication Campaign by the Italian League Against Cancer in the Province of Alessandria (Italy)

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BACKGROUND: In Italy, national HPV vaccination for 12–13-year-old girls has recently begun. The inevitable enthusiasm aroused by the availability of a safe and effective tool for primary cancer prevention, such as the novel HPV vaccine may prove to be excessive, if not preceded and accompanied by an effective communicative campaign providing correct, complete, homogeneous and intelligible information able to help people make a free, well-informed choice. **METHOD:** A series of basic issues were faced during the planning of the campaign. Firstly, the many different and sometimes conflicting viewpoints concerning the vaccine variously held by health professionals, the media (which had begun to communicate long before any official campaign had even been set up), and ordinary people such as parents and teachers, who had for some time started to form their own ideas on the vaccine and cervical cancer risk); secondly, the chance to boost the promotion of the long-standing cervical screening programme (Pap test) and finally, concurrent education concerning the prevention of sexually transmitted diseases. **RESULTS:** Two distinct booklets have been prepared, the first for girls and boys aged 11–14 and the second for their parents and teachers. A team consisting of a gynaecologist, a psychologist and a communications expert contributed to the drawing up of the text. Not only the risks and benefits of the vaccination, but also other essential features of cervical cancer prevention such as screening programmes, have been emphasized in order to improve basic individual knowledge. In addition, the authors have tried to favour informed acceptance of the vaccine by stimulating awareness and activating the decision-making processes which affect attitudes and behaviour. **CONCLUSIONS:** The integration of the scientific competence related to the contents of the campaign with the counselling and relational skills of health professionals has assured effective made-to-measure communicative interventions able to 1. respond to information needs without an overload of scientific data which could confuse an audience with scanty or heterogeneous previous knowledge, 2. welcome and listen to individual preoccupations and 3. avoid any prejudicial attitude towards a prevailing social trait which could weaken the penetration of the message. **RESEARCH IMPLICATIONS:** Communication

strategies aimed at promoting conscious adhesion based on clear information need to be developed in any vaccination programme. The message should indicate any limits and uncertainties, but should at the same time listen to the people involved, since continuous improvement can only be obtained thanks to their participation. The strategic choice is to provide people with the knowledge required to make responsible choices and actively participate in prevention. **CLINICAL IMPLICATIONS:** The Italian League against Cancer has always been a privileged ally of the Italian National Health System and the Italian Ministry of Health, and also in this case the League has confirmed its great advisory and informative capacities, in particular with respect to the young, elements essential to the achievement of another great success in the fight against cancer. **ACKNOWLEDGEMENT OF FUNDING:** The campaign was in part funded by the Amministrazione Provinciale di Alessandria and the Centro Servizi Volontariato di Alessandria.

P3.1.2

Evaluation Criteria for the Telephone Cancer Information Service in Japan

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BACKGROUND: Although cancer is the leading cause of deaths in Japan, cancer information available to the public is still insufficient. A telephone service providing cancer information was recently initiated; however, the quality of this service has not yet been investigated. Therefore, the aim of this study was to establish the evaluation criteria for the telephone cancer information service in Japan. **METHOD:** The setting of this study was the Cancer Telephone Information Service started on July 2008 in Japan. A qualitative approach was employed to determine the criteria to evaluate the information service quality. Fifteen calls were purposively chosen, recorded and then were transcribed. Seven researchers reviewed the audio data and transcription, and identified criteria independently. The researchers repeatedly discussed and developed the final criteria. **RESULTS:** Through the process we identified three main categories to evaluate information providers: (1) following the policy of the center, (2) providing accurate information, and (3) using effective communication skills. We also included three main categories focusing on reactions of callers: (1) expressed that the provider had understood the caller's question and feelings, (2) expressed that the caller had received appropriate information, and (3) expressed that the caller had been satisfied with the consultation. **CONCLUSIONS:** The result

implied that a process needs to be evaluated from both providers and receivers of the services. This study particularly suggests that providers should be equipped by a standpoint of the organization's policy, accuracy of provided information, and sufficient communication skills. **RESEARCH IMPLICATIONS:** This study revealed criteria to identify quality of a process of providing cancer telephone information services by qualitatively assessing real consultation processes. This should make the proposed criteria practical and applicable to the reality. However, further refinements and assessments of reliability and validity for the criteria are necessary. **CLINICAL IMPLICATIONS:** The criteria that this study proposed could be used to assess the quality of the consultation and to educate the information providers for quality assurance. Building and properly utilizing such criteria will improve quality of services for providing cancer information and support as a whole and contribute to building up the national system for cancer information and support services. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded in part by a Grant from Health and Labour Sciences Research Grants, the Third Term Comprehensive Control Research for Cancer.

P3.1.3

Media and Cancer

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BACKGROUND: In common knowledge, cancer is synonymous with death and suffering. The Hungarian population is reluctant to have medical screenings and check-ups and the fear of treatments is very strong. Positive examples, like cancer survivors, on the other hand, are much less known. The purpose of this presentation is to show the media as a tool for shaping common knowledge on the issues of cancer, survival, suffering and the myths around treatment, hospice movement. **METHOD:** The two leading media groups in Hungary organise cancer-related programs on a regular basis. The Hungarian Broadcast interviews survivors, family members as well as professionals in an attempt to dispel fears connected to the illness and the treatment. It also monitors cancer-related movements like the Breast Cancer Pink Ribbon Movement or events like Fields of Hope. The best-selling magazine *Nők Lapja* (Women's Magazine) has launched a series to emphasize the importance of early diagnosis and screening. It presents positive examples, recovered patients who share their own fears and tell us about the help they received. **RESULTS:** Radio interviews, and other colorful radio programs has drawn the attention

on the importance of early detection. The call on help line and request for psychosocial support increased. The strong media commitment to the Breast Cancer Pink Ribbon helped extremely lot to face breast cancer. Broadcast Programs on Fields of Hope opened a new way of communication on dignity on life and death. Number of participants—cities increased from 2 to 9, schools from 12 to 56. **CONCLUSIONS:** Media plays an essential part in shaping common knowledge on cancer. It can help mitigate the taboo of cancer, real facts may take the place of unrealistic fears. It is a tool for highlighting prevention, early diagnosis as well as the possibilities of curative and palliative treatment and hospice care. **RESEARCH IMPLICATIONS:** The media as a tool for shaping common knowledge on cancer and its treatment is a scarcely explored subject. However, it seems more than likely that media does have an important impact on the willingness to have screenings and the lay decisions made on treatment issues. More accurate research may contribute to the better exploitation of the potential of media resources. **CLINICAL IMPLICATIONS:** The majority of the population is aware of the significance of the early diagnosis and treatment of cancer, however, the participation on screenings is remarkably low. This may be due to irrational fears. Publicity and the featuring of positive examples contribute vastly to the alleviation of these fears. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.4

Psychological Distress and Quality of Diagnosis Disclosure in the Experience of Breast Cancer Patients

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BACKGROUND: The physician-patient-communication is object of research of a multiplicity of studies, in particular with patients with cancer. The diagnosis disclosure constitutes especially high requirements to the therapists as well as to the patients. Normally it is equalized with the delivery of bad news and therefore represents an incriminating situation. With the course of the diagnosis itself, many patients are unsatisfied. In the present work the psychological distress of patients and the experienced quality of notice disclosure are analyzed. **METHOD:** A consecutive sample of inpatient treated breast cancer patients after the initial diagnosis ($N = 288$, average age of 57 years, range 26–86 years, averaged period since diagnosis: $M = 1$ month, $SD = 1,82$; range <1 month–22 months) out of two inpatient units were questioned in written form at the earliest

10 days after the diagnosis disclosure (the data ascertainment will be completed in April 2009 so that the sample will increase). The questionnaire contains next to questions about sociodemographical and disease oriented criteria also items about psychological distress, which are collected by means of the HADS, PA-F-12-KF and distress thermometer. Furthermore experienced quality of diagnosis disclosure (How appropriate was the diagnosis disclosure experienced? Which emotional reactions showed the patient, which profession delivered the diagnosis?) as well as current information requirements and current information needs are elevated. **RESULTS:** The distinct aspects of the experienced quality of diagnosis disclosure will be evaluated descriptively. In addition by means of the regression-analytical method it will be verified, if differences in the experience of diagnosis through certain variables can be predicted (age, educational background, degree of psychological distress, marital status). **CONCLUSIONS:** On the basis of this retrospective cross-sectional survey, statements about psychological distress of breast cancer patients after the initial diagnosis at the beginning of therapy, the experienced quality of diagnosis disclosure, as well as possible correlations can be made. In view of the cross-sectional design causal conclusions cannot be reached. **RESEARCH IMPLICATIONS:** Will be discussed subjected to the detected results. **CLINICAL IMPLICATIONS:** Will be discussed subjected to the detected results. **ACKNOWLEDGEMENT OF FUNDING:** Funded by the Federal Ministry of Education and Research (BMBF).

P3.1.5

Optimizing Team Members Communication Skills in Radiation Therapy: Content and Feasibility of a Belgian Interuniversity Curriculum

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BACKGROUND: Radiation therapy is usually administered by numerous team members from various disciplines. A training curriculum aimed at improving team members' communication skills (patients and relatives oriented skills and team oriented skills) is therefore needed. **METHOD:** The 38-h training curriculum includes two modules. The objective of the first module (16h) is to improve team members' abilities to communicate

with patients and their relatives. Small group sessions were organized for professionals of the same discipline (role-playing exercises). The objective of the second module (22h) is to improve team members' abilities to communicate with other team members: for example, to communicate with the patients about team members' roles and functions and to communicate together when the patient is present, the objective being to avoid lack or redundancy in support and information given to patients and their relatives. Small group sessions were organized for professionals of all disciplines (role-playing exercises). **RESULTS:** Four departments of radiation therapy accepted to participate in the training. Forty-two percent of team members of these four departments registered to the training, the registered rate ranging from 19% to 75%. Barriers to participation included time limitations relating to the training, concerns about participating to role-playing sessions and team dynamic. **CONCLUSIONS:** These data highlight not only the feasibility of this curriculum but also the diversity of participation rates. **RESEARCH IMPLICATIONS:** The efficacy of interventions designed to improve team work needs to be tested. **CLINICAL IMPLICATIONS:** Communication skills' trainers should be aware that team members of radiation therapy departments are motivated to improve their abilities to communicate with patients and colleagues. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

P3.1.6

Communication Skills Training: A Study of Residents' Psychological and Physiological Variables Which Facilitate or Inhibit the Learning of Assessment Skills

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BACKGROUND: Assessment skills have been recognized as core skills in breaking bad news. No studies have yet explored residents' psychological and physiological variables which facilitate or inhibit the learning of assessment skills. This study aimed to identify residents' psychological characteristics and physiological arousal, which may predict the learning of assessment skills in the context of a communication skills training.

METHOD: In this randomized controlled study, the learning of assessment skills has been measured in a breaking bad news simulated consultation performed before and after a communication skills training. This simulated consultation has been recorded and transcribed. Assessment skills were tagged with a computer assisted program (LaComm). Residents' psychological characteristics have been measured before communication skills training. Residents' physiological arousal (heart rate) was monitored continuously during a 20 minutes simulated breaking bad news consultation performed before training. Linear regression has been conducted to assess the associations between residents' psychological characteristics and physiological arousal at baseline and the learning of assessment skills. **RESULTS:** Sixty-one residents were included in the study. Psychological and physiological variables at baseline explained 43% of the variance in residents' learning of assessment skills. Results showed negative associations between residents' learning of assessment skills and emotional-focused coping (Beta = $-.287$, $p = .01$) and self-efficacy beliefs as regard detection of patient distress (Beta = $-.431$, $p < .001$). Results showed positive associations between residents' learning of assessment skills and support-focused coping (Beta = $.360$, $p < .001$) and physiological arousal (Beta = $.250$, $p < .05$). **CONCLUSIONS:** Some residents' psychological and physiological variables directly related to breaking bad news-task are predictors of learning of assessment skills in the context of communication skills training. **RESEARCH IMPLICATIONS:** Psychological factors and physiological arousal should be included in models designed to understand the learning process of complex communication skills such as breaking bad news. **CLINICAL IMPLICATIONS:** Trainees and trainers should be aware that the learning of complex skills is heterogeneous and is related to trainees' self-efficacy beliefs, coping skills and physiological arousal directly related to the task. This heterogeneity indicates the need to implement more personalized training techniques. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

P3.1.7

Impact of a Communication Skills Training Program on Residents' Bad News Disclosure in a Simulated Consultation: A Randomized Study

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BACKGROUND: Breaking bad news is a stressful and difficult task. Residents often feel uncomfortable especially when they disclose bad news. This study aims to assess the impact of a 40-hour communication skills training program on the way residents disclose bad news. **METHOD:** Residents were randomly assigned to the training program or to a waiting list. The way residents disclosed bad news was assessed during a simulated patient consultation. Simulated consultation was audiotaped and transcribed at baseline and after training for the training group and 8 months after baseline for the waiting list group. To study the way bad news was disclosed, we extracted from the interview the precise utterances containing the diagnosis disclosure. A content analysis of each utterance was performed. Moreover, the number of words of each utterance was calculated. Group-by-time effects were tested with Generalized Estimating Equations and Repeated Measures Analysis of Variance (MANOVA). **RESULTS:** Ninety-eight residents were included. A group-by-time effect (Generalised Estimating Equation) was found for the type of disclosure of the diagnosis: the number of precise diagnosis increased for trained (33 before and 41 after training) compared to untrained residents (33 before and 31 after training) (RR = 3.43; $p = 0.02$). A group-by-time effect (MANOVA; $p = 0.009$) was also found for the number of words used to disclose the diagnosis: the length of the bad news disclosure was shorter for trained (95 words before and 51 words after training) compared to untrained residents (86 words before and 79 after training). **CONCLUSIONS:** This study shows that a communication skills training program is associated with a more precise and concise bad news disclosure. **RESEARCH IMPLICATIONS:** Future research should focus on optimising the teaching of bad news disclosure. **CLINICAL IMPLICATIONS:** Trainees and trainers should be aware that bad news disclosure is a difficult moment that requires particular attention. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium, by the C.A.M., training and research group (Brussels—Belgium).

P3.1.8

How Well to Cancer Clinicians Detect Perceived Distress? Diagnoses of Clinical Nurse Specialists vs the Distress Thermometer

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BACKGROUND: Several studies have found that concordance between patient and staff evaluations of psychological distress was poor (0.21) [Cancer 1988;57:109–112] and Lampic et al (1996) found agreement on kappa was 0.07 for depression and 0.23 for anxiety [Cancer Nurs 1996;19:419–428]. **METHOD:** As part of a pilot screening implementation programme in Leicester (UK) we asked clinicians to rate their clinical impression along with patients score on the Distress Thermometer (DT). 58% scored above a cut-off of 4 and 70.2% above a cut-off of 3. We received 84 ratings (includes 7 with missing/incomplete data). We calculated pooled sensitivity, specificity, PPV, NPV, and fraction correction (TP+TN/all cases). **RESULTS:** Using a cut-off of 3v4 on the DT, CNS identified 54.5% of the distressed cases and correctly excluded 86.2% of low scorers. The PPV was 88% and NPV was 50% (Likelihood Ratio 3.9+, 0.52–). The fraction correct was 65.5% and Kappa 0.348 (Table 1). Using a cut-off of 4v5 on the DT, CNS identified 55.6% of the distressed cases but correctly excluded 76.9% of low scorers. The PPV was 73.5% and NPV was 60.0% (Likelihood Ratio 2.4+, 0.57–). The fraction correct was 65.6% and Kappa 0.319 (Table 2). **CONCLUSIONS:** CNS have difficulty detecting perceived distress but have better sensitivity than specificity. In general CNS generate more false negatives than false positives when attempting to detect distress. In line with expectation rule-in accuracy is better with mild cases (88.2% vs 73.5%). Clinicians are unsure in about a quarter of all decisions. **RESEARCH IMPLICATIONS:** Previously Trask *et al.* [Bone Marrow Transplantation 2002;29(11): 917–925] found that staff identified 154/25 (60%) of high DT scorers and excluded 21/25 (84%) of low scorers (kappa 0.44). Our results suggest better sensitivity but lower specificity and a lower Kappa of 0.319. It is unclear if there are particularly difficulties with the identification of distress vs depression vs anxiety. **CLINICAL IMPLICATIONS:** Both false positive errors (misidentifications) and false negatives (missed cases) are important and could potentially be reduced by repeat assessments or by the use of standardized instruments. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.9

Anxiety and Abilities in Communications During the Cancer Diagnosis Transmission

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BACKGROUND: To know the influence of communication abilities on physicians at the time of

giving cancer's diagnosis. **METHOD:** This study is both exploratory and descriptive; the size sample is 30 physicians taken out of a non-stochastic and accidental sample, and the tool used was a personal identification to choose data that can influence in the research an inventory of trait and state-anxiety was used to measure such scales of self-evaluation (IDARE, in Spanish). In addition, an interview was done to obtain information regarding communicational abilities to give cancer diagnosis. We are replicating this study in other cities in our country and in Montevideo, Uruguay for a statistical comparison. **RESULTS:** To know the cancer diagnosis gives place to very high state of anxiety, disregarding other variables which might influence. Another aspect to be taken into account is that a large percentage of doctors scarcely use their communication abilities during the cancer diagnosis transmission. **CONCLUSIONS:** The state of anxiety is very high in most of the inventories, and it can be evaluated that physicians feel that moment as a threat. **RESEARCH IMPLICATIONS:** It will be relevant that a physician know which are the communication abilities that strengthen the doctor-patient relationship, creating an environment of greater confidence and security. This also allows a better relaxed situation in that time of tension, giving to the patient the chance of listening with much more care, understanding what the physician wants to tell him. **CLINICAL IMPLICATIONS:** The illness diagnosis is a basic communicational time in accepting it; the acceptance on behalf of the patient, and the strengthening of an adequate doctor-patient relationship. Starting from the assumption that anxiety in physicians decreases in implementing communication abilities while giving cancer's diagnosis. **ACKNOWLEDGEMENT OF FUNDING:** Inventory of trait and state-anxiety was used to measure such scales of self-evaluation (IDARE, in Spanish).

P3.1.10

Development and Evaluation of a Checklist Assessing Communication Skills of Oncologists

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BACKGROUND: A special instrument was needed to evaluate communication skills of oncologists. After a profound literature review we decided to develop a new instrument, based on studies, statements from experts and the SPIKES-model (Baile *et al.*, 2000). The checklist we developed assesses videotaped consultations of physician-patient consultations in different settings (e.g. talking about the transition from curative cancer treatment to palliative

care or talking about clinical trails and therapy options). **METHOD:** The checklist has two parts. One part evaluates communication techniques used by the physician (e.g. 'Did the doctor use an adequate way to elicit the patient's understanding?'). The other part is specialised on the content of the consultation (e.g. 'Did the physician explain the transition to palliative care?'). Two raters were trained to use the checklist. Video recordings of consultations were assessed by raters. The Intra-Class-Correlation (ICC) was used to calculate the agreement between raters. The results were intensively discussed in our research group. Afterwards, a second version of the checklist was developed and evaluated. **RESULTS:** For the first time the checklist was used to evaluate consultations concerning the transition from curative cancer treatment to palliative care. First statistical analyses showed that the ICC range from .5 to .9. Some items had to be modified for future applications. After modification and further training, the instrument was used to evaluate other consultations. Second statistical analyses showed a satisfying ICC of .8 regarding the whole checklist. The content part for itself has an ICC of .9 and the communication technique part has an ICC of .6. **CONCLUSIONS:** The evaluation of the checklist shows that the checklist has a satisfying Interrater Reliability (ICC .6-.9). The checklist is easy to implement. It took about twice the time of the duration of the consultation to assess one video. **RESEARCH IMPLICATIONS:** The checklist is developed out of a profound literature review and shows the up to date standard of communication skills in oncology. Both parts of the checklist may be adapted to other settings. Researchers may profit from our method for evaluation of communicational skills. They may also profit from our work regarding how to train raters using the checklist. **CLINICAL IMPLICATIONS:** The checklist is a brilliant source of feedback for the clinician. With the checklist the clinician may assess his communication skills in different settings. The way in which the clinician talks with patients may be reflected and modified. **ACKNOWLEDGEMENT OF FUNDING:** The study was funded in part by a grant from the Deutsche Krebshilfe e.V. (German cancer aid) no. 107480.

P3.1.11

Trust in Nurses: Determinants and Patient-Reported Outcomes in Cancer Care

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BACKGROUND: Socio-emotional behavior of nurses seem to play an important role in meeting the cognitive and affective needs of patients with cancer. As there is currently limited empirical evidence about patient-perceived trust in nurses (TIN) in cancer care, its effectiveness for cancer patients (CP) as well as determinants of TIN, the purpose of this cross-sectional study was to explore the influence of TIN on patient-reported outcomes and to analyze patient-specific determinants of TIN. **METHOD:** A postal survey was administered to 710 CP who had been inpatients in at the University Hospital Cologne (response rate 49.5%). Trust in nurses was assessed with 5 items of the 'Trust in nurses' (TRUE) measure. Patient-specific determinants were 'Social support in private life' (German F-SozU scale), 'Tendency to excuse inadequate behaviour of hospital staff' (from Cologne Patient Questionnaire, CPQ), and 'Reduced patient-demands in hospital' (from CPQ). Patient-reported long-term outcomes were measured using the 'Major Depression Inventory' (MDI) from the WHO and the EORTC-Quality of Life (QoL) Core Questionnaire. Hypotheses were tested by structural equation modeling with 'AMOS 7.0' software. **RESULTS:** CP trust in nurses had: (a) a moderate indirect effect on their 'physical QoL' and 'socio-emotional-cognitive QoL' via 'information about health promotion', and (b) a moderate effect on CP 'depression', which was partially mediated by 'information about health promotion'. The determinant with the greatest importance was 'reduced patient-demands in hospital': it had a strong negative influence on the perception of TIN, indirectly influencing CP 'depression' and 'socio-emotional-cognitive QoL'. **CONCLUSIONS:** TIN seems to be an important pre-requisite for information giving about 'health promotion' in cancer patients. By this pathway TIN has a preventive effect on depression and improving QoL. Conversely, 'reduced patient-demands in hospital' negatively influences these relationships. **RESEARCH IMPLICATIONS:** Among replication of our results, future research should also investigate nurse-specific determinants of TIN such as work stress, job dissatisfaction, and burnout. Particularly important seems to examine nurses' blocking behaviors, because they are known as either hindering or stimulating CP in expressing his or her concerns and information needs. Moreover, it would be also interesting to conduct an in-depth research exploring why CP reduce their demands regarding nurses' socio-emotional behavior. **CLINICAL IMPLICATIONS:** This research findings suggest that a trustful relationship with nurses may be required to enhance information-giving regarding health promotion and patient-reported outcomes in cancer patients. Furthermore, results also show that trusty nurses may be important intermediaries

between CP and psycho-oncological institutions regarding information giving about health promotion. Thus, TIN, as an outcome-relevant professional competence, needs to be assessed and developed more intensively in nurse students' and nurses' education. **ACKNOWLEDGEMENT OF FUNDING:** We are grateful to the Else Kröner-Fresenius Foundation for providing Dr. Melanie Neumann with moral and financial support during the course of this study (grant number P43/05//A33/05/F0).

P3.1.12

Patients from Birmingham-UK Use the Medical Interview Satisfaction Scale (MISS-21) to Feedback on Their Oncology Consultations, with and Without the Distress Thermometer

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BACKGROUND: Feedback on cancer care is key for evidence based and patient centered practice. UK oncologists are required to gather patient feedback on their performance. Patient feedback is used to improve medical care and is a significant predictor of key health outcomes. The Medical Interview Satisfaction Scale (MISS-21) gives clear, validated and normed feedback on clinical consultations. While the Distress Thermometer (DT) is now widely used, there is little evidence on its impact on doctor-patient communication. **METHOD:** Design: Pre and post, between subjects. Sample selection by convenience: 20 consecutive controls (no DT) followed by 20 consecutive intervention participants (with DT). Age range: 16 to 70. Gender: 51 males, 69 females. Procedure: 120 patients feedback through the MISS-21 on consultations with three oncologists. -60 feedback: 'treatment as usual'. -60 feedback: having completed and handed over the Distress Thermometer (DT) before the consultation. **RESULTS:** 1. Effect from the DT on MISS-21 The MISS-21 has four subscales: Communication Comfort, Rapport, Compliance Intent and Distress Relief. A Two-Way ANOVA showed significant improvement across all three clinicians in all four subscales with DT screening. 2. One-way ANOVA showed greater effect of DT on Communication Comfort and Rapport. 3. Patient Qualitative feedback. Impact of DT on Consultation: 33.3% 'no'; and 66.7% 'yes': 'It helps to open further in-depth discussion, increasing doctor-patient communication' (30%). **CONCLUSIONS:** The MISS-21 is a quick and sensitive measure of patient feedback on cancer consultations. The DT improves patients' satisfaction with their cancer consultation: greatest improvements in

Communication Comfort and Rapport. Oncologists report that consultations were not negatively affected: similar content and consultation duration. **RESEARCH IMPLICATIONS:** Significant improvement in each MISS-21 subscale using DT. DT may highlight additional psycho-social concerns for discussion to be addressed in consultation. Positive effect on communication skills? Post hoc show that the subscales Communication Comfort and Rapport had strongest mean change ($p < .01$). Supported by the qualitative feedback. **CLINICAL IMPLICATIONS:** Patient feedback to oncologists can improve clinical practice: the MISS-21 has proven a quick and sensitive measure, well accepted by patients and oncologists. The DT has brought immediate improvements in patient feedback on: Distress Relief (Can ease suffering, reduce unnecessary medical treatment and inappropriate referrals); Communication Comfort (Improved clinical history, improved patient outcomes); Rapport (Increased trust in clinician); Compliance Intent (Better treatment adherence, improved patient outcomes, and reduced medical expenses). **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.13

Informed Consent in Randomised Clinical Trials—Oncological Patients' Understanding About Their Trial

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BACKGROUND: Randomised clinical trials (RCT) are indispensable, especially in oncological research, however less than 5% of authorised patients attend RCT (Jenkins, Fallowfield, Solis-Trapala, Langridge, and Farewell, 2005). Ethically, informed consent (IC) demands 'that patient's understand the information provided, and be competent to reason about possible courses of action' (Brown, Butow, Moore, and Tattersall, 2004, p. 385). This requirement is not always met in practice and needs more detailed observation. **METHOD:** Cancer patients asked to participate in a randomised trial were surveyed using a semi-standardised interview which was developed by the authors. Questions about (a) understanding, (b) perceptions and (c) needs were examined. The sample contained eight patients who participated in a trial and two who declined participation. The data were evaluated on the basis of Mayring's qualitative analysis (Mayring, 2007).

RESULTS: The research results reveal that (a) patient's understanding in IC is a lot less developed than expected, especially concerning randomisation, content and procedure of RCTs. Apparently, patient's receptiveness during the IC is often influenced by hectic and unannounced conversations. Above all, health limitations due to cancer play a decisive role. (b) However, most of the patients perceive their physician as sympathetic. (c) Patients needs included a preannounced, clear and thorough IC with enough time, preferably at a point when their health would be in a stable condition. **CONCLUSIONS:** The approach of this study, considering and analysing patient's statements, fills an important empirical research gap. Three main goals have been achieved: (a) An analysis of patient's understanding of oral and written IC information as well as (b) the exploration of patient's perceptions throughout IC in clinical studies. (c) Above all, patient's needs were clarified. That way, it was possible to gain new results about objective and subjective understanding of cancer patients in ICs in a comparatively young research field. **RESEARCH IMPLICATIONS:** This study serves as a good and important basis for further research in IC communication. In future, larger and more representative samples should be chosen. Particularly, future trials should focus on the gap between ethical IC guidelines and their implementation. Some results of this study show that it might be necessary to put a stronger focus on the implementation of ethical IC guidelines. **CLINICAL IMPLICATIONS:** This study shows that the IC could be optimised further by implementing communication techniques and improving printed patient's information. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.14

Communicative Skills as a Core Professional Competency in Oncology Physicians: A Delphi Action-Research

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BACKGROUND: The most recent literature in psycho-oncology stresses more and more the role played by communication within the therapeutic relationships between an oncology patient and her physician. On the basis of the above literature review, we prepared a Delphi interview schemata we run via Internet to 3 groups of subjects: oncology physicians, oncology patients and clinical psychologists, with the aim to explore the domain of communication between physicians and patients in oncology from several points of view. **METHOD:** According to our hypothesis,

physicians, patients and psychologists underline different nuances of the communicative process between a physician and her patient. For this reason, we decided to collect data using a Delphi interview which allows subjects to exchange ideas and develop different points of view. We have contacted 10 subjects for each category and we have run two Internet Delphi sessions; on a first step, subjects gave responses without knowing the others' answers and then they were required to answer to the same questions knowing the others' answers. We adopted a mixmethod analysis, triangulating discourse and content analysis (software T-Lab). The first one aims at marking the way by which something is said; the second one, quantitative in nature, is based on word counting, word co-occurrence and multiple correspondence analysis. **RESULTS:** What is evident, on a first look to our data, is that taking the other perspectives is something difficult (the specificity analysis run via T-Lab suggests in a strong way that there are 3 different and apparently not consistent perspectives on therapeutic communication) which requires a specific training (at least for the professional categories involved, physicians and clinical psychologists). In these terms, Delphi methodology can be seen not only as a way to collect data but also as a way to start an intervention; in this sense, we may talk about an action research we have run with the purpose not only to understand better the relationship between a physician and a patient but also to develop such a relationship, with all the positive effects recent International literature suggests. **CONCLUSIONS:** In conclusion, it seems that there is a gap in the International literature on communicative skills of oncology physicians, which are assessed in abstracts terms, very often without asking patients' voice or without a specific intervention by a communication consultant or a clinical psychologist. Our research is explorative and with evident limits (think about the numbers of participants), which push us to go on and collect new data, but it seems to us that enlightens a specific need in training programmes terms for physicians and a specific help clinical psychologists may give to such a context (which, unfortunately, at least in Italy, very seldom seems prepared to receive such an help, listening to clinical psychology). **RESEARCH IMPLICATIONS:** In terms of research implications, besides evident limits of our research design we have underlined, it emerges that it is urgent to analyse the communicative process between oncology patients and physicians no more in abstract terms but rather in more empirical terms, using also observational data, whenever this would be possible. This would allow us to better comprehend what goes on between the two parties, while traditional approaches within International literature are more mono-perspective. **CLINICAL**

IMPLICATIONS: The interactions among physicians, patients and psychologists have served not only as a way to collect data but also as a real intervention with emphatic finalities. In addition, some training suggestions in terms of communicative competency for oncology physicians will be provided during the talk. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.15

The Good, the Bad and the Ugly: Social Encounters in Cancer Illness

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BACKGROUND: For most people, a life-threatening illness like cancer entails encounters with the health system, with which they may have only limited interaction previously. These encounters are nevertheless central to the quality of care after a critical illness, as the possibilities for treatment and care are defined at that time, affecting individual rehabilitation. How professionals within the health system and patients navigate this relationship is significant in the quest for a new life after cancer. **METHOD:** This paper is based on a narrative anthropological analysis of how the need for social rehabilitation is shaped and situated in interactions with significant others in the lives of cancer survivors. The empirical basis is extensive ethnographic material from 53 in-depth interviews with cancer survivors after active treatment. Participants were asked to share their stories of cancer with the researchers, emphasizing the experiences they perceived to be important. **RESULTS:** Most of the stories the participants told were of encounters with the health system: they were stories of being treated for cancer and becoming patients. Based on our narrative approach we identified the plots of three types of story-the good, the bad and the ugly, showing how they are determined by the social interaction between the patient and the health professional and how the need for rehabilitation is shaped by this encounter. The need for rehabilitation is different in the three plots, but overall it reflects a social need resulting from the social relationships and encounters of each cancer survivor. **CONCLUSIONS:** Cancer patients need for rehabilitation is constituted by social relations with close family and health professionals. This study shows how narrativity traces the experience of cancer treatment, emphasizing social encounters and the 'emplotment' of significant others and significant selves. Narrativity is thus a point of access to understanding the role of the significant self in stories of illness, treatment and rehabilitation. This study shows how social encounters with

significant others, usually the physician, are reflected and explored in these stories. The prospects of rehabilitation, we argue, are closely linked to the 'emplotment' of a personal story of suffering. Key aspects of rehabilitation thus occur through reconfiguration of self, from an object of disease to a person and agent. **RESEARCH IMPLICATIONS:** Future research in cancer rehabilitation should explore the social meanings in cancer as core issues in survivorship. **CLINICAL IMPLICATIONS:** Our study indicates that analyzing illness stories and assisting in a reconfiguration of the 'emplotment' of such stories could be useful in cancer rehabilitation, in strengthening social ties and adjustment to interactions with the medical system. We suggest that actively working to reconfigure stories of illness could be clinically relevant for successful cancer rehabilitation. **ACKNOWLEDGEMENT OF FUNDING:** The study was funded by the Danish Cancer Society (grant number: PP 07024), the TrygFoundation (grant number: K08-05), the IMK Foundation (grant number: 30206-147) and the Department for Psychosocial Cancer Research.

P3.1.16

A Randomized Controlled Trial of Cancer Risk and Health Education in Relatives of Colorectal Cancer Patients

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BACKGROUND: Having a first-degree relative (FDR) with colorectal cancer (CRC) increases an individual's risk of developing the disease. Providing FDRs with information about their risk of developing CRC, screening information, and other CRC-related health information, may increase knowledge and screening compliance as has been shown in relatives of breast cancer patients. **METHOD:** Purpose: The primary aim of this study is to test the efficacy of in-person vs. telephone or written forms of providing a risk counselling and health promotion intervention to address barriers to screening and provide accuracy around personal risk for FDRs on standardized measures of knowledge of CRC risk and health-related factors, comprehension of risk, understanding of screening recommendations and intent to adopt an appropriate screening regimen. **Methods:** A randomized controlled trial with assessments pre, 2 weeks, 2 months and 1 year post-intervention. **RESULTS:** Results: 279

relatives have been randomized, 84 to in person counselling, 88 to telephone counselling, 94 to written letter info and 107 to control arm. Ninety-eight subjects (35%) were male and 181 (65%) were female with an average age of 47 (11) years. Seventy-nine percent were married, 70% were Anglo-Saxon and 58% had a college or university degree. Data is being analysed and will be presented with pre and 1-year post intervention findings. **CONCLUSIONS:** Conclusion: This trial will provide evidence on the effectiveness of different methods of risk and health counselling for relatives of CRC patients and have implications for clinical practice in communicating risk and screening information in cancer prevention. **RESEARCH IMPLICATIONS:** This trial will provide evidence on the effectiveness of different methods of risk and health counselling for relatives of CRC patients. **CLINICAL IMPLICATIONS:** Clinicians will have evidence-based practice guidelines for the use of letter, telephone and/or in person counselling for first-degree relatives of colorectal cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** The first author holds a career scientist award from the Canadian Institutes of Health Research. 'This work was supported by the National Cancer Institute, National Institutes of Health under RFA CA-96-011 and through cooperative agreements with members of the Colon Cancer Family Registry and P.I.s. The content of this manuscript does not necessarily reflect the views or policies of the National Cancer Institute or any of the collaborating institutions or investigators in the Colon CFR.'

P3.1.17

Internet Campaign—with Famous Artists—for Dignity of Life and Death

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BACKGROUND: Common misbeliefs around the prevention and the treatment of cancer may actually shorten the time of survival. A similar problem is that only few patients and family members draw on palliative care and psycho-social support. Complex hospice care is available only at a few health care services. **METHOD:** With the participation of well-known artists, we launched a campaign. Its purpose was to draw attention to the importance of quality of life during cancer. Even after the completion of curative treatment, there is a life to live and a hope to preserve dignity. Various tv-spots, based on the personal confessions of well-known artists appeared on different websites and the YouTube. In this lecture we shall present the tv-spots, as well as the experience gathered during

the campaign. **RESULTS:** Campaigns featuring well-known people are a great help in dissolving the taboos around cancer and the acceptance of a complex treatment. Through the participation of the artists, more attention is paid to the illness which may alleviate fears concerning death and suffering. **CONCLUSIONS:** A wide-spread online campaign gives artists the opportunity to convince people that cancer is not a synonym of death, and that dignity may be preserved until the very last moment of life. This work is a valuable help in developing hospice movement, and in convincing people that there is very much we can do for those people who live the last weeks of their life. **RESEARCH IMPLICATIONS:** It is highly important to explore the social-psychological mechanism through which celebrities (actors, artists, etc.) exercise a greater power of persuasion on people than professionals (physicians, health care professionals), who have a far more extensive knowledge on the issues of cancer. **CLINICAL IMPLICATIONS:** Modern hospice and palliative care has got all the tools for the appropriate symptom control of terminally ill patients. A great number of patients is held back from these services by misbeliefs, false presumptions and fears. The participation of celebrities may help dispel these misbeliefs and accept hospice care as a way to ease their distressing symptoms in the final period of their lives. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.18

Who Should Try to Diagnose Depression in Cancer Settings? A Proof of Concept Study Comparing Multiple Assessments by Nurses and Doctors

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BACKGROUND: Clinicians have low recognition rates for depression in cancer settings but clinicians have limited time and often a low index of suspicion for mood disorders. Here the merits of single vs two vs three attempts to diagnose depression (assuming equal accuracy across each assessment) is evaluated. **METHOD:** From our related meta-analysis we found that oncologists had a sensitivity (SE) of approximately 40% and specificity (SP) of 80% and clinical nurse specialists achieved a SE of 70% and SP of 55%. Using these baseline rates, a model was developed to test the hypothesis that multiple assessments would improve recognition rates. This is built on a simple algorithmic model whereby all those suspected not to have depression have just one assessment but those suspected to have depression have 1, 2 or 3 assessments by clinicians having the same ability (or the same clinician). Taking a hypothetical example of 1000 patients with cancer of whom 200 are depressed, individuals can be seen

by oncologists or clinical nurse specialists (CNS) in any combination. **RESULTS:** 1. *Oncologists Alone:* Oncologists alone would detect 80/200 cases & 640/800 non-cases using a single assessment, an overall accuracy of 72%. However this would improve to 80% after two assessments and 81% after three (see Table 1 for proof of concept). 2. *CNS Alone:* CNS alone would detect 58%, however this would improve to 74% after two assessments with limited further benefit after three (Table 2). 3. *Oncologists then CNS:* The 72% detection of oncologists would improve to 78% following a second assessment by a CNS but with limited further benefit after three assessments (Table 3). 4. *CNS and then Oncologists:* The 58% detection by CNS would improve to 78% following a second assessment by an oncologist but with limited further benefit after three assessments (Table 4). **CONCLUSIONS:** Although cancer professionals have difficulty detecting depression accuracy can be improved simply by repeating routine clinical assessments. The accuracy of oncologists improved by 8% and CNS almost 16% by offered two rather than one assessment. The detection of oncologists single assessment improved by 6% using follow-up by CNS. The detection of CNS was improved by 20% using a follow up by oncologists. **RESEARCH IMPLICATIONS:** Future studies should examine the ability of health professionals to detect depression over multiple appointments (cumulative recognition). **CLINICAL IMPLICATIONS:** A single assessment to detect depression may be insufficient, with typically only 60–70% of true cases and non-cases detected. Two assessments offers a substantial improvement. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.19

Volunteers in a Post Communistic Country—for Dignity of Life: Fields of Hope Project in Hungary Gyöngyi Porkoláb¹, Anita Kovács¹, Zoltán Sipos², Katalin Muszbek¹

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BACKGROUND: Role of volunteers was underestimated in the communistic time in Eastern Europe. In Hungary in 1988 the psycho-oncology group created the first network of volunteers to support cancer patients. The hospice movement integrated volunteers during the last decade. A special area for volunteers is to join professionals to change public mind towards dignity of life and death. **METHOD:** In 2007 Hungarian Hospice Foundation and a group of volunteers started with a new project. The aim of the Fields of Hope program was to draw public attention on the dignity of life and to teach students on the natural process of birth-live-death. In the first year two

cities and 12 schools were chosen for the program. Daffodil bulbs were planted on the main squares of the two cities, flowers created the word HOSPICE. Teachers of the schools were trained on the psychology of loss and how to manage it. Around 2000 student participated in the program with creative works on the topic. Volunteers coordinated and actively participated in the whole process. **RESULTS:** The program is being a great success. The collaboration with city government, school directors and teacher was unexpectedly good. There were more than 50 media presentations on the topic. Due to the popularity, in 2008 and other 7 cities and 56 schools joined the program. The creative materials of the students were very remarkable. **CONCLUSIONS:** There is a demanding need for volunteers in our developing society. Movements initiated on lower levels could achieve its goals and the acknowledgement and support of the participants easier and earlier - it seems the case with the Fields of Hope program in Hungary also. **RESEARCH IMPLICATIONS:** The factors of successful and appealing voluntary work is an important question of future research. The answers to these questions may greatly contribute to the design and organization of voluntary projects. **CLINICAL IMPLICATIONS:** The efficiency of organized voluntary work is an essential issue of health promotion in the entire society. Responsible voluntary work is an integral part of humane social values, lifestyles and health promotion. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.1.20

Is It Possible to Improve Residents Breaking Bad News Skills? A Randomised Study Assessing the Efficacy of a Communication Skills Training Program

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BACKGROUND: Breaking bad news is a difficult task for residents. They should prepare patients for the delivery of bad news, deliver bad news precisely and concisely, assess understanding and support patients. This study aims to assess the efficacy of a 40-hour training program designed to teach residents the communication skills needed to break bad news. **METHOD:** Residents were randomly assigned to the training program or to the waiting list. The training program consisted of a 40-hour

communication skills training. Residents' communication skills were assessed during a simulated patient consultation. Simulated consultations were audiotaped at baseline and, after training for the training group and 8 months after baseline for the waiting list group. Each audiotaped transcript was analysed by tagging used communication skills with a computer assisted program (LaComm) and by tagging the beginning and the end of bad news delivery. Group by time effects were tested with Generalized Estimating Equations and MANOVA. **RESULTS:** Ninety-eight residents were included. Trained residents used effective communication skills more often than untrained residents: more open questions (RR = 5.79; $p < .001$) and empathy (RR = 4.50; $p = .017$) and less information (RR = 0.72; $p = .001$). Duration of the bad news delivery preparation period lasted longer for trained (1min 53s before and 3min 55s after training) compared to untrained residents (2min 7s before and 1min 46s after training) ($p < .001$). Duration of the bad news delivery period was shorter for trained (42s before and 23s after training) compared to untrained residents (36s before and 33s after training) ($p = .009$). **CONCLUSIONS:** This study shows the efficacy of a training program designed to improve residents' breaking bad new skills. **RESEARCH IMPLICATIONS:** This study shows that the way residents break bad news may be improved. **CLINICAL IMPLICATIONS:** This type of training program should therefore be included in resident curriculum. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the Fonds National de la Recherche Scientifique—Section Télévie of Belgium, by the C.A.M., training and research group (Brussels—Belgium).

P3.1.21

Post-training Improvements in Residents Breaking Bad News Skills are Related to an Upregulation of Their Physiological Arousal

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BACKGROUND: No study has yet assessed physiological arousal changes related to the acquisition of breaking bad news skills. The objective of

this study is to assess changes in physiological arousal before and after an effective communication skills training. The efficacy of this training has been tested in a randomized controlled study and has shown improvements in residents' self-efficacy beliefs about their communication skills and in their breaking bad news skills. **METHOD:** Physiological arousal was assessed during a 20 minutes simulated breaking bad news interview before and after training for residents assigned to the training arm of the randomized study and twice at an eight months interval for residents assigned to the waiting list arm of the study. Heart rate was monitored using an ambulatory digital holter recorder (mean heart rate levels were calculated for each consecutive 5-minute periods of the simulated interview) and samples for measurement of salivary cortisol were collected (areas under the curve (AUC) were calculated). **RESULTS:** Ninety eight residents were included in the study. Repeated measures analyses of variance show a significant group by time effect on physiological variables. Mean heart rate levels remain high after training for the training group compared to the control group where the mean heart rate levels decrease ($p = .001$ to $.046$ for the four 5-minute periods of the simulated interview). Moreover, cortisol AUC increase after training for the training group compared to the control group where cortisol AUC remain stable ($p = .035$). **CONCLUSIONS:** This study shows that improvements in residents' self-efficacy beliefs about their communication skills and in their breaking bad news skills are related to an upregulation of their physiological arousal. **RESEARCH IMPLICATIONS:** Physiological arousal should be included in models designed to understand the learning process of complex communication skills. **CLINICAL IMPLICATIONS:** Trainees and trainers should be aware that the use of complex communication skills requires appropriate physiological arousal. **ACKNOWLEDGEMENT OF FUNDING:** This research program was supported by the 'Fonds National de la Recherche Scientifique—Section Télévie' of Belgium and by the C.A.M., training and research group (Brussels—Belgium).

P3.2.1

Use of Complementary and Alternative Medicine Among Patients with Cancer in Italy

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BACKGROUND: Few and discordant data about the use of complementary and alternative medicine

(CAM) among patients with cancer are available in Italy. Aims of the present study are: (1) to establish the first detailed epidemiologic description of the use of CAM among cancer patients in Italy; (2) to evaluate relation between CAM use and satisfaction of patients' needs in the conventional care context, perceived psychological distress, presence of psychopathology, personality traits. **METHOD:** The present study, which is starting in January 2009, involves 800 patients from care units of eight oncology departments in Tuscany (medical wards, Day Hospitals, outpatient departments, domiciliary and palliative care units). Patients will fill in a specific form collecting socio-demographic data and CAM use related information. Illness related data will be collected with the help of medical staff. Patients will also fill in questionnaires assessing distress (BSI-18), patients' needs (NEQ) and personality traits specifically related to individual skills in comprehending internal and external events, managing problems and difficulties and giving meaning to what happens (SOC—Sense Of Coherence). **RESULTS:** In June a first part of data from five out of eight oncology departments will be available. Final analysis of data will be available in December 2009. **CONCLUSIONS:** The present study will provide the first detailed epidemiologic description of the use of CAM among cancer patients in Italy and will focus on an aspect not yet sufficiently studied which is the relation between CAM use and satisfaction of patients' needs in the conventional care context. **RESEARCH IMPLICATIONS:** The present study represents the first wide and detailed report on the use of CAM in Italy among cancer patients at different stages of illness and diverse levels and settings of medical care, disclosing possibilities of more specific studies in the future on this topic in our country. **CLINICAL IMPLICATIONS:** Research on epidemiologic and psychological aspects of the use of complementary and alternative therapies among cancer patients will help to bring better comprehension of 'alternative and complementary needs' of patients which should be recognized and discussed to improve conventional care. Moreover this kind of research should support public health institutions monitoring CAM use in specific territories, particularly regarding possible advantages and risks. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.2

Floral Therapy as an Emotional Support to Mothers with Children in Cancer Treatment

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BACKGROUND: Literature has widely discussed the emotional imbalance, brought by diagnosis and

treatment of childhood cancer to patients and relatives. Being the mother the principal caregiver for the children, and the one who suffers and influence them the most, it's of great importance that hospitals develop programs to give emotional support to these mothers. The objective of this project was to verify if Floral Therapy could be a useful tool to provide this support. **METHOD:** It was a qualitative study done at APAAC, a support institution located in Campinas, in the state of São Paulo which houses children and teenagers from all over the country, who are undergoing cancer treatment in nearby hospitals. The mothers who showed the desire to participate were observed for three months using these floral essences suited to their emotional state. Open interviews were done periodically with the objective of not only getting a spontaneous report from the subjects in relation to this therapy, but also in getting adequate treatment for new emotions which may come. **RESULTS:** After analyzing the collected data, in three different moments, where mothers did a comparison between their emotional states before the beginning of the therapy and after its end, it was verified that the subjects had reached a significant change in their emotional state through self-harmonization and substitution of a disturbing emotion for a positive one, achieving a better quality of life during the treatment of their children's disease. **CONCLUSIONS:** It was concluded then, that Floral Therapy, a therapeutic tool created by the English doctor Edward Bach in the 1930s and incorporated by WHO (The World Health Organization), in 1976, as one of the 'Alternative Medicines' was an effective instrument in soothing the tension and stress that these mothers are submitted to. **RESEARCH IMPLICATIONS:** To investigate the contribution of Floral Therapy is of great importance to healthcare professionals, who will have one more therapeutic tool, which has the benefits of being cheap, low risks and faster results than verbal therapy. **CLINICAL IMPLICATIONS:** The use of this complementary therapy will provide healthcare teams with the ability to improve multidisciplinary treatment, as it assists informal caregivers, who will be able to contribute to the patient's treatment. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.3

Sense of Coherence Levels Among Head and Neck Cancer Subjects

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BACKGROUND: Head and neck (H&N) cancer is often considered a burdensome disease. The literature suggests that both biological and psychosocial factors may affect H&N cancer

prognosis. Recently, sense of coherence (SOC) has been investigated as a determinant of health outcomes in people with cancer. However, no study of SOC and H&N cancer subjects has been conducted. This study aimed to describe SOC among H&N cancer subjects and investigate the possible correlates of SOC in this group. **METHOD:** A prospective study was conducted among a convenient sample of H&N cancer subjects at a Brazilian hospital. From the prospective study, cross-sectional analyses of baseline information from 162 subjects were carried-out. Information on SOC levels, sociodemographic, psychosocial, clinical and behavioural characteristics was collected through medical chart review and a personal interview conducted by the author (LDV). SOC was approximately normally distributed and General Linear Modelling procedures were used to investigate the association between SOC levels and covariates. **RESULTS:** The mean SOC level and age were, respectively, 63.8 (range 27–90) and 57.7 years. The majority of the sample was male (75%), had a partner (65%) and was current smokers and alcohol drinkers (44.4% and 47.2% respectively). The cancers were mainly in the oral cavity (50%) and diagnosed at a late stage (59%). Bivariate analysis showed higher SOC levels among those who were men, younger, who had a partner, were currently working, had more social support, had opportunities to talk openly and a preference to not keep feelings inside. After multivariate analysis, social support and preference for keeping feelings inside was no longer associated with SOC. **CONCLUSIONS:** This study results suggested a strong association between SOC levels and psychosocial determinants. That is, stronger SOC levels were observed among H&N cancer subjects who were male, younger, who had a partner, who were currently working and who had the opportunity to talk openly. On the other hand, no statistically significant association was observed between SOC and clinical variables or behaviour (i.e. smoking and alcohol drinking) habits. **RESEARCH IMPLICATIONS:** The study of SOC levels among Brazilian H&N cancer subjects offers new possibilities for clinical and psycho-oncology research. For future research purposes, similar studies should be carried in other H&N oncology clinics to better understand how SOC is correlated with or even determines health outcomes in this group. **CLINICAL IMPLICATIONS:** The SOC may be an important factor in determining health outcomes in H&N cancer and other patients. Interventions using the SOC concept promote health and, improve patients' wellbeing. Also, the SOC questionnaire can be used in clinical practice to help identify psychologically vulnerable patients and to understand the support needed by H&N cancer subjects towards the disease adjustment. **ACKNOWLEDGEMENT OF FUNDING:** This

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P3.2.4

Music: The Sound of Feelings

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BACKGROUND: Studies on music therapy reveal the power music has to awaken pleasure and break blockages against emotional contact of deeper levels, possibly opening up expressive channels that facilitate the emerging of conflicting emotional aspects that in other psychotherapeutic processes might need a longer time to happen. This study had the aim to promote group psychological attendances with patients and followers of a waiting room, using music as a triggering element for discussions and reflections. **METHOD:** This project took place at the waiting room of Dr. Mario Gatti Municipal Hospital Oncology ambulatory care unit, in Campinas-SP, Brazil. There were eight meetings of approximately forty minutes each, which started with the presentation of the work proposal, inviting the participants to observe the feelings provoked in them during the playing of a song, which was usually of a popular or folkloric origin. Each participant would receive a sheet with the lyrics. At the end, the participants exposed to the group their feelings, followed by an open discussion on the themes presented. **RESULTS:** Music permitted the interns to discuss, in the waiting-room, themes such as: 1) the temporality of human life, 2) hope, 3) faith, 4) friendship, 5) quality of life, 6) death and 7) the patients' engagement in the treatment, allowing the exchange of experiences among patients and followers, favoring reflections, integration, and the perception that they are not alone in their sickness, therefore transforming the waiting-room into a more human and welcoming place. **CONCLUSIONS:** The songs allowed the expression of feelings in a melodic way, providing the patients the access to emotional contents, facilitating the discussion of delicate subjects. We observed that the participants used words and verses of the authors, as a mechanism of projection of their feelings, favoring the elaboration of possible conflicts. We can affirm that, in the group sessions, the discussions about the feelings evoked by the songs offered support and means for the patients to better deal with their process and treatment implications. It is important though to

bring the attention to the fact that the choice of songs must prioritize the popular ones, containing preferably verses of easy comprehension, not too directive and deprived of religious or prejudicial biases. **RESEARCH IMPLICATIONS:** To provide new ways of psychotherapeutic actions that may contribute to the work of the psycho-oncologist. We also hope that this project will subsidize researches and further studies to broaden the knowledge about the use of music in group sessions. **CLINICAL IMPLICATIONS:** To allow the patient contact with his/her feelings and emotions, enabling reflections and elaborations through the awakening promoted by music. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.5

Attitude Toward the Use of Complementary and Alternative Medicine in CNS Cancer Patients: A Preliminary Study

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BACKGROUND: Introduction of innovative therapies has improved quality of life and life expectancy in cancer patients; however, some studies show that about 30% of patients are using complementary and alternative medicine (CAM). Italy appears among the countries with the highest percentage of CAM usage, above all for patients affected by CNS (Central nervous system) cancer. This work aims to investigate diffusion, frequency and characteristics of CAM usage in patients suffering from CNS cancers. **METHOD:** The research has been performed in the Neuro-oncology Department of a neuroscience hospital in Milan. 40 patients affected by CNS cancer and cured in that department, have undergone a semi-structured interview, led by a psychologist. Its aim was to investigate CAM usage diffusion, frequency and users' characteristics, taking into consideration their sickness history and their socio-familial condition. **RESULTS:** Among the 40 patients who participated in the study, 52% were using CAM. As a matter of fact, the factors linked to this usage were high education and socio-familial condition (every patient living alone used CAM). On the contrary, sex and sickness severity were not linked to CAM usage. Because of the small group size and the higher frequency of patients with high-grade cancer involved in the study, it wasn't possible to give an evaluation about the correlation between cancer histology and CAM usage. **CONCLUSIONS:** Data revealed by the present study coincide with the results showed in the European

Case surveys about CAM usage incidence and patients' education and socio-economic level, underlining an increasing CAM usage by cancer patients. It is important to underline that CAM use in patients with cancer, who are already in therapy with other drugs, can cause some problems. As a matter of fact it turns out that some substances (such as Echinacea, Ginkgo Biloba etc.) interact with the activity of the enzymes involved in drug metabolism interfering with the therapeutic action of Chemotherapy and anti-epileptic treatments. **RESEARCH IMPLICATIONS:** Our data represent preliminary information about CAM usage by Italian CNS cancer patients. A more detailed questionnaire, in order to investigate about specific CAM usage, reasons, costs and about the Patient-Doctor communication, is being developed for future studied. **CLINICAL IMPLICATIONS:** Certainly, we are in front of a new scenario where CAM are a reality that can't be totally ignored. These data underline the importance of communication, sincerity and Doctor-Patient cooperation in order to establish a treatment based on compliance with the aim to take care about patients as a whole. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.6

MALVA GROUP: Supporting Group Based on Relaxing Technique for CNS Cancer Patients

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BACKGROUND: Aim of this work is to present groups using relaxation technique for CNS (Central Nervous System) cancer patients hospitalized and their evaluation given by the patients taking part in these groups. The main aim of the project is to create a group context encouraging sharing and elaboration of subjective experience, using relaxation technique in order to obtain a more quiet psycho-physiological status. **METHOD:** Groups have been organized in the Neuro-oncology Department of a neuroscience hospital in Milan for hospitalized patients and their relatives. Every one willing to participate was accepted to take part in this experience after a short individual interview. Every patient could participate in the group when hospitalized in the institute. Groups took place once a week, for about 75 minutes. Methods applied included energetic techniques derived from Do-in, respiration and guided visualizations. Qualitative evaluation was estimated through 'open questions' and a multiple choice questionnaire given to participants. **RESULTS:** The patients

(29) and relatives (9) who participated in the preliminary project declared that they perceived a higher sensation of calm and inner peace, succeeding in getting their mind free of negative thoughts during the meeting time and forgetting their sickness, even if for a short time. Patients and their relatives agreed that this kind of treatments could be useful for facing in a calmer way the therapeutic iter and their numerous hospitalizations making their attitude more participating and positive. **CONCLUSIONS:** Support groups for cancer patients, using complementary treatments (relation, respiration, movement and visualization) have been really appreciated and perceived as good tools, helpful for patients and their relatives. Moreover the group experience has turned out to be useful for psychological support, leading to easier socialization as well as suggestions and opinion sharing. **RESEARCH IMPLICATIONS:** Oncological patients suffer of anxiety, depression and desperation. A Stable Supporting Group creation could facilitate more functional strategies in order to face sickness-related problems. We will use quantitative tools to measure changes in stress, anxiety, quality of life and illness acceptance, before and after learning these techniques. **CLINICAL IMPLICATIONS:** Groups facilitate wellbeing sensation and stress reduction, generating an immediate benefit, reducing side effects of therapy related to anxiety phenomena. These groups represent a new way of taking care of oncological patients as a whole. Groups help patients activate personal resources during therapeutic treatment and get an easier psychophysical integration among people involved in the sickness. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.7

Studying of Disorders in Patients with Acute Leukemia in Different Stages of Disease Scientific Research Institute of Hematology of Uzbekistan Psychiatry Department of Tashkent State Institute of Advanced Medical Education

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BACKGROUND: The treatment of the cancer patients often is complicated by the development of psychopathological disorders. There are significant number of mental and personality disorders in the acute leukemia that need typological analysis and discover correlation stage of disease. The purpose of research is the estimation of the psychopathological disorders at patients with acute leukemia and investigation the dependence from different stage of leukemia. **METHOD:** The study was provided in 104 patients with acute leukemia (age

14–74 years old) were treated in Hematology/Oncology Department of the Institute of Hematology of Republic of Uzbekistan. There were 79 patients with acute non-lymphoblast leukemia, 25 acute lymphoblast leukemia. All patients were divided on three groups the dependence from stage of leukemia: stage of induction remission (1), patients in remission (2) and with resistant form or relapse (3). Patients were studied by clinical-psychopathological methods, such a conversation, tests for definition of the level of depression, supervision. RESULTS: The study was provided in 104 patients with acute leukemia (age 14–74 years old) were treated in Hematology/Oncology Department of the Institute of Hematology of Republic of Uzbekistan. There were 79 patients with acute non-lymphoblast leukemia, 25 acute lymphoblast leukemia. All patients were divided on three groups the dependence from stage of leukemia: stage of induction remission (1), patients in remission (2) and with resistant form or relapse (3). Patients were studied by clinical-psychopathological methods, such a conversation, tests for definition of the level of depression, supervision. CONCLUSIONS: Nearly alike frequency psychopathological disorders existed beside patients with relapse or by resistant form of disease (89.6%) and on stage of the induction to remission (at moment of the diagnostics—89%); beside patients, residing in remission—in 57% events. The differences in frequency and nature psychopathological disorders, revealed in study, are connected with different degree of expression clinical syndrome on different stage of disease. RESEARCH IMPLICATIONS: This study is indicative of significant changes to physical, psychological, social sphere to vital activity that requires development and introducing the individual programs to rehabilitations, which must cover all aspects to vital activity patients. CLINICAL IMPLICATIONS: This study is indicative of significant changes to physical, psychological, social sphere to vital activity that requires development and introducing the individual programs to rehabilitations, which must cover all aspects to vital activity patients. ACKNOWLEDGEMENT OF FUNDING: None.

P3.2.8

Case Study on Mahima, with Breast Cancer
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BACKGROUND: Ms Mahima, a 43 years female and a nurse teacher by profession, teaching Oncological Nursing to undergraduate nursing students was diagnosed as Breast cancer, series of investigations and treatment and the radical mastectomy followed by chemo and radio therapy.

She did not want to come back to normal life; she needed constant counseling and support. The author was an active counselor, shared her pain during the stages of treatment that followed. **METHOD:** Case study method. **RESULTS:** Constant counselling, moral and Psychological support from each individual who were in contact with her. The close family members, and the author being a professional nurse herself, had been in constant touch with her including the use of mobile phones during the entire period of the treatment. The painful stages of chemotherapy were psychologically shared by the author. **CONCLUSIONS:** Strong psychological support and constantly being with the patient physically, helps in the prognosis of such a patient. **RESEARCH IMPLICATIONS:** Can be used in counselling such patients who is shattered in their lives. **CLINICAL IMPLICATIONS:** procedure can be used on individuals, which seemed to have helped Mahima a great deal, returning to normalcy and continuing in her occupation, where she list her complete confidence. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.9

Necessity of Training Oncology Nurses in Psycho-Social Issues—NGO Efforts for Bridging Gaps to Help Cancer Patients Community in Rural India

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BACKGROUND: Establish Relationship between nursing personnel and People-Living-With-CANCER. In cancer patients its assumed depression is inevitable sequel to diagnosis, treatment of mood disorder is unnecessary/impractical Retrospective analysis shows this step improves quality of life & survival of cancer sufferers. Average survival rate with such situation in rural areas is 3–5years. **Aims:** Describe palliative/nursing care-issues. Observe nature of relationship between nurse and cancer-sufferers. **METHOD:** A retrospective analysis at our 11 year old NGO–database between April 2005 till December 2008 carried out. Chemo-therapy is more acceptable for use in early-stage disease as multimodality treatment concepts. Many cancer-patients have additional psychological [Depression] complex medical problems that needs therapy. **RESULTS:** Opinion evaluation for 25 nurses from palliative-care-team. Main issues of concern [1] CANCER-illness and coping with depression. [2] diagnosis and search for solution? Expectations for future life/its-quality? [3] Concerns of treatment cost [4] Availability of proper follow-up centres in rural areas of developing nations. **CONCLUSIONS:** Multifaceted Relationship between nurse and CANCER affected patients is crucial better care. NGO setup shown by graphical-presentation

at IPOS-Vienna-congress. Our Indian NGO-project works on this strategy for training nurses in psychological care of CANCER-patients. nurses provides continuity of care, relief from hopelessness and smooth transition from diagnosis to death. Our Nursing strategy provides support/counselling with home based care for terminally ill. At IPOS-2009-congress venue our presentation outlines relationship between nursing personnel and psychosocial issues of cancer-sufferers in community setup. **RESEARCH IMPLICATIONS:** Cancer-care-givers needs to be sensitized towards psycho-social issues of cancer-sufferers. Especially in resource-poor-developing-nations there is urgent need to familiarize them to mental trauma/humiliation suffered by cancer diagnosis. By interaction with senior-researchers at IPOS-Vienna-congress we shall carry back expertise/knowledge from IPOS congress back into our NGO community in rural/tribal India. **CLINICAL IMPLICATIONS:** At 11th IPOS, I as NGO-representative shall exchange our concerns/experiences/difficulties about psycho-social needs of cancer-sufferers with congress-participants. IPOS-participation will spread our activities in collaboration with conference participants. Analysis of international trends in psycho-oncology & its correlation with our study will help clinicians develop a plan to tackle such issues in developing-nations. Presentations by leading cancer researchers on issues of breast cancer at Vienna-congress will also modify our future action plan of our Community-work. **ACKNOWLEDGEMENT OF FUNDING:** This was a project designed & conducted by volunteers of this cancer NGO in rural/tribal India. We did not receive any funding. All 12 volunteers, 2 nurses & one psychologists gave their free services for this project. All cancer patients were those who returned to villages after chemo/surgery in city hospitals. This was a unique effort 'As a Community study without any funding resource'.

P3.2.12

Determining the Unmet Needs of Brain Tumor Patients

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BACKGROUND: Primary brain tumors often result in a significant symptom burden and a diversity of psychosocial needs. Improved treatments have resulted in increased survival rates, thus influencing the nature of patient's needs and the extent to which they can be met. The purpose of this study was to identify the most salient support care needs of brain tumor patients and to explore whether demographics, emotional distress, cancer-related fatigue, and

disease-related factors predict unmet needs. **METHOD:** Patients attending the Tom Baker Cancer Centre neurological clinic on follow-up appointments were approached about participating in the study. Participants were required to meet the following criteria: (1) Diagnosis of a malignant or non-malignant glioma or meningioma (2) Over 18; (3) KPS \geq 60; (4) Reasonable fluency in English. Seventy-one brain tumor patients completed the following questionnaires: the Support Care Needs Survey (SCNS), the FACT-Br, the FACIT-F, the BSI-18, and a brief survey of their use of sources of information about their disease. Demographic information was obtained from the participants and disease-related information was collected from medical charts. **RESULTS:** Patients attending the Tom Baker Cancer Centre neurological clinic on follow-up appointments were approached about participating in the study. Participants were required to meet the following criteria: (1) Diagnosis of a malignant or non-malignant glioma or meningioma (2) Over 18; (3) KPS \geq 60; (4) Reasonable fluency in English. Seventy-one brain tumor patients completed the following questionnaires: the Support Care Needs Survey (SCNS), the FACT-Br, the FACIT-F, the BSI-18, and a brief survey of their use of sources of information about their disease. Demographic information was obtained from the participants and disease-related information was collected from medical charts. **CONCLUSIONS:** While primary brain tumors often result in significant challenges for the patients, this sample of survivors on medical follow-up reported relatively few unmet support care needs. The most pressing needs were found in the psychological domain of the SCNS and were related to fear of the future and concerns for loved ones. Such needs are quite realistic given the often poor prognosis associated with this type of disease. The results are discussed in terms of accessibility to psychosocial services, peer supports, and patient information in a large regional cancer centre. **RESEARCH IMPLICATIONS:** We need to learn more about how we can address the fears that primary brain tumor patients have for their future, and their concerns for those who support them. We need more studies to understand how caregivers of brain tumor patients can best be supported. **CLINICAL IMPLICATIONS:** Primary brain tumor patients continue to have relatively high rates of emotional distress, fatigue, pessimism, and concerns for those who are of close support to them in spite of access to psychosocial services, peer support, and patient education programs. This may be due in part to the nature of the disease, but these problems may be alleviated by early detection and targeted intervention. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.13

Research Into the Role of Songwriting with Cancer Patients in Music Therapy—An Integrated ExperienceEmma O'Brien^{1,2}¹*The Royal Melbourne Hospital, Victoria, Australia,*²*The University of Melbourne, Victoria, Australia*

BACKGROUND: This abstract describes the authors Masters qualitative research into the role of songwriting in music therapy (MT) with bone marrow transplant patients (BMT). It presents the results from interviews with participants and discusses the role of integrating participants in the research process and how this has informed the author's current PhD research design. It seeks to highlight and describe the role of songwriting in MT for patients in BMT and ultimately across the treatment continuum. **METHOD:** Phenomenological research methods were used to examine the experience of songwriting in MT during a BMT protocol. Six patients with various cancers (AML, CML, ALL Myeloma, Hodgkin's Lymphoma and Waldenstrom's Disease)—4 females, 2 males (34–45 yrs) participated in this study. The music therapist used a specialized method to guide them in creating original songs. Interactions consistently integrated the participants in songwriting through a process of reflection and validation. A third party interviewed the participants, post the sessions, using qualitative open-ended questions that sought to understand the participants' experience. Interviews were recorded and transcribed. Essences were derived and key themes emerged. **RESULTS:** Ten themes emerged from the composite essences: 1) Songwriting was a positive and enjoyable experience; 2) Participants were proud of their songs; 3) It was easy to express themselves in song; 4) Songwriting was a non-threatening intervention; 5) Participants' had never considered writing a song before; 6) The process of song writing seemed to unfold easily; 7) Brainstorming was helpful in assisting self expression; 8) The music therapist was a guide in the process; 9) The choice of music palate for their song was very important; 10) Participants had varying views on the own music contributions to the song. **CONCLUSIONS:** Participants found songwriting in MT positive, self-affirming, enjoyable, expressive and musically creative; with the music therapist as a guide offering a broad music palate and a non-threatening therapeutic intervention. It offered unique therapeutic interventions and interactions that may increase the quality of life of patients experiencing BMTs. The research also demonstrated the value of the specialized songwriting method that has since been published in key teaching texts. By deriving and understanding the participants' experiences in the method clinicians are able to offer best practice to support people with cancer during their treatment. This method of research can inform

other practitioners as well. **RESEARCH IMPLICATIONS:** This research highlights the value of qualitative research methods that integrates the patients/consumer in the research process. The findings offer a rich description of the songwriting and highlight the value of qualitative research which have informed the design of mixed methods PhD research project. The PhD is multi site study ($n > 50$) using quantitative measures (Profile of Mood States & McGill Quality of Life Questionnaire) with follow up qualitative interviews for the participants. **CLINICAL IMPLICATIONS:** This is real world research examining methods used on site > 10 years. Consequently the findings are translational into clinical practice. It illustrates the value of integrating the patient in the mode of treatment and also in informing research. Creative methods are effective in the cancer journey and should be delivered by or in conjunction with a trained therapist to maximize the level of interaction and integration and ultimately the participant's satisfaction with the experience. **ACKNOWLEDGEMENT OF FUNDING:** Masters Research- None (2004); PhD Research Funded through Victorian Cancer Agency (Australia) Scholarship for Research into Supportive Care for Cancer Patients (2008–2010).

P3.2.14

Alternative Methods in Treatment and Palliation of Cancer, a Psycho-Oncological Perspective

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BACKGROUND: Considering cancer treatment as a multidisciplinary approach, many centers for alternative medicine in Asia treating Cancer patients have engaged different alternative therapies targeting pathological processes as well as psychological aspects of cancer. Current study overlays various methods utilized by the patients before, during and after completion of cancer treatment including homeopathy, anthroposophical therapies and meditation for psychological, social, behavioral, and ethical betterment of cancer patients. **METHOD:** Questionnaire based review at multiple centers in Pakistan and Bangladesh. Moreover, searches via the web about current cancer therapies engaged in Asia their efficacy and results. **RESULTS:** 1. A significant number of patients have chosen Homeopathy, herbal and Chinese medicine as palliative treatment especially after completion of chemotherapy and radiotherapy. 2. Statistical data available in literature is scarce and sometimes conflicting as far as the outcome of these therapies are concerned. 3. Three most famous and demanded treatment strategies are: a. Homeopathy for treatment of premalignant states, prevention of metastasis, pain relief, GI symptoms and depressive illness etc. b. Herbal

medicine for treatment of GI symptoms and Liver metastasis etc. c. Chinese medicine including Acupuncture. **CONCLUSIONS:** More people are presenting to alternative therapists for problems which are either cancer or allied, from which they do absorb benefit. Due to poor medical reporting and gap in statistical data collection this valuable information is being lost. This cannot be denied as insignificant or non-convincing. Demand of the day is that these therapies should be funded and more research be done to evaluate what and what not to do at certain point. These therapies should be acknowledged as a part of multidisciplinary approach to cancer treatment globally as countries like Switzerland. **RESEARCH IMPLICATIONS:** Hunting and evaluating alternative routes to cancer treatment with further research has opened new doors and helped the our oncologists to bring more and more ways under one roof and example is LUKAS KLINIK Arlesheim Switzerland. **CLINICAL IMPLICATIONS:** Not all alternative therapies are beneficial to cancer patient, treatments specially involving reactive alkaloids may prove harmful to precancerous states therefore complete knowledge of these therapies should be easily accessible to oncologists both to benefit the patients and prevent hazardous effects. The usefulness of alternative methods like homeopathy and acupuncture in treating problems like chronic and severe cancer pain are unsurpassed, there benefits should utilized on global level as NHS has commenced in UK. **ACKNOWLEDGEMENT OF FUNDING:** This is a Self funded study which has been conducted by authors who are attached to a non-profit organization(AHMF). We would like more hands to join and benefit cancer patients by pushing this to next level.

P3.2.15

Recreational Dance Program and Dance Movement Therapy Program Benefit differently Cancer Patients: A Qualitative Study

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BACKGROUND: Dance can benefit both clinical and nonclinical populations, as physical exercise, a means of communication, as well as an artistic expression. It is also a fundamental element in Dance Movement Therapy (DMT). However, DMT, which uses dance/movement as a medium for psychological growth and personal integration, has advantages that dance alone cannot provide. A challenging research question, therefore, is how these advantages translate into therapeutic benefits over and above those achievable through dance. **METHOD:** The present study aims to assess the differential impacts of dance and DMT through a

qualitative approach. Participants were 120 invited cancer patients, divided into 5 recreational dance groups, and 5 Dance Movement Therapy groups. After the program, participants were asked to answer several open-ended questions about their subjective experiences in the groups which included the perceived effect, knowledge gained if there was any, the relationship of group experience and their life experience etc. For participants who joined the DMT programs, they were asked to state the difference between joining a recreational dance or physical exercise group (if they had done so) and DMT group. **RESULTS:** Results indicated that benefits common to both dance and DMT groups were: (a) physical benefits, such as increased vigor and energy level; (b) psychological benefits, especially mood improvement and stress reduction; (c) social benefits, such as getting to know more friends and helping one another. Benefits that were more salient among DMT participants included being more open and released. Additionally, deeper self-understanding and experiences of spirituality were specific to DMT groups. These experiences included letting go of attachments and rigid standards, forgiving, respecting others' personal space, accepting the givens of life, trusting, loving, and caring of others. **CONCLUSIONS:** These results suggest that cancer patients benefit from both recreational dance program and DMT physically, psychologically and socially. Spiritual benefits seem unique among DMT groups. These additional benefits might come from the special therapeutic elements in DMT which emphasize on the interconnectedness of the whole person—the mind, body and spirit. Insights can be obtained through articulation of movement experience to psychological feelings, life attitude as well as philosophy. **RESEARCH IMPLICATIONS:** This study is the first study to explore the differential benefits of recreational and therapeutic use of dance. It also demonstrates how qualitative data obtained through open-ended questions can be used to understand the subjective experience of participants joining the rehabilitation programs. **CLINICAL IMPLICATIONS:** Both the recreational and therapeutic use of dance movement benefit cancer patients greatly. Rehabilitation programs of both types for cancer patients are worth further development and promotion. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the Hong Kong Cancer Fund.

P3.2.16

Translating Clinical Phenomenon into Researchable Questions and Clinical Practice: A Multidisciplinary Quest

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BACKGROUND: There exists questions such as ‘What are the benefits of holistic care and complementary therapies and the potential benefits and disadvantages of integrating complementary therapies into traditional Oncology hospital care?’ Many end points are largely subjective and there is speculation about what clinical results might be achieved. Although many believe that ‘a mind at peace with its body might enhance the powers of self-healing’ ... where is the data that supports this hypothesis? **METHOD:** The Psycho-social Oncology Program is approaching these issues by developing a series of ‘team’ generated hypothesis. In a multidisciplinary team setting, clinical phenomena of cancer care such as pain, hot flashes, dyspnea are discussed. The team identifies significant clinical occurrences lacking in validated Mind-Body treatment regimes. Current standards of care are evaluated and reviewed in terms of efficacy and strength of research. The shortcomings of current treatment methodologies are evaluated. These may include lack of rigorous scientific methodology or even the total lack of research validating a mind body treatment. **RESULTS:** Mind-Body interventions are suggested. These interventions target cognitions, behaviors and biology. The team identifies the use of mind body interventions that may be of benefit in reducing the frequency and severity symptoms in cancer survivors. Interventions that may improve the subjective quality of life are also considered. The interventions must be innovative mind body that will lend themselves to implementation and evaluation by the members of the team. **CONCLUSIONS:** Utilizing a multidisciplinary approach, areas of Mind-Body Health Research lacking in rigorous scientific methodology are identified. Innovative interventions are proposed, and evaluated on their scientific merit and their ability to result in evidence based therapies that can be replicated. The gathering of a multidisciplinary team allows for many philosophies and treatment approaches to be considered, evaluated and implemented. **RESEARCH IMPLICATIONS:** There have been limited systematic studies of the efficacy Mind-Body treatments for cancer patients. There is encouraging, but not compelling evidence to suggest that selected Mind-Body Therapies are helpful for cancer patients in both emotional and physical arenas. The problems encountered with the development of empirical data may be due to several causes. These difficulties may include the nature of the patient population and the nebulous nature of the objective measures that have been in used. **CLINICAL IMPLICATIONS:** As a multidisciplinary team the Mind-Body Health Research Program seeks to translate clinical phenomena of cancer care into solid research questions that will lead to evidence based therapies supporting CAM. The team is plagued by untested and unproven hypotheses on primary treatment, palliative and

psychosocial issues. There is very little good clinical data on which to base recommendations for these therapies. Many of the studies that are available are of sub-optimal quality i.e.: lack randomization. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.2.17

A Collaboration Story in the Development of a Supportive Care Program for the Ankara Oncology Research and Training Hospital, Ankara, Turkey

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BACKGROUND: Adding to the history of collaboration between countries in the development of services for cancer patients, this presentation describes how three professionals met at IPOS in 2006, Venice, Italy. This collaboration led to the creation of a workshop for Turkish oncology health professionals in Cappadocia in 2007, and to the development of a Supportive Care Program for Cancer Patients at the Ankara Oncology Research and Training Hospital, Turkey in 2008. **METHOD:** Working with Turkish funding, Drs. Haldun Soygur and Derya Akbiyik organized a workshop expecting 20–40 participants for November 2007. Their keynote speaker, Patricia Fobair, LCSW, MPH had participated in the development of a supportive care program for cancer patients at Stanford University Hospital’s Cancer Center, and they hoped to inspire such a program in Turkey at the Ankara Oncology Research and Training Hospital. Patricia Fobair, applied for a Fulbright Senior Specialist Program and was named to the Social Work list 2007–2011. Together they applied the Fulbright Program for a 6 week grant for collaboration in program development. **RESULTS:** November 2007, 180 health professionals attended the psycho-oncology workshop in Cappadocia. The huge response suggested that the health professionals wanted to increase their skills with cancer patients. From November 10 to December 22, the Soygur, Akbiyik and Fobair team-mates succeeded in demonstrating that cancer patients needed additional services, that the staff was available and interested in providing group support and occupational therapy services, and that the medical faculty, the Director of the Hospital, and Health Minister were also supportive of initiating a Supportive Care Program at the Ankara Oncology hospital as a model for the country. **CONCLUSIONS:** The work of initiating a Supportive Care Program in Ankara continues. A proposal has been written to the Health Ministry applying for continuing funds for a Social Work staff position. Additional grants will be submitted

to the World Health Organization and the European Union for funds allowing further collaboration, and for the program's growth throughout the country. In the meantime, the psycho-education groups started for the breast cancer patients and men with testicular cancer continue with Turkish health professionals leading the groups. The Occupational therapy, art and jewelry making classes began in February 2009. **RESEARCH IMPLICATIONS:** This model of collaboration between health faculties, between countries of diverse ethnic and religious origins can be effective. It is possible for collaborations to occur, when affinity and commonality of purpose are discovered. As an international organization, IPOS can take credit for setting the stage where new friendships among health professionals concerned with cancer meet, and begin relationships that lead to improved health care programs for cancer patients throughout the world. **CLINICAL IMPLICATIONS:** We demonstrated that by using a planning process, we could involve the patients and staff in supporting the development of a new program. With continuous meetings with the staff and patients, we were able to counter resistances and provide successful group interventions for the patients. In the future, patients will participate in providing clinical research information that allow for more sophisticated program evaluation. At the moment, increasing patient participation and staff enthusiasm speak to the program's success. **ACKNOWLEDGEMENT OF FUNDING:** The authors are grateful for the assistance from the Fulbright Senior Specialist Program (US State Department) which underwrote the consultant's expenses during the six weeks in Ankara, Turkey. The Ankara Oncology Research and Training Hospital in Ankara, Turkey provided the housing and maintenance expenses.

P3.3.1

The Relationship Between the Self-esteem and Mood States in Patients Undergoing Hematopoietic Stem Cell Transplantation

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BACKGROUND: Hematopoietic stem cell transplantation (HSCT) is an alternative to conventional treatment for adults with hematological malignant diseases. Because HSCT is associated with

life-threatening physical morbidity, lengthy convalescence, and social isolation, the potential for significant psychosocial morbidity is high. The aim of this study was to investigate the relationship between self-esteem and mood states before HSCT in Japanese patients undergoing HSCT. **METHOD:** Subjects consisted of 273 adult patients with hematological malignancy receiving HSCT between April, 1996 and January, 2007 at the University of Tokyo Hospital. Patients were asked to complete the Japanese version of Rosenberg self-esteem scale, Hospital Anxiety and Depression Scale (HADS) and Profile of Mood States (POMS) before HSCT. HADS consists of anxiety (HADS-A) and depression (HADS-D) subscales. From POMS, six subscales of tension/anxiety (T-A), depression (D), anger/hostility (A-H), vigor (V), fatigue (F) and confusion (C) scores were obtained. Pearson's correlations coefficients of the self-esteem scores with scores of HAD-A, HAD-D and six subscales of POMS were calculated. **RESULTS:** The subjects were 167 male ($M = 39.6$ years, $SD = 11.9$) and 106 female ($M = 39.6$ years, $SD = 12.5$) patients. The self-esteem summary score had significant negative correlation with all of the subscales other than V in female patients ($r < -0.39$), while the self-esteem summary score was significantly correlated with HAD-A, T-A, D, V, F, C but not with HAD-D and A-H in male patients. **CONCLUSIONS:** Overall, low self-esteem may be associated with poor mood states, which suggests that it maybe important to assess self-esteem before HSCT. Further studies are needed to explore the reason for the difference in the associations between self-esteem and mood states between male and female patients and to investigate if low self-esteem can predict disturbance of mood states after HSCT. **RESEARCH IMPLICATIONS:** This study indicates that self-esteem might be important to assess mood states of patients before HSCT. **CLINICAL IMPLICATIONS:** Self-esteem might be correlated with mood states, which might lead to better management of patients undergoing HSCT. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.2

When Pelvic Exenteration Becomes Inevitable After Genital Cancer: Psychosocial and Psychosexual Issues of Women Who Deal with Pelvic Exenteration with or Without Vaginal Reconstruction

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BACKGROUND: Radical surgery such as pelvic exenteration with or without reconstructive techniques, radiation and chemotherapy are

common treatments for extensive or recurrent genital cancer. Women experience many physical mutilations that lead to great body-image, existential and psychological changes. We investigated the psychological adjustment, satisfaction with surgery and needs of women who faced this devastating experience in order to determine patients' therapy-related needs for quality improvement of medical care and psychological support before and after surgery. **METHOD:** From March 2006 to October 2006, we contacted 16 patients who underwent pelvic exenteration with or without vaginal reconstruction operated in the Division of Gynecological Oncology since 2002. All patients accepted to participate in the retrospective study. A psychologist researcher performed a telephone semistructured interview, that lasted 45–90 minutes. Patients were interviewed at least one year after surgery. Seven areas were investigated: actual health status perception and physical functioning, body image and self-esteem, social functioning and interpersonal relationships, couple relationship and sexuality, satisfaction with reconstructive surgery and vaginal plastic surgery when performed, patients' satisfaction with care and patients' needs. **RESULTS:** All women gave a positive meaning to the surgery in terms of survival; surgeon was perceived as a savior. None regretted her decision to undergo the procedure. Mean age was 49 years ranging from 33 to 68. All women faced strong existential, body-image and sexuality issues. All women reported feelings of depression during the first months after surgery. Sixty-eight per cent were married and all of them had faced couple difficulties, sexual difficulties; 4 faced a separation. Regarding patients' satisfaction with care, patients referred a lack of support during the informed consent. They referred feelings of abandon, lack of information regarding rehabilitation, sexual rehabilitation during the follow up period, after the end of treatments. They expressed the need to meet other women who faced this mutilating surgery. **CONCLUSIONS:** Patients and family faced immense efforts to deal with a threatening event, to such a strong and devastating experience that lead to drastic changes in patients' body, functions, lifestyle and many losses. The interviews showed that a positive psychological adjustment related to this experience is possible. A good quality of life is possible but women need many time to face changes in body image, self-image distortions, losses. This qualitative study also showed the importance of patients' satisfaction with care, how the quality of communication and information disclosure had to be improved, especially regarding information about the neo-vagina. Vaginal reconstruction following pelvic exenteration is an important aspect of the physical and psychological rehabilitation and more in-depth psychosexual assessment is needed to improve the

quality of care and facilitate favorable outcomes. **RESEARCH IMPLICATIONS:** We created a prospective psycho-social study: the assessment protocol includes objective instruments that assess psychological distress (PDI), anxiety (STAI), coping (COPE, Mini MAC) and a specific questionnaire to assess patients' needs, satisfaction with reconstructive techniques, the impact of the surgery on sexuality and intimacy, satisfaction with vaginal reconstruction. Patients are evaluated at baseline, one week before surgery, then 6, 12 and 24 months after surgery. Since 2006, 15 patients have been enrolled. The study is ongoing. **CLINICAL IMPLICATIONS:** Thanks to our retrospective study, the psychology staff involved in the psychological support program increased. We added sessions dedicated to the psychosocial assessment to help women to deal with pre-operative anxiety. We improved family and couple support. We now participate in the visits dedicated to informed consent and strengthened the doctor-patient relationship. We created expressive-supportive groups. Finally we introduced sexual counseling to survey sexual rehabilitation, enhance well-being, encourage sexuality when desired by the patient. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.3

The Effects of Psycho-Oncology Education in Medical Universities in Japan

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BACKGROUND: The education program of psycho-oncology in medical universities has not yet been fully established in Japan. The two presenters of this study are in charge of giving lectures both at Kinki University School of Medicine and Kansai Medical University. The aim of this study is to report the effects of lectures and to present the factors and strategies related to improving the education of psycho-oncology in the future. **METHOD:** Lectures regarding psycho-oncology and palliative care medicine were given to the 3rd grade medical students of Kinki University School of Medicine in 2007 and 4th grade medical students of Kansai Medical University in 2008. After the lectures the students were asked to answer six open-ended questions (the concept of psycho-oncology and palliative care medicine, total pain of cancer patients, indication for cancer pain control and the problems, psychological issues of cancer patients

and their family, multidisciplinary team therapy and free comments). The study was conducted anonymously and qualitative analysis was applied to the data. **RESULTS:** Six hundred and fifty items were extracted from the questionnaires of 170 students. The answers were divided into twelve categories; understanding the importance of (1) the concepts (138 items), (2) multidisciplinary team therapy (109), (3) mental support for patients' family (95), (4) the mental symptoms and support for cancer patients (93), (5) cancer pain control (92), (6) communication among patients, their families and medical staff (56), (7) difficulty of clinical practice (31), (8) expectation for education and training (12), (9) the first exposure to psycho-oncology (10), (10) DVD effectiveness (7), (11) coalition of psychiatry and psychosomatic medicine (5), and (12) application possibility of communication skill to other diseases (2). **CONCLUSIONS:** The education program of psycho-oncology in medical schools raised the understanding of the concept, interest in gaining knowledge and expectations for training. However, medical students were concerned about the difficulty of clinical practice. The opportunity for communication skill training and clinical practice should be introduced to the pre- and post-graduate education program. **RESEARCH IMPLICATIONS:** The information contained in this study might be useful for educational researchers related to the field of psycho-oncology. **CLINICAL IMPLICATIONS:** The education program of psycho-oncology in medical schools has not yet been fully established in Japan. The effects of lectures and expectations for education need to be evaluated in order to improve the quality of psycho-oncology education. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.4

Are There Significant Differences on the Risk Perception in the Genetic Counseling Between the Populations of Madrid and Almería (Spain)

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BACKGROUND: Analyze the influence of the family typology and anxiety as a trait, in the risk perception of the patients who come for the first time to the genetic counseling. Analyze the differences between the two populations of the sample (Hospital Universitario 12 de Octubre, Madrid, Spain y Hospital de Torrecárdenas, Almería, Spain). **METHOD:** The sample comes from two Spanish hospitals and it is conformed by

80 patients attending for the first time to the oncological genetic counseling visit. For the evaluation we use a semi-structured interview (sociodemographic, medical and genetic counseling information and risk perception), STAI-R (trait Anxiety Inventory) questionnaire to measure anxiety and FRI (Family Relationship Index) to measure family typology. **RESULTS:** Final results will be presented at the congress as data is being analyzed at present time. **CONCLUSIONS:** Its implications for clinical practice will be discussed. **RESEARCH IMPLICATIONS:** Improve the research for individuals and families counselled for familial cancer history and his needs. **CLINICAL IMPLICATIONS:** Due to the results we may design specific intervention program for families at Oncological Genetic Counseling (CGO). **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.5

Canadian Cancer Navigation: An Integrative Framework

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BACKGROUND: Many national cancer programs acknowledge the necessity to improve continuity of care. The *Canadian Partnership Against Cancer* supports the implementation of cancer navigation as a crucial component of improving continuity of care. However, literature has failed to describe cancer navigation consistently. Part of this is related to the lack of validation about the bi-dimensional nature of this role: organizational and clinical. The goal of this study is to validate a framework of cancer navigation. **METHOD:** An initial definition of cancer navigation including two main dimensions, continuity of care and patient empowerment was first proposed. Empirical works was needed to validate this model. This qualitative evaluative design included a total of 2 cases, involving 3 units (2 in Quebec: hospital and community settings; 1 in Nova Scotia: community setting). Qualitative interviews were conducted with professional navigators, patients and family members, front line staff, family physicians, health administrators (interviews: $n = 49$; focus groups: $n = 10$). **RESULTS:** The first dimension, health-system-oriented, refers to the continuity of care, including informational, management, and relational continuity. The second dimension, more patient-centered, corresponds to patient empowerment, including self-management, coping and support.

The results contribute to validate this model. For continuity, both cases indicate that professional navigators in Quebec and Nova Scotia have similar challenges (e.g., effectiveness in which information on navigator's file is transferred, development of coherent and timely coordination of services, lack of systematic referral process around diagnosis, tools and clinical guidelines limitations). For empowerment, however, patients have access to a supporting navigator helping them to cope and make decisions. **CONCLUSIONS:** This study intends to challenge, refine and validate an integration of previous definitions of navigation in a context of relevant continuity of care models and psychosocial concepts related to patient centered values and empowerment. **RESEARCH IMPLICATIONS:** An integrative conceptual framework about cancer navigation could improve the effectiveness and uptake of navigation programs. A clear definition and expectation of the navigators' functions could facilitate the identification of relevant indicators and outcomes for program evaluation. The development of a conceptual framework for navigation is a crucial component for the CIHR team on *Access to Cancer Supportive Care* (NET grant 2007–2012), the *Canadian Partnership Against Cancer* and *Quebec Cancer Control Program*. **CLINICAL IMPLICATIONS:** With a clear definition of their role, the navigators may be more efficient and less challenged in terms of setting priorities and making decisions having to face both, health system and patients' demands. This could contribute to improving quality and continuity of cancer care. **ACKNOWLEDGEMENT OF FUNDING:** Work being completed by this research team is part of a collaborative patient navigation project funded by the *Canadian Institute of Health Research* (CIHR), the *Canadian Partnership Against Cancer* (CPAC), and the *Agence de Santé et de Services Sociaux de la Capitale-Nationale* (ASSS-03).

P3.3.6

A Needs Assessment for a New Graduate Diploma/M.Sc in Psycho-Oncology

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BACKGROUND: In part fulfilment of accreditation requirements for a new Graduate Diploma/M.Sc in Psycho-Oncology a Needs Assessment was carried out to ascertain interest among healthcare professionals for the programme. The new programme aims to equip and empower healthcare professions from multidisciplinary backgrounds working with people with cancer to develop psycho-oncology services within their own scope of practice with a particular focus on identifying and meeting psychological needs of patients with cancer.

METHOD: To ascertain healthcare professionals' perception for the need for postgraduate education in psycho-oncology in general and to ascertain potential level of engagement by multidisciplinary healthcare professionals working with people with cancer with the new programme in particular, approximately 800 survey questionnaires with quantitative and qualitative sections, were posted, or sent electronically to students of stand alone professional development modules in psycho-oncology, (funded by the Irish Cancer Society) graduates of the School of Nursing programmes in Dublin City University (DCU), and, through the auspices of the Irish Cancer Society, Irish Psycho-Oncology Group (IPOG) members. **RESULTS:** Approximately 130 completed questionnaires were returned. Respondents consistently endorsed the need for a multidisciplinary Graduate Diploma/MSc in Psycho-Oncology to enhance their own professional skills to further improve and develop psycho-oncology services in Ireland and stated their interest or otherwise in the new programme. Respondents also suggested a range of topics which they considered essential to a comprehensive postgraduate psycho-oncology curriculum. **CONCLUSIONS:** The Needs Assessment provided a useful indication of which health care professional specialties were most interested, potential level of interest in and range of topics for the new Graduate Diploma/MSc in Psycho-oncology. **RESEARCH IMPLICATIONS:** The new Graduate Diploma/MSc in Psycho-Oncology will run through the School of Nursing DCU from September 2009 and will be evaluated as a pilot in terms of effectiveness in meeting students' psycho-oncology learning and skills acquisition requirements. The M.Sc. element of the programme requires completion of a research project, so the level of psycho-oncology research relevant to improving patient care will increase as a direct consequence of the programme. **CLINICAL IMPLICATIONS:** The learning, skills acquisition and research ability acquired by programme graduates has the potential to impact substantially over time on expanding and improving the quality and effectiveness of psycho-oncology research and service delivery in Ireland as well as raising awareness of the need for continued strategy and policy development regarding psycho-oncology services in Ireland. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.7

Influence of Psychosocial Intervention on T Cell Subpopulations in Patients with Early Breast Cancer

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BACKGROUND: The first question addressed in our study was whether patients with operated primary breast cancer (BC) in an adjuvant setting would show differences in immune parameters compared to normal controls (NCs). Secondly, we were interested if a psychosocial intervention would have a positive impact on immune dysfunctions in patients with BC. Therefore, the patients group was randomly assigned into two groups, the intervention- and the waiting group (intervention after a six months waiting period). **METHOD:** Fifty-two women between the age of 45 and 70 years were randomised into either a group with psychosocial intervention (IG, $n=30$) or in a waiting group (WG, $n=22$). In addition, NCs ($n=26$) were evaluated. We investigated the percentage, activity and onset of apoptosis of T cell subpopulations by multicolour flow cytometry in these cohorts at three different time points (pre-intervention, end of intervention, two months follow up or at equivalent time points). To determine statistical differences between these cohorts' nonparametric test including the Mann Whitney- and the Kruskal-Wallis test were used. **RESULTS:** We found significant differences in the number of T cell and regulatory T (Treg) cells in BC compared to NCs at time point one. In addition, patients' T cells showed a significantly higher onset of apoptosis relative to NCs at time point one. In the IG, we detected a significant reduction in the Treg cells number ($4.6 \pm 0.9\%$ to $2.9 \pm 0.7\%$; $p < 0.001$), an increase in the proportion of T cells ($59.1 \pm 10\%$ to $62.7 \pm 10\%$; $p = 0.007$) and no change in the onset of apoptosis of T cells compared to the WG and NCs at time point one versus time point three. No change in these parameters was observed in the WG at the equivalent time points. **CONCLUSIONS:** This study confirms that patients with operated primary breast cancer in an adjuvant setting have signs of immune dysfunction compared to age and sex matched NCs. The observed immune dysfunction may be reversed by psychological intervention and our study support the concept of Psychoneuroimmunology. **RESEARCH IMPLICATIONS:** Of special interest is the reduction in the Treg cell number, since Treg cells seem to be crucial in the development of T cell tolerance to malignancies and contribute to immune dysfunction. Further studies are warranted to investigate the possible mechanism of action responsible for the reduction of Treg cell. **CLINICAL IMPLICATIONS:** The clinical implication is that psychosocial interventions are recommended to reduce chronic stress in patients with BC to reverse possible immune dysfunction. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by the Austrian National Bank Fund grant 11139.

P3.3.8

Cognitive Function (CF) and Recall of Prognostic Information Disclosure in Advanced Cancer Patients (ACP)

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BACKGROUND: Advanced cancer patient (ACP) understanding of an eventually fatal prognosis is viewed as ethically beneficial, and such knowledge has been shown to be significantly associated with ACPs' treatment choices. Prior research has examined several factors that negatively contribute to ACP prognostic understanding; however, the role of cognitive function (CF) and its relationship to ACP understanding of a terminal prognosis has never been formally evaluated. **METHOD:** ACPs' CF was evaluated among a population of terminally-ill patients enrolling in phase I trials at our institution using a neuropsychological battery designed to assess several domains of decisional capacity: Memory (Hopkins Verbal Learning HVLTL); Executive Functioning (Verbal Fluency and Trail-making A/B); Language (Boston Naming-short); Attention (Digit Span); Comprehension (Auditory Comprehension & WAIS comprehension). Semi-structured interviews of ACPs also evaluated md-pt communication re prognosis, and included the Hospital Anxiety and Depression Scale (HADS), Beck's Depression Inventory (BDI-II), and the FACT-COG quality of life instrument. **RESULTS:** To date, 112 ACP enrolling in phase I trials have been interviewed: median age 60 (23–83); 66% male; 88% Ca; 62% married; 71% > high school; 52% GI dx. 59% of ACPs reported having a discussion re life expectancy, and 55% stated the md gave them a prognostic timeframe. ACP who stated md did not provide them a timeframe had measurable deficits in CF as indicated by Z scores for: HVLTL immediate recall ($-1.3 \pm .84$ v. $-.74 \pm 1.1$, $p = .03$); total recall (-1.9 ± 1.2 v. -1.2 ± 1.5 , $p = .02$); delayed recall (-1.7 ± 1.6 v. -1.1 ± 1.6 , $p = .04$); language ($.2 \pm 1.3$ v. $.7 \pm .68$, $p = .03$); Trails B (-1.6 ± 2.5 v. $-.61 \pm 2.2$, $p = .04$). ACP exhibited more depressive symptoms (12 ± 10 v. 6 ± 3 , $p = .04$) and lower scores for perceived cognitive impairment (96 ± 25 v. 105 ± 16 , $p = .04$); impact on quality of life (26 ± 7 v. 28 ± 5 , $p = .03$); FACT-COG total (152 ± 31 v. 164 ± 22 , $p = .05$). **CONCLUSIONS:** ACP enrolling in phase I trials who could not recall specific prognostic information had measurable cognitive impairment as compared to those ACP who could recall such information. Our data indicate that CF may play a role in ACP communication and/or understanding of prognostic information.

RESEARCH IMPLICATIONS: From a research perspective, this is the first study to describe CF in patients entering phase I clinical trials and its relationship to prognostic understanding. Further research is needed to better determine the significance of cognitive impairment, as well as comorbidities, and psychological well-being and their effects on ACPs' understanding of their prognosis. **CLINICAL IMPLICATIONS:** From a clinical perspective, based on neuropsychological tests of memory, language, and executive functioning, there may be evidence of mild cognitive impairment in ACP enrolled in phase I trials. Therefore, clinicians need to be aware of how the role of cognitive function may impact patient understanding of a terminal prognosis which may therefore affect ACPs' treatment decision making as well as overall quality of life. ACPs may benefit from neuropsychological testing prior to enrollment in phase I trials. **ACKNOWLEDGEMENT OF FUNDING:** This project is supported by a grant from the National Institutes of Health (NIH: CKD; RO1 CA 087605-01A1). The abstract itself was not funded.

P3.3.9

The Epidemiology of Psychiatric Disorders in Oncological Patients

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BACKGROUND: The data on the prevalence and spectrums of psychiatric disorders in oncology are sparse. There is a need in the analysis of a current state of a problem of accumulation of mental disorders in oncology taking in account characteristics of somatic pathology and personality predisposition and in the analysis of the current state and needs in the therapy of mental disorders comorbid with somatic diseases. **METHOD:** The innovative toolkit including guidelines specific structured clinical interview, registration card and battery of psychological tests was developed. Study sample included 505 oncological patients with different cancers hospitalized to Russian Oncology Scientific Center RAMS from January to November 2008 undergone psychiatric assessment. **RESULTS:** Mental disorders were diagnosed in 86.1% of study sample patients. Differences in distribution of different types of mental disorders in patients with different cancer diseases are established, as well as structural distinctions of psychosomatic interactions. Nosogenic reaction (NR) (or adjustment disorders according ICD-10) were the most prevalent psychiatric disorders in oncological patients and were diagnosed in 73.7% of the study sample. 75.6% of the sample patients needed the psychopharmacotherapy however actual

percentage of patients received such therapy was only 33.5%. **CONCLUSIONS:** The data obtained confirm the high prevalence and different distribution of psychiatric disorders in cancer patients. There is an unsolved problem of undertreatment of mental pathology comorbid to oncological diseases associated at least partly with underdiagnosing of psychiatric pathology in oncology. **RESEARCH IMPLICATIONS:** The data obtained confirm the need in further systematic studies on prevalence, typology and therapy of psychiatric disorders in oncological patients taking in account specific characteristics of personality, mental state and differences in cancer diseases (clinical presentation, stage, survival rates, therapy, etc). **CLINICAL IMPLICATIONS:** Reference guidelines on psychopathological syndromes in general medicine based on the study data and classification of mental disorders used in the study are prepared for publications and will be helpful for clinicians and other specialists working with oncological patients. **ACKNOWLEDGEMENT OF FUNDING:** The study was supported with the grant No. 08-01-00087-à from the Russian Foundation for Basic Research.

P3.3.10

Treatment of Nosogenic Reactions Associated with Gastric Cancer

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BACKGROUND: 50–90% cancer patients need psychopharmacotherapy and/or psychotherapy for treatment of comorbid psychiatric pathology. Nosogenic reactions (NR) (or adjustment disorders) are the most prevalent psychiatric disorders in oncology including patients with gastric cancer. Several studies confirmed efficacy of antidepressants and psychotherapy in the treatment of NR. However further studies in this area are still required because of major differences in psychiatric disorders spectrums among different cancers. **METHOD:** 97 patients (60 males), age 29–77 years hospitalized to Russian Oncology Scientific Center RAMS with verified diagnosis of gastric cancer and comorbid nosogenic reactions received study treatment. Methods of therapy varied depending on clinical type of NR: 1) dissociative NR (partial or complete denial of cancer)—psychotherapy (PsT) (group 1, $n = 62$) with following combination with or change for psychopharmacotherapy (PhT) if needed to cope with anxiety or depressive symptoms; 2) anxiety-depressive NR—antidepressant monotherapy (group 2, $n = 35$): fluvoxamine, escitalopram, sertraline or venlafaxine in minimal starting doses with following titration within standard dose

ranges for optimal effect. **RESULTS:** The primary aim of PsT in dissociative NR (adequate level of complacency with cancer therapy) was achieved in 60 from 62 patients in group 1 but with change of dissociation for anxiety and/or depression symptoms required the antidepressant use in 72% of responders to PsT. In group 2 after 6 week of antidepressant therapy there was 79% of responders (reduction of baseline HADS score by $\geq 50\%$) with relatively low mean optimal (risk/benefit) daily dosages. The adverse events were rare (only 13,5%) and of mild severity. No signs of drug-drug interactions observed. **CONCLUSIONS:** The therapy strategies proposed for NR treatment in gastric cancer patients are highly effective and safe. Good tolerability of antidepressants studied is at least partly explained by minimal daily dosages required for optimal therapeutic effect. **RESEARCH IMPLICATIONS:** The study data confirm reasonability of developing therapeutic approaches taking in account specific features of psychiatric pathology in different cancers. **CLINICAL IMPLICATIONS:** The study data may be used for optimisation of the therapy of psychiatric disorders in gastric cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.11

Is Screening for Distress Useful? Screening for Psychological Distress in an Irish Radiation Oncology Hospital

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BACKGROUND: The psychological distress of cancer patients is often overlooked in cancer hospitals. Barriers exist between patients and healthcare providers in recognition and management of a patient's distress. Supported by studies that report the prevalence of psychological distress worldwide it is recommended that distress be managed by screening (NCCN, 2008). This study aims at piloting the Distress Thermometer (DT) in screening for psychological distress in a radiation oncology hospital in an Irish context. **METHOD:** All new radical and palliative patients attending for radiotherapy will be sampled consecutively. Patients will be screened using the DT and the HADS will be administered as the criterion measure. A score of 4 or more on the DT is decided as a cut-off for distress. Demographic variables will be analysed using ANOVA to determine group differences and correlation analysis to determine association between distress and population characteristics. **RESULTS:** Preliminary results are promising and plan to report the prevalence of psychological distress in this population. The cut-off on the DT will be determined using receiver-operating characteristic

curve analysis (ROC) that yields the optimal sensitivity and specificity of the DT. Data analysis of demographic variables should yield interesting information on distress and this cancer population's characteristics. **CONCLUSIONS:** The potential findings will indicate if the DT is an acceptable measure for screening in this setting comparable to the HADS. The ROC curve analysis will determine an optimal cut-off point on the DT that can be utilised in future screening programs in the hospital. The prevalence of distress and demographic analysis will provide data for the psychosocial providers in the hospital on provision of enhanced services and interventions. **RESEARCH IMPLICATIONS:** We expect these findings will indicate the prevalence of psychological distress in an Irish context using the DT. It will determine the validity and the usefulness of the DT in an Irish radiation oncology hospital. This research complies with Irish cancer care policies, which recommends the use of screening in the management of psychological distress. **CLINICAL IMPLICATIONS:** The findings should imply that psychological distress be better managed through screening in the future which has implications for the enhanced provision of psycho-social services in the hospital. Potential benefits to patients include greater patient satisfaction that emotional needs are addressed and the provision of systematic care that is equal and fair to all patients. Potential benefits to staff are that the development of a comprehensive referral pathway to the psychosocial team are available for cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.12

Screening for Psychological Distress Among Oshiwambo-speaking Namibian Women Diagnosed with Breast or Cervical Cancer

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BACKGROUND: Research indicates that many cancer patients suffer psychological distress. Research regarding psychological distress in Southern Africa, particularly in Namibia, is scant. The objective of this study was to assess the prevalence of distress among Oshiwambo-speaking Namibian women with breast cancer or cervical cancer. Furthermore, the study explored the feasibility of the use of the Distress Thermometer (DT) and the Hospital Anxiety and Depression Scale (HADS) as distress screening tools within oncology settings in Namibia. **METHOD:** Data was collected at the Oshakati State Hospital's oncology out-patient clinic in Oshakati, Namibia. The sample consisted of 103 adult women diagnosed with either breast cancer or cervical cancer. Two self-report screening

instruments, namely the DT and the HADS were used. Both tools were translated into Oshiwambo. **RESULTS:** The HADS identified 28.2% of the subjects as distressed, whereas 32% and 18.4% were identified as experiencing anxiety and depression respectively. The DT, using a cut-off score of 5, identified 42.7% of the patients as distressed. Significant positive correlations between the DT and the HADS were found. **CONCLUSIONS:** This study support international research regarding the prevalence of psychological distress among cancer patients. It further supports the use of the DT and the HADS as screening instruments for psychological distress within the Namibian context. **RESEARCH IMPLICATIONS:** This study is a pioneering research regarding psychological distress of cancer patients in Namibia. It adds to the scant research in the field of psycho-oncology within the region. It further highlights the need for further research regarding psycho-oncology aspects in Southern Africa. **CLINICAL IMPLICATIONS:** The study highlights the potential need for routine screening for psychological distress among cancer patients in Namibia, as well as the need for the management thereof. The DT and the HADS may be suitable screening tools for this context. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.13

Transdisciplinarity in the Care of Patients with Mouth Cancer: A Report of Experience

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BACKGROUND: This report aims to outline the actions of the PAIM-BOCA—Program of Comprehensive and Multi-professional Attention to Patients with Mouth Cancer from the perspective of transdisciplinarity. The oral cavity cancer and its treatment bring up specific limitations such as loss of voice, problems in swallow, speech, and aesthetic problems causing difficulties in basic aspects like eating and communication, compromising the quality of life and changing the routine of patients and their families. **METHOD:** The team comprises medical oncologists, head and neck surgeons, oral surgeons, physiotherapist, psychologist, speech pathologist and dental hygiene technician. The cases are discussed collectively, and depending on the situation they can carry out joint actions such as treatment planning, pre-surgical preparation of patient and/or chemotherapeutic and radio-therapeutic treatment, implantation of maxillofacial prosthesis immediately after resection of the tumor, recovery of masticatory and phonatory functions, social

reintegration and others. **RESULTS:** The actions proposed by PAIM-BOCA favor the exchange of knowledge and experience among different professionals who work on the treatment, diagnostics and rehabilitation of these patients, promoting a better quality of life. In addition to the actions directed to patients and their families, the staff of PAIM-BOCA also makes health promotion and prevention activities and develops training and coordinate the actions of professionals working in public health system. **CONCLUSIONS:** The proposal for a transdisciplinary intervention initially presented as a challenge to the team, but the interaction among different disciplines has been a major tool to the comprehensive approach of the care, strengthening the practice of professionals engaged in the program and contributing with the recovery of patients reducing their impairment, anxiety, depression, fear and anguish. **RESEARCH IMPLICATIONS:** Various studies point out the need of a multi-professional assistance to patients with cancer. The present study hopes to contribute to new researches that enlarge the knowledge of this therapeutic modality along with the care provided to the patient with cancer. **CLINICAL IMPLICATIONS:** The interaction among different disciplines has been a major tool to the comprehensive approach of the care, which contributes to improving the quality of life and rehabilitation of the patient. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.14

Psychiatric Disorders in Cancer Patients: Experience of the Psycho-oncology Unit at the University Hospital of Caracas, Venezuela

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BACKGROUND: Oncology patients suffer emotional and behavioral disorders during treatment that may significantly affect their treatment and quality of life. International literature shows that 20–30% of such patients have psychological disorders but this data is currently unknown in Venezuela, South America. Early identification and psychological support to patients and families can influence for a better adaptation to disease processes. Here, integrated medical and mental health staff should direct their efforts. **METHOD:** A descriptive field study was carried out with the Psycho-oncology Unit 2007–2008 patients dataset. Such data was collected conducting clinical interviews by a psychiatrist and two clinical psychologists (incl. one psycho-oncologist), and analyzed in

percentage of psychiatric disorders. The clinical diagnosis was based on the DMS-IV-TR. RESULTS: 795 first-visit patients (19.1% of all service patients) and 2110 successive visits were evaluated, 22.9% of which are family members. The most frequently medical diagnosis was breast (23.2%), uterine (10.3%) and cerebral cancer (7.8%), among others. Psychiatric disorders were diagnosed in 73.8% of the patients, among which mood disorders have greater prevalence, such as adjustment disorder (29.8%), bereavement (25.2%), depressive episode (17%), as well as anxiety (4.8%) and sleep disorders (5%), among others. The psychosocial and environment problems most frequently observed were related to primary support group (21.6%), economic (10.9%), and access to health care system (7.4%), among others. CONCLUSIONS: Psychiatric disorders of oncology patients are not inevitable. On the contrary, a close follow-up should be made to early detect and treat symptoms. An adequate diagnosis should offer a treatment suitable to the patient's needs and factors influencing the proper adaptation to the disease. Therefore, the integrated work of medical staff is of vital importance to learn the psychological factors significant in such adaptation and treatment. This coordinated effort also allows learning how to identify when to refer a patient to the psycho-oncologist for support, and consequently improve his/her quality of life. RESEARCH IMPLICATIONS: This study will offer guidance to revise screening methods to early identify psychiatric disorders that may delay patient adaptation. It also highlights the need of future research of some psychiatric disorders in such patients. CLINICAL IMPLICATIONS: The psychiatric disorders prevalence will provide guidance to facilitate psychological support, and suitable treatment to patients. It will also provide useful data to develop integrated oncological and psycho-oncological programs for a better health care. ACKNOWLEDGEMENT OF FUNDING: None.

P3.3.15

Psychological Correlates of Colorectal Cancer

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BACKGROUND: The attempt to identify personality types tending toward cancer in general or specific cancers in particular is of long standing. Yet previous studies yielded inconclusive findings (e.g., Type C). The purpose was to identify personality correlates of colon cancer patients. The study improves on former attempts by considering medical variables and by applying a new psychological

methodology grounded in the cognitive orientation (CO) theory. METHOD: The participants were 230 colorectal cancer patients of both genders, in the age range of 35 to 75, 99 healthy individuals, and 90 Crohn patients. The healthy individuals and Crohn patients were matched in demographic features to the cancer patients and served as control groups for the cancer patients. All participants were administered the CO questionnaire which included items referring to four belief types (about oneself, norms, reality and goals) concerning themes identified as relevant for colorectal cancer in pretest interviews. RESULTS: One way analyses of variance and discriminant analysis showed that the questionnaire scores differed as expected among the groups and provided a highly significant correct identification of cases of the three groups. As expected, the CO scores in Crohn patients—known to be at risk for cancer—were higher than in the healthy controls but lower than in the cancer patients. The results showed that the main psychological features of the patients include controlling themselves and others, pent-up anger, increased demands of themselves and striving for perfection. These features were independent of demographic and medical characteristics. CONCLUSIONS: The CO questionnaire of colorectal cancer identifies correctly colorectal cancer patients and differentiates between them and Crohn patients as well as healthy controls. The personality correlates of colorectal cancer can be summarized as focused on the tendencies for perfect duty performance, and two contradictory thematic pairs: self effacement versus self assertion, and closeness to others versus distancing from others. These tendencies constitute potential sources of tension. RESEARCH IMPLICATIONS: The CO theory is supported as a theoretical framework for studying psychological risk factors for cancer. Advance has been made in identifying potential psychological risk factors for colorectal cancer. The study may be used as a paradigm for studies with other cancer diseases. The CO questionnaire of colorectal cancer may be applied in further studies. CLINICAL IMPLICATIONS: The findings enable planning targeted psychosocial interventions with colorectal cancer patients. These interventions will focus on the themes and conflicts that have been found to be of particular relevance for colorectal patients. ACKNOWLEDGEMENT OF FUNDING: None.

P3.3.16

Screening for Psychological Distress Among Patients with Advanced Cancer in Ireland: A Pilot Study

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BACKGROUND: Persons with cancer are at high risk of experiencing severe levels of psychological distress. Because cases of distress often go unrecognised in clinical settings, effective distress screening methods are a key component of comprehensive cancer care. This paper describes the pilot phase of the first validation study of the NCCN Distress Thermometer (DT) among patients with advanced cancer. In addition, the paper examines methodological challenges encountered in conducting psychosocial research among patients with advanced cancer. **METHOD:** A consecutive sample of 20 patients with advanced cancer were recruited in a hospital setting. After being screened for cognitive impairment, the patients participated in a face-to-face interview with a research psychologist. The study instruments included the DT and Problem Checklist, the Hospital Anxiety and Depression Scale (HADS), the PTSD Checklist Civilian Version (PCL-C), Arrol *et al.*'s (2005) two-item depression screening tool and 'help' question, as well as the NCCN screening items for pain and fatigue. The interview also included selected modules from the SCID-I (DSM-IV) as the 'gold standard' for the validation of the DT and the PCL-C. **RESULTS:** The paper will report preliminary findings in relation to levels and predictors of distress, as well as associations between SCID diagnoses and scores on the DT, the PCL-C and the HADS. **CONCLUSIONS:** The DT and the PCL-C are acceptable screening tools for distress and trauma in patients with advanced cancer in Ireland. **RESEARCH IMPLICATIONS:** Findings from this pilot study will be examined in relation to their implications for conducting psychosocial research among patients with advanced cancer. Specific issues that will be examined include the participant recruitment process and the mode of administration (oral versus self-administration) of self-report instruments. **CLINICAL IMPLICATIONS:** This study will provide pilot data on the ability of the DT to detect psychological distress among patients with advanced cancer. The study findings may further endorse the role of the DT in the clinical setting for early distress detection in patients with cancer, thus facilitating early referral and treatment of distress and enhancing patients' psychological health outcomes. **ACKNOWLEDGEMENT OF FUNDING:** The Irish Cancer Society.

P3.3.17

Developing Psycho-oncology Education in Ireland—the First Five Years (2004–2008 Inclusive)

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BACKGROUND: In 2004 professional development modules in psycho-oncology, run through the

School of Nursing and funded by the Irish Cancer Society, were accredited in Dublin City University at under- and post-graduate level. By end 2007 approximately 300 students had availed of the pilot programme, which aimed to facilitate health care professionals and volunteers to address the psychosocial needs of people with cancer and their families, and to reduce their own incidence of burnout. **METHOD:** Utilising IPOS/APOS guidelines, educational/professional development descriptors were developed for the modules: Terminal Illness and Bereavement (Level 5-Postgraduate); Working with People Affected by Cancer 2 (Level 5-Postgraduate); Working with People Affected by Cancer 1 (Level 4-Undergraduate); A Psycho-oncology Programme for Volunteers (Level 2-Undergraduate). Students were required to submit a written assignment to gain university credits. Lectures were evaluated each day with the LecTrain evaluation tool. **RESULTS:** All study days met with students' expectations and lectures were evaluated positively. An increase in percentages, post- compared to pre-lectures, of students' understanding of concepts, models and issues relevant to the optimal psychosocial care of the person with cancer, was evident in all modules' evaluations. **CONCLUSIONS:** The strong post learning effect demonstrates the impact of training and education on students' understanding and knowledge acquisition in psycho-oncology. **RESEARCH IMPLICATIONS:** The follow-on development of this project is the establishment of further psychosocial oncology education and research at DCU. A new Graduate Diploma/MSc in Psycho-Oncology has been accredited, supported by the USA/Poland IPOS training team as well as a North South Ireland project development group and will run from September 2009, initially on a pilot basis. A Needs Assessment for establishing psychosocial oncology education in Ireland was conducted to support the validation and accreditation process. **CLINICAL IMPLICATIONS:** Student evaluations indicated that the professional development modules in psycho-oncology were highly relevant to their clinical practice and showed an awareness of the need for postgraduate psycho-oncology education to enhance quality of psychological care for patients with cancer and to increase services and research in psycho-oncology. **ACKNOWLEDGEMENT OF FUNDING:** Acknowledgement of Research Funding: Irish Cancer Society.

P3.3.18

The Role of Carers of People with Advanced Cancer and the Impact of Their Caring

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BACKGROUND: With an increasing trend for advanced cancer patients to be cared for at home, family carers are playing a vital role in palliative and end-of-life care. This project aimed to investigate the role and impact of caring for someone with advanced cancer. This qualitative phase is a part of a larger study aimed to quantify the carer role through development of an instrument. **METHOD:** Semi-structured interviews were conducted with a total of nineteen carers—fourteen currently caring for someone with advanced cancer, and five bereaved carers. Carer involvement in the patients' illness and treatment, subsequent changes to their life and use of supports were discussed. Data was analysed with grounded theory methodology. **RESULTS:** Several themes emerged from the data. Carers assume a significant role during the patient's illness. There are several challenges that make this role more difficult, such as financial or work commitments. While supports can assist in the role, they often come at costs such as reduced privacy. Assuming the caring role can cause severe impact to a carers' life, including loss of employment or change of residence. Furthermore, the data indicated that caring can result in changes to self-identity. Depression, anxiety and high levels of sadness are evident in some carers. Self-efficacy appeared to be an important construct to carers. Confidence in their caring is relevant to resilience regarding challenges, accessing supports, asking for assistance when needed and maintaining a sense of self-identify. The relationship between all themes will be discussed. **CONCLUSIONS:** Carers take on what can often be an overwhelming role to look after someone with advanced cancer. This study shows self-efficacy is relevant in managing the caring role. **RESEARCH IMPLICATIONS:** The next phase of this study will develop and assess an instrument to measure self-efficacy in carers of people with advanced cancer. Further research can explore the relationship between carer and patient outcomes and evaluate carer uptake of services. **CLINICAL IMPLICATIONS:** Carers can experience negative psychosocial outcomes from caring. Meeting patient needs may be limited when carers have outstanding needs themselves. Addressing carers well-being, coping and available supports is vital. **ACKNOWLEDGEMENT OF FUNDING:** This study has been funded with a National Health and Medical Research Council Palliative Care PhD Scholarship.

P3.3.19

Overcoming the Tyranny of Physical and Psychological Distance: Pilot Testing Use of Information Communication Technology to Address the Needs of Adolescents and Young Adults with Cancer

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BACKGROUND: Information communication technology (ICT) use has caused a fundamental revolution in human interaction. Adolescents and young adults (AYA) living with cancer are amongst the most disadvantaged and isolated patients in the health care system. Given that AYA are a generation of highly ICT-literate people, ICT offers a crucial mechanism to address this inequity. This project developed and pilot tested innovative ICT-based peer-support intervention for AYA. **METHOD:** We developed a peer-based social support system to promote social connectivity between AYA with cancer. An integrated ICT service, named 'MyTrac' was created which linked an online social network application ('Ning') and mobile phones ('Twitter'). Seven AYA with cancer were recruited to pilot test the system over 12 weeks. Each participant was provided with a laptop shown the MyTrac site and signed up for Twitter on their mobile phones. They completed face-to-face interviews at baseline, 6 weeks and 12 weeks. System audit logs documented participants use of the system and content of their communication. **RESULTS:** All participants except one built their own personal pages on My Trac. The personal pages contained clinical details as well as personal information and photographs. Six participants invited others to join the site and three became regularly contributors to the site. Twitter was extensively used. Most exchanges involved reports of daily activities, thoughts and feelings. One exchange initiated by one participant from an ambulance during a medical crisis, was highly emotionally charged, and drew mixed support from the other participants which resulted in his voluntary withdrawal from the project. Three participants formed a close and enduring supportive relationship as a result of this intervention. The remaining three participants registered limited engagement. **CONCLUSIONS:** Combining online social networking applications with mobile phones was successful in promoting social connectivity. However, this type of interaction only suited some participants and has raised ethical issues of how to maintain participant safety in a virtual world. **RESEARCH IMPLICATIONS:** Rigorous research is needed to provide a sound evidence-base for innovative and sustainable ICT interventions to facilitate peer-support, enhanced self-care and management of clinical and supportive care needs. **CLINICAL IMPLICATIONS:** The practical and ethical issues of using integrated, emerging ICT platforms to deliver supportive care interventions need more research. **ACKNOWLEDGEMENT OF FUNDING:** This project has been funded by Cancer Australia grant and Telstra provided technological support.

P3.3.20

The Role of Anticipated Regret and Illness Representations in Colorectal Cancer Future Preventive Health Behaviours

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BACKGROUND: Since the benefits of preventive health behaviours (PHBs) are often delayed, immediate means are needed to motivate present behaviour for future gain. Anticipated affect may provide this motivation. This study applied the self-regulation model to determine the role of illness representations and anticipated regret in intended colorectal cancer PHBs in a healthy population. Using a randomised controlled design, anticipated regret was experimentally induced to determine the potential role of anticipated affect in determining future PHBs. **METHOD:** Participants ($N = 109$) recruited from the community and the university completed questionnaires regarding current colorectal cancer risk (based on current health behaviours and medical history); perceived risk for colorectal cancer; and colorectal cancer-related illness representations using the revised Illness Perception Questionnaire. Then half of the participants were randomised to either a regret-inducing (hypothetical scenario to imagine feeling regret after developing colorectal cancer and not previously not undertaking PHBs) or a control condition (no additional information). Following randomisation, future intentions to undertake the seven PHBs currently recommended by the National Health and Medical Research Council for colorectal cancer prevention were assessed. **RESULTS:** Most participants (84%) rated average or below average perceived risk for colorectal cancer, while 90% of participants currently enact approximately equal numbers of health-protective and health-harmful behaviours. Participants in the regret condition reported high regret if the scenario were to occur in real life. Mean intention to undertake the seven PHBs was 28 out of 35, indicating moderate intentions. Controlling for age, BMI, and income, regression analyses demonstrated that current CRC risk and illness representation of treatment control were associated with intentions to carry out PHBs. Contrary to predictions, participants experiencing anticipatory regret reported lower intentions to enact future PHBs. **CONCLUSIONS:** This study extends the application of the self-regulation model to healthy populations and the colorectal cancer context. It is the first study to explore the role of anticipated regret in this context as a possible means of motivating future health behaviours. Of all the illness representation assessed only treatment control was associated with intention to undertake PHBs in the future. The strongest predictor of

PHBs was actual risk which was primarily determined by current health-protective and health-harmful behaviours. Anticipated regret served to decrease intentions to carry out future PHBs, contrary to expectation. **RESEARCH IMPLICATIONS:** Surprisingly, treatment control was the only illness representation related to future PHB intentions. These findings may reflect the comprehensive array of health behaviours assessed along with this being a sample of healthy individuals for whom colorectal cancer representations may be poorly formed. Affective representations of colorectal cancer risk, were not associated with intentions to carry out PHBs, and the role of anticipated regret was found to have an inhibitory effect on future behavioural intentions. **CLINICAL IMPLICATIONS:** These results suggest that to improve intentions to undertake preventive health behaviours related to colorectal cancer risk, interventions need to focus on enhancing positive perceptions regarding treatment control, and continuing support of, and motivation for, present risk reducing behaviours. In the colorectal cancer context, manipulation of anticipated affect in the form of regret does not appear to be a useful approach to increase adherence to the desired healthy behaviour patterns. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.3.21

Knowledge and Attitudes of Community Counselors/Educators About the Human Papillomavirus (HPV) Vaccine for the Prevention Cervical Cancer: A Knowledge Translation Pilot ProjectZeev Rosberger¹, Andrea Krawczyk², Susie Lau¹, Sara-Lyn Moore¹¹*Segal Cancer Centre-Jewish General Hospital & McGill University, Montreal, Quebec, Canada,*²*McGill University, Montreal, Quebec, Canada*

BACKGROUND: Much misinformation exists in the community regarding the safety and efficacy of newly recommended (HPV) vaccines for the prevention of cervical cancer. While the data have been extremely positive to date, there remains much confusion and resistance on the part of parents and adolescents who must provide consent. Parents and children lack accurate information about the HPV vaccine and fear that the vaccine may have dangerous, as yet unproven, side effects or promote sexual promiscuity. **METHOD:** Community-based educators and counsellors must be prepared to answer parent's questions regarding the HPV vaccine and cervical cancer prevention to ensure that parents make the best preventive health decisions for their children. Thirty-seven educators and counsellors working for a community social service agency were invited to a 2-hour information workshop on HPV and the HPV vaccine. These

individuals' roles are to organize parents' parlour groups and group sessions for students around topics, e.g., health, sexuality, psychosocial development, etc. The presentation was delivered by an expert in the field and provided the most up-to-date clinical and epidemiological data regarding HPV, HPV testing and Pap screening, and the HPV vaccines in an interactive format. Questionnaires were completed before and after the session to examine changes in knowledge accuracy and attitudes. **RESULTS:** There was a significant increase in knowledge accuracy (mean correct answers = 12.7 vs 17.4, $p < .03$) out of twenty items. They were more confident in their knowledge accuracy, though no immediate feedback was given ($p < .002$), and more likely to recommend the vaccine ($p < .001$). **CONCLUSIONS:** A brief information session can be effective in enhancing factual knowledge and confidence about the HPV vaccine among educators and counsellors who provide health information parents of school age children. **RESEARCH IMPLICATIONS:** The next steps in this project in knowledge translation will include evaluation of the knowledge, attitudes and decision-making of parents and children who attend community-based sessions given by the educators and counsellors in the present study. **CLINICAL IMPLICATIONS:** Parents and children should be able to make decisions regarding the HPV vaccine. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research, Clinical Research Network on HPV and related diseases.

P3.4.1

Educating Staff and Patients on Providing Advance Directive Information upon Admission to a Cancer Center in Taiwan

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BACKGROUND: In Taiwan, the signing of a Do-Not-Resuscitate (DNR) order became a law in 2000. At our cancer center, we plan to offer Advance Directive information (AD) to patients upon inpatient admission. However, because of cultural concerns, some patients and hospital staff voice objections. This study proposes to educate and prepare hospital staff and patients on the feasibility of the project. **METHOD:** Series of in-depth discussions about the project were conducted with the Palliative Team of the Cancer Center in year 2005 and 2006. The study was formally approved by the Palliative Committee and the

Clinical Ethics Committee in Sept. 2006. Recommendations were solicited from staff, some patients and their families and friends. A series of extensive educational activities were launched through hospital wide lectures, publications and television programs, between October 2006 and March 2007. In addition, an e-learning program was set up for the entire hospital staff. **RESULTS:** 75% of all hospital staff have passed the tests of the e-learning program regarding AD. Up to 90% of the staff that answered the additional questionnaires expressed willingness to sign the advance directives. Documents regarding AD were provided to all patients upon admission to the Cancer Center beginning March, 2007. Most of the hospital staff was already comfortable with this process by then. Less than 2% of the patients and families gave negative feedbacks. Though the majority of the patients ignored it, a surprising few signed the living will, including the health care proxy. **CONCLUSIONS:** Promoting the awareness of AD to patients upon admission to a cancer center in Taiwan is feasible with proper prior educational outreach to staff and patients. Once it is done, most of them are receptive to it. **RESEARCH IMPLICATIONS:** This study was conducted at a cancer center in Taiwan. Further investigations will be needed to assess whether this finding can be generalized in general hospitals and other Asian countries. **CLINICAL IMPLICATIONS:** Future clinical work will continue to emphasize these educational efforts to encourage ongoing dialogue between patients, their families and healthcare professionals regarding AD and end-of-life care issues. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.4.2

Home Care of Palliative Patients—Description of Patients and Relatives in the Region of Leipzig

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BACKGROUND: Only 25–40% of palliative cancer patients receive health care at home, although it would be achievable for 60–80%. In order to improve outpatient palliative care valid data are necessary to describe conditions of a succeeding or failing ambulatory palliative care. The presented project is funded by the 'Else Kröner-Fresenius-Stiftung' and shall examine beneficial as well as impedimentary factors of outpatient palliative care. It will provide results for the health care policy and scientific discussion. **METHOD:** Within a prospective study design 100 palliative cancer patients and 50 caring relatives were interviewed several times (t1–tx). On the basis of standardized questionnaires and manual

interviews data were collected concerning quality of life (EORTC), control of symptoms (HOPE), satisfaction with care (ZUF) and psychological distress of patients and relatives (BSFC). The sample of palliative patients ($N = 100$) consists of 50 women and 50 men between 41 and 96 years. RESULTS: At the beginning of ambulatory care the interviewed patients suffer most frequently from tiredness (63%) and weakness (62%). More than one third of the patients (35%) has middle to strong pain at this time of domestic care. Every fourth patient feels strongly fearful (25%) and depressive (34%). The maintaining relatives are to a large extent the life partners of the patients (76%) and more frequently female. Approximately every sixth patient is being cared by his or her child (16%). 80% of the interviewed relatives ($N = 50$) do have health complaints at the beginning of home care. CONCLUSIONS: Tiredness and weakness are the main symptoms with home supplied patients in palliative situation. The majority of the caring relatives are wives. They have a high need of psychosocial support and a large supply deficit exists. RESEARCH IMPLICATIONS: The results presented here require validation by further research with larger sample sizes. Especially the caring relatives and their needs have to be focused more detailed. CLINICAL IMPLICATIONS: Symptom control in palliative outpatients should be done by trained specialists in palliative-care. In order to ensure that relatives are prepared for probable problems that might hit them in the caring situation at home, they should be better informed about requirements of home care. ACKNOWLEDGEMENT OF FUNDING: The presented project at the University of Leipzig is funded by the 'Else Kröner-Fresenius-Stiftung'.

P3.4.4

Delirium Phenomenology in Terminal Cancer

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BACKGROUND: Delirium is a major problem in terminal cancer care. Disorientation, inappropriate behaviour, inappropriate communication, illusions, and hallucinations are among the most frequent delirium symptoms. However, few studies described the frequency and the circadian pattern of these symptoms, which may have a significant impact on clinical issues and care planning. Objective: To describe the prevalence and the circadian pattern

of delirium symptoms in terminally ill cancer patients. METHOD: 2515 patients admitted in 7 palliative care units in Canada were followed prospectively over a 3 year period. Demographic and medical data was recorded upon admission. The Confusion Rating Scale (CRS) was used for delirium screening. Delirium symptoms rated by the CRS were: disorientation, inappropriate behaviour, inappropriate communication, illusions, and hallucinations. Bedside nurses completed the CRS on every work shift. A score of 2 or higher on the CRS was considered positive and associated with significant delirium symptoms. RESULTS: Overall, patients were screened positively for delirium in 6.2% of the nurse shifts ($n = 9020$ on 144 388). Surprisingly, significant delirium symptoms were more often detected during daytime (7.2% of the work shifts) compared to evening (6.4%) and night shifts (5.1%) ($p < 0.001$). When patients scored positive on the CRS, disorientation was the most frequent symptom recorded (87.8%), followed by, inappropriate communication (80.6%) and by inappropriate behaviour (48.1%). Nurses rated positively the 'illusions and/or hallucinations' item in only 17.2% of the positive CRS. CONCLUSIONS: Disorientation is the most common delirium symptom detected by the CRS, followed by inappropriate communication, inappropriate behaviour, and illusion and/or hallucinations. Significant delirium symptoms are more often detected, in decreasing order, during the day, the evening and the night. RESEARCH IMPLICATIONS: Observed delirium phenomenology and circadian pattern need further studies to explain their occurrence, especially in regard with medication prescribed. CLINICAL IMPLICATIONS: Cognitive and behavioural symptoms, especially disorientation, represent the most frequent delirium symptoms observed. Delirium remains a prevalent condition in every work shift. ACKNOWLEDGEMENT OF FUNDING: Supported by funding from the National Cancer Institute of Canada with funds from the Canadian Cancer Society (Grant no. 14371).

P3.4.5

Insight Among Patients in a Palliative Care Ward for Terminal Cancer Patients

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BACKGROUND: Many cultural factors influence the insight of cancer patients. In Korea, many caregivers and members of patients' families are reluctant to fully inform patients about their condition. For patients in a palliative care ward (PCW), the problem of disclosure is more complicated because they do not have sufficient time to communicate. This study examined insight among patients in a PCW. **METHOD:** The subjects were patients admitted to the new PCW at Chonnam National University Hwasun Hospital between July 1, 2008 and January 6, 2009 and their families. A psychiatrist interviewed each patient or a family member to determine the patient's level of insight regarding the diagnosis of cancer, its terminal nature, and the admission to the PCW. The level of insight was categorized as 'Aware,' 'Unaware,' or 'Unclear.' The patients' demographic characteristics and medical history were obtained from a review of the medical records. **RESULTS:** In all, 60 patients agreed to the interviews. Almost all patients were aware that they had cancer (91.7%), although only 45.6% of the patients were aware that their disease was terminal. Regarding their insight about the PCW, only 30.4% of the patients were aware that they had been admitted to a PCW, whereas 50.0% of the patients were unaware. During their stay in the PCW, 58.3% of the patients died and mean survival was 15.69 days. A lack of insight regarding their admission to the PCW was significantly related to death during the time in the PCW ($p = 0.090$). **CONCLUSIONS:** Those patients who were unaware of their diagnosis of cancer thought that they had some other disease or that they had a tumor, but not cancer. Their families did not want to disclose this information to the patients, because they thought that it would make the patients feel hopeless. Some of the patients who were unaware of the nature of the PCW thought that it was a medical ward and hoped for curative treatment. In most of the cases in which the patient was unaware, the patient's family arranged for admission to the PCW after the doctor recommended end-of-life care. **RESEARCH IMPLICATIONS:** The study was limited by the small number of patients. Future investigations with more participants should examine the influence of level of insight on the mental health of patients and caregivers. The cultural basis for refusing to disclose information that might lead to insight must also be studied. **CLINICAL IMPLICATIONS:** Many patients admitted to the PCW had poor insight into their condition and the nature of their palliative care. This distorts the meaning of palliative care, which involves preparing for the end of life. In such circumstances, patients die without making such preparation. This is a serious problem that has a negative influence on the mental health of the patients and their families. More education about skills at communicating bad news is critically needed.

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P3.4.6

Spirituality in Palliative Care Nurses: An Interpretative Phenomenological Analysis

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BACKGROUND: Nurses' work with dying patients may confront them with death on a daily basis. Many authors suggest that nurses' own spiritual experience may help them to accompany patients' spiritual needs as they approach end of life (Miner-Williams, 2006; Grey, 2006). The aim of this qualitative study was to describe and to provide a better understanding of the personal spiritual and existential experience of palliative care (PC) nurses. **METHOD:** Eleven nurses providing palliative care in different settings participated in semi-directed interviews in which they were invited to describe and explore their spiritual experience as well as their personal understandings of spirituality. Interviews were transcribed and imported in N'vivo software for qualitative analysis. Codification, analysis and interpretation of interview material followed Jonathan A Smith's interpretative phenomenological analysis (IPA). **RESULTS:** Analysis revealed the emergence of five themes to describe nurses' spiritual experience: (1) the importance of living according to personal values, (2) inner strength, (3) meaning and purpose of life, (4) sense of connexion in interpersonal relationships, and (5) mindfulness. Some nurses experienced spiritual suffering as well as existential questioning. A sense of coherence between values, wishes and actions seemed to characterise spiritual well being. **CONCLUSIONS:** Spirituality, as described by the five emerging themes, may help nurses transcend daily death confrontation in their work with the terminally ill. **RESEARCH IMPLICATIONS:** Previous research on health care providers' spirituality has mostly focused on spiritual care or on nurses' perceptions of patients' spirituality. Recognizing the importance of PC nurses' spirituality in the ability to assess and accompany patients' spiritual needs, this study adds to the body of knowledge by developing a better understanding of palliative nurses' spiritual and existential experience. **CLINICAL IMPLICATIONS:** This understanding of palliative care nurses' spiritual and existential experience may also help to design proper interventions for nurses to help them cope with daily death confrontation by developing their spiritual awareness. In the long run, nurses' awareness of their own spiritual and existential experience may result in better spiritual care for patients. **ACKNOWLEDGEMENT OF FUNDING:** The first author would like to thank the Canadian Institutes of Health Research.

P3.4.7

Palliative Care in Canada: The Economic Perspective for Families and Health Care System

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BACKGROUND: Given the trend towards the deinstitutionalization of palliative care in Canada, the role of informal caregivers in providing care and assistance to end-of-life patients is on the rise. Despite the growing number of studies assessing palliative care costs, the sharing of palliative care costs between the public health system, families, and non-for-profit organisations remains unclear. The present study aimed at providing a comprehensive picture of palliative care costs, and specifying how these costs are shared. **METHOD:** A prospective longitudinal survey of 248 patients (mainly cancer patients) registered in a regional palliative care program in five urban regions across Canada and their informal caregivers was performed. A first face-to-face interview was conducted in the patient's home, and subsequent follow-up data were collected by phone at two-week intervals until the patient's passing or up to a maximum of 6 months. The survey questions prompted participants to provide information on the types and number of goods and services they used (related to the patient's condition), and to identify who paid for these goods and services (the government, the family, a non-for-profit organization, or another payer), and by what percent. Participants were also asked questions about informal caregiving time. **RESULTS:** The present study provided a picture of costs occurred by palliative care patients and their families, and specified how these costs were shared between the government, families and non-for-profit organizations. The most important cost component supported by the government was inpatient hospital care, followed by home care. A large part of costs supported by families was attributable to informal caregiving time. Almost all costs assumed by non-for profit organizations were for medical equipment or aids used by patients in their home. **CONCLUSIONS:** The study results allow us to draw a clear picture highlighting the extent to which, and the areas that, families need to be financially assisted in their efforts to care for their dying loved ones at home. The following question should be addressed: Is the financial burden put on families 'socially' acceptable? The decision to dying at home when the context is favourable to do so should not have as a consequence an unfairly shift of the financial burden from the health care system to the families. **RESEARCH IMPLICATIONS:** This study proposes a comprehensive approach to estimate costs related to palliative care, including both *direct* costs

(those related to goods and services used) and *indirect* costs (those attributed to informal caregiving time). **CLINICAL IMPLICATIONS:** The knowledge gained from this study could allow clinicians to have a better understanding about the extent of the financial burden faced by families looking after terminally ill patients at home in an occidental country. It would also be useful in guiding financial support programs for these families. **ACKNOWLEDGEMENT OF FUNDING:** This research was funded by the Canadian Institutes of Health Research (CIHR) (grant no. 123695).

P3.4.8

Improving End-of-life Care and Services in the Intensive Care Unit (ICU): to Better Understand Stress Factors Linked to Satisfaction and Well-being of Nurses

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BACKGROUND: ICU nurses have to face many stressors such as death every day. They have to provide curative care and easily shift to palliative care in a short period of time. The objective of the first phase of this three-phase research program is 1) to describe the stress factors associated with end-of-life care provided by ICU nurses, and 2) to better understand the impact of the work environment on the level of satisfaction and well-being of those nurses. **METHOD:** Participants are being recruited in five clinical settings of three cities of the province of Québec: 1) Québec City, 2) Trois-Rivières, and 3) Montréal. Eight one-hour focus groups with a total of 35 ICU nurses have been conducted by a researcher and the research coordinator using a semi-structured interview guide. Focus group discussions are audiotaped, and data is analyzed using InVivo software. So far, a total of 8 focus groups have been completed. **RESULTS:** Three categories of stressors have been described: 1) organizational, 2) professional, and 3) personal. A lack of human resources and nurses not being involved in decision making are organizational stressors that ICU nurses have to deal with. Professional stressors include the lack of education in end-of-life care, and the lack of time

to provide care to patients and their family. Ethical dilemmas appear to be a major personal stressor with end-of-life care in the ICU. Nurses often have to deal with conflicts between two or more moral imperatives as there are different therapeutic views between them, doctors and families. **CONCLUSIONS:** Ultimately, the objective of this research project is to improve the context in which end-of-life care is provided, including intensive care units (ICU), in order to develop a conceptual framework aimed to better understand the impact on the level of satisfaction and well-being of nurses. **RESEARCH IMPLICATIONS:** Preliminary results of this study have allowed the description of stressors related to end-of-life care in the ICU, and will contribute to the development of a conceptual framework to better understand the satisfaction and the well-being of nurses. **CLINICAL IMPLICATIONS:** Results from this study could support clinicians in the development of training educational programs for nurses who provide end-of-life care in the ICU, and could allow decision-makers to better understand the sources of stress of those nurses so that they could improve the work environment, the attraction for nursing as well as the retention of nurses. **ACKNOWLEDGEMENT OF FUNDING:** CIHR Canadian Institutes of Health Research; CHSRF Canadian Health Services Research Foundation; MSSS Ministère de la Santé et des Services Sociaux; IRSST Institut de recherche Robert-Sauvé en santé et en sécurité du travail.

P3.4.9

Care of the Dying in an Oncologic Palliative Care Unit

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BACKGROUND: Over the last years, there has been an increasing development of Portuguese palliative care teams in the hospital setting, but we cannot expect that they can be involved with every patient who needs them. In the last days of life, patients become weaker and show common characteristics. The Liverpool Care Pathway (LCP) is a multi professional document with appropriate guidelines based on evidence related to care of the dying. **METHOD:** Objective: To characterize how patients are cared in the last days of life in an oncologic palliative care unit. Sample: Twenty oncologic palliative care patients in the last days of life who died in June 2008 in the Palliative care Unit in Oncologic Portuguese Institute of Porto. Methods: Analysis of twenty multiprofessional routine notes (nurses, doctors, psychologists, social workers) of the twenty oncologic palliative care

patients in the last days of life, using the base review formularies given by the LCP team. **RESULTS:** There were LCP goals that were frequently achieved (more than 70%): current medication assessed and non essentials discontinued; prn subcutaneous medication written up for pain, agitation, respiratory tract secretions, nausea and vomiting and dyspnoea; awareness of diagnosis (patient and family/other) and identify how family wants to be informed of patients impending death. There were LCP goals that were not or poorly achieved: the decision to discontinue inappropriate nursing interventions, assess religious/spiritual needs, give family/ other hospital information leaflet, inform general practitioner of patient condition or death and the four hourly nursing procedures (mouth care or check the syringe driver). **CONCLUSIONS:** The results have shown that the professionals don't usually write in the routine notes all their planned interventions and the use of the LCP form may help the team members as an aide memoir of all the important elements of care in the last days of life. It also reduces the amount of information to register because it is all in one multiprofessional document. **RESEARCH IMPLICATIONS:** The implementation of the LCP will improve research and audit in the last days of life and promote the continuity of care. **CLINICAL IMPLICATIONS:** It is important to see that, although the study was conducted in a palliative care unit there is still plenty of work to do concerning to the care of patients in the last days of life. The major benefit of the LCP is that it minimizes the documentation, which leaves the professional with more time to spend with the patient and their family, but it also promotes the delivery of good care. **ACKNOWLEDGEMENT OF FUNDING:** APCP—Associação Portuguesa de Cuidados Paliativos.

P3.4.10

The Concept of Family Needs and Necessities in Palliative Care

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BACKGROUND: In palliative care, both patient and their family are the focus of the team's intervention. This team has got the responsibility of check family general and specific needs. **METHOD:** Objective: To reflect about the concepts: family general necessities (family needs) and specific family necessities (family necessities). Key words: family needs e family necessities. Methods: Meta-analysis on line (www.b-on.pt) in 26th August 2008 on 'family needs'—119 articles, and 'family necessities'—89 articles. Both concepts

were ReFINE for 'palliative care'—67 articles. There were taken into consideration all the articles between 2003 and 2008, and there excluded those that were not dated, payed and pediatric articles. There were selected 27 articles. **RESULTS:** The word 'need' (to need), is always used as verbal tense. This term refers to a general need and a necessary duty like an obligation, desirable or useful that people need for their physiological or psychological well-being. Ex: I need some support. The word 'necessity' is used as a name and not as a verbal tense. So this term is related to a more specific and personal feeling, that defines what is indispensable or unavoidable, a pressing need or a desire. Different people have different necessities and these ones can change at each moment. Ex: At this time of my life, I have the necessity to have an economic support. **CONCLUSIONS:** In palliative care the words 'need' and 'necessity' are both used to express what is general or specific for each family. The analysis shows us that palliative care professionals should agree about the real meaning of these words in order to identify what is general and what is specific. **RESEARCH IMPLICATIONS:** Palliative care teams know global family needs and plan there intervention according to them. However, families have the right to a planned intervention based on their narratives and on what they ask for. **CLINICAL IMPLICATIONS:** Palliative care patients want to stay at home with their families and these are their caregivers. The continuity of care at home depends on the recognition and satisfaction of specific necessities. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.4.11

Case Study 'Bereavement Child Process'

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BACKGROUND: The purpose of this abstract is to present a case study of a child bereavement process who lost her mother in a palliative care unit and to emphasize the importance of intervention of mental health practitioner on the process of mourn on families of patients who dies of a terminal illness, specially of the child mourning. **METHOD:** The methods is a descriptive one, because it a case study. The sample is of one subject of 8 years old. **RESULTS:** The result in this case is a sucessful process of a bereavement child, who after psychological intervention presents a emotional adaptative response to the process of mourning. **CONCLUSIONS:** This case emphasize that mental health practitioner needs of be aware of several things when are dealing with children who have lost parents: –children do mourn, but differences in mournig are determined by both the

cognitive and emotional development of a child; –the loss of a parent though death is obviously a trauma but does not in and of itself necessarily arrested development; –that mourning for a childhood loss can be revived at many points in an adult's life when it is reactivated during important life events. when the mourning is reactivated, it does not necessarily portend pathology but is simply a further example of 'working thourgh' (Worden, 1993). **RESEARCH IMPLICATIONS:** It is important to recognize the importance of mental health worker to develop preventive approaches for children who have lost parents. The same tasks of grieving that apply to the adult obviously apply to the child, but these tasks have to understood and modified in terms of the child's cognitive, personal, social and emotional development. (Worden, 1993). **CLINICAL IMPLICATIONS:** Grief counselling presents a special challenge to the mental health worker so it is importante to recognize the limitations and looking at one's grief will help counselor or therapist know his or her limitations with respect to the kinds of patients or kind of grief situatation that one is able to deal with. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.4.12

Refractory Suffering and the Impact on the Multi-disciplinary Team

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BACKGROUND: This presentation will discuss the results of qualitative research undertaken in 2007–8 to understand the effect refractory suffering has on the experienced palliative care clinician. Refractory suffering impacts on multidisciplinary team dynamics, roles and boundaries. All clinicians despite which discipline they represent identified feelings of impotence, frustration and helplessness when faced with a client whose suffering could not be relieved. The outcome of such suffering has been reflected in clinical responses and difficult team dynamics. **METHOD:** The research team conducted a scoping exercise of the national and international literature to gain insights into the broad area of study. This exercise formed the basis for developing interview and questionnaire guides for the project. Palliative care practitioners with a minimum of 2 years clinical experience were invited to participate either by interview or by filling out online questionnaires. Interview transcript data and completed questionnaires were analysed by the research team, with themes independently drawn out and individually cross-checked by team

members. Cross-sectional analysis was undertaken to cluster and label core themes that are inter-related and repeated between cases. RESULTS: Clinician responses vary significantly when faced with refractory suffering. This then impacts on the timing of calling in other team members to assist. In extreme cases this can contribute to a situation of division between clinicians. The main themes to emerge included cohesion within the multidisciplinary team. This was identified by all team members. Alignment of professional philosophy was felt to be critical for support of the team. Recognition that there has been a paradigm shift from supportive care to interventional care. And finally there was recognition that role complexity can impact on interdisciplinary respect. CONCLUSIONS: Despite palliative care demanding care for the whole person, many clinicians often still focus on physical suffering first. Working with psychosocial suffering requires a different skill set to those needed for physical symptom management. Clinicians feel that while they have had some communication training they have not had enough to deal with complex cases. This has an impact for the configuration of multidisciplinary teams. Teams are weighed in favour of physical symptom management with little resource being invested in psychosocial management. The few team members assigned to psychosocial care experience a very 'ad-hoc' approach to referral which undermines team function. RESEARCH IMPLICATIONS: Future research needs to focus on the following: Determine the most effective way to teach clinicians communication skills; Discover effective ways to build organisational culture that supports and develops capacity in working with refractory suffering; Discover the most effective way to promote clinical supervision and mentoring for palliative care professionals; Conduct comparative research using a larger cohort to explore how different disciplines and genders manage refractory suffering. CLINICAL IMPLICATIONS: Multidisciplinary teams are held up as critical for modern day health care delivery. Understanding the role and function of every team member will improve interactions at time of high stress associated with refractory suffering. Recognition of strengths and limits in each discipline will prevent inappropriate referrals and expectations. A team environment that is supportive and prepared to discuss complex cases safely and openly will experience the benefits of the multi disciplinary team. ACKNOWLEDGEMENT OF FUNDING: The researchers wish to acknowledge the support of the International Institute of Palliative and Supportive Studies for the grant that enabled this project to take place, and the participants who generously agreed to be part of the study.

P3.4.13

Involving Men as Care Givers to Make Palliative Care Real in Uganda

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BACKGROUND: Introduction: For a long time in Uganda, the caring role has culturally been a women's role. And as for men they are expected to play the protecting role. As a result boy children shy away from the caring role for fear of being labeled weak, or being seen to behaving like women. METHOD: However the scourge of HIV/AIDS which has increased the incidence of cancer in Uganda has brought some changes in these cultural and societal constructs. More men are getting into the caring role though with limited nursing skills. Those who have ventured into it have found it interesting but challenging and are encouraging more men to join. RESULTS: Issues: Palliative care is slowly changing the Cultural and societal constructs, men are finding themselves having to carry out the caring role especially when they find that all the other family members are sick and it is only a man not diseased. CONCLUSIONS: Lessons learned: Culture affects men's attitude towards the caring role. Culture doesn't allowed men to acquire the caring skills. Palliative care has proved to some communities that men are good carers. Those who ventured into the caring role are now encouraging and training other men to do so. RESEARCH IMPLICATIONS: Recommendations: Community sensitization to encourage men to get involve in the caring role. Families to empower a boy child with caring skills. Training programs for men as care givers. CLINICAL IMPLICATIONS: Once well trained men can support women in caring role and decrease the burden of caring on women. ACKNOWLEDGEMENT OF FUNDING: Palliative Care Association of Uganda.

P3.4.14

Crisis Therapy at the End of Life

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BACKGROUND: There is a tendency to think that there is only one possible positive outcome of cancer: complete recovery. However, hospice philosophy considers death an integral part of life, too. Demonstrative cases of personal growth, positive experiences, and constructive changes in human relationships can be seen towards the end of life. The delineation of a

conclusive psychotherapeutic case of a terminally ill cancer patient illustrates the validity of hospice principles. **METHOD:** The 72 year(s)-old female patient was admitted to our inpatient unit from a toxicology ward, where she had spent 10 days because of an attempted suicide after the diagnosis of a multiplex cerebral metastasis of her colon tumor. She suffered from neurological and depressive symptoms and severe pain, but she refused any kind of symptom control as she wanted to die as soon as possible. After a psychological crisis intervention at arrival, she received 15 supportive therapeutic sessions (one session each day). The effective control of her physical symptoms was provided by our oncologist. **RESULTS:** The specific object of her fears and anxiety was identified through the analysis of dreams, and the content of her dreams was the basis of the tailor-made suggestions that were used to alleviate her anxiety, and to foster the communication with health care professionals. The interventions proved effective: she became gradually relaxed and calm, cooperative, and accepted symptom control medication. She remained in this harmonic state even when her physical status declined. On the 18th day she died peacefully, without any pain. **CONCLUSIONS:** Psychologists have important tasks in hospice-palliative care. Most of the patients are in a very critical psychological state of severe anxiety, pains and other psychological and bodily symptoms. Effective crisis intervention helps the patient to ease from anxiety and social isolation, become cooperative and accept effective symptom control. The relief from the severe symptoms gives way to special supportive psychological interventions that help the patient to communicate well with family members, to summarize the most important events of one's life, and to make the best of the intimate and important moments of the end of life. **RESEARCH IMPLICATIONS:** The research on outcomes of different psychotherapeutic methods in terminal phase would help to find the most effective ways of support. However, the research in terminal phase of life poses many ethical and methodological questions that not easy to answer because of the very special psychological situation of end of life care. **CLINICAL IMPLICATIONS:** Optimized psychological interventions can effectively reduce anxiety, foster communication, and deepen human relationships even in the terminal phase of cancer characterized by severe somatic symptoms. The psychological results of hospice-palliative care show that improving the quality of life is an important and achievable aim in the end of life care. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.4.15

5-HTTLPR Polymorphism of Serotonin Transporter Identifies in Palliative Care the Patients with Advanced Cancer which Will Respond to the Effects of the SSRI Agent Citalopram on Depression and Fatalism

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BACKGROUND: Hopelessness-helplessness and depression significantly affect the quality of life, and are negative prognostic factor for the survival, of cancer patients. The difficulties in adaptation to stressful life events and the ensuing mental suffering have been associated with the 5-HTTLPR polymorphism of serotonin transporter. The aim of this study was therefore to examine the effects of the SSRI antidepressant drug citalopram in palliative care on anxiety, depression and mental adaptation to cancer. **METHOD:** A series of consecutive patients (aged 71.1 ± 12.1 years) with advanced tumours of various origin and localization were evaluated at enrolment into the study (T0) and two weeks later (T1). The patients were characterized psychometrically using the Hospital Anxiety and Depression Scale (HADS), and the Mini-Mental Adjustment to Cancer Scale (Mini-MAC), to examine the psychological reaction to the disease. The 5-HTTLPR genetic polymorphism of serotonin transporter was analyzed in samples of oral mucosa scrapings of the patients, and was found to follow the Hardy Weinberg equilibrium. **RESULTS:** In patients with advanced tumours treated for two weeks with citalopram, when 5-HTTLPR genetic polymorphism is not considered, the effects of the treatment consist of a moderate though significant reduction of HADS scores for anxiety and depression. When the same treated patients are stratified for 5-HTTLPR, the HADS score for depression was more markedly and significantly reduced only in the patients with the 'L/L' genotype. The subjects carriers of one 'S' allele (S/S and S/L) displayed also a significant increase of the scores for Mini-MAC fatalism. No significant difference was found on the remaining subscales. **CONCLUSIONS:** The data presented indicate that in a palliative care setting of patients with advanced cancer the treatment for two weeks with the antidepressant SSRI agent citalopram causes significant antidepressant effects. The examination of the 5-HTTLPR genetic polymorphism indicated that the antidepressant action is in reality exerted in a more pronounced way only in the patient carrying the 'L/L' genotype with high functional activity. In these patients, the effects of citalopram are also exerted on mental adaptation to cancer, and consist in a

significant increase of fatalism in the patients characterized by the presence of at least one 'S' allele. **RESEARCH IMPLICATIONS:** These data encourage the examination of a larger cohort of patients for obtaining a confirmation of the results reported, and for investigating the effects of the treatment with antidepressant agents of patient with advanced cancer in greater depth, also in relation to the patients' genotypic characteristics. This study might reveal how the personalized use of antidepressants may improve the quality of life and the coping strategies of cancer patients with advanced disease in palliative care. **CLINICAL IMPLICATIONS:** The data presented indicate that a two weeks treatment with a SSRI antidepressant agent causes significant effects in the palliative care of patients with advanced cancer. The data allow to identify, on the basis of the analysis of the 5-HTTLPR polymorphism, the patients which will respond to the effects of the treatment not only on mood but on the strategy of mental adaptation to cancer as well, also allowing a personalized drug treatment. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported by the 'Programma di Ricerca Scientifica di Interesse Nazionale of Italian Ministero dell'Istruzione, dell'Università e della Ricerca' entitled 'Phenotypic and genotypic characterization of mental adaptation to cancer and of the response to the treatment with antidepressant drugs in oncology (Anno 2007—prot. 20074XMRSE)'. The skilful contribution of Ms. Sara Pavanello, undergraduate psychology student, in collecting and analyzing the psychometric data, is gratefully appreciated.

P3.4.16

Responding to Existential Suffering at the End of Life: To Sedate or Not to Sedate?

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BACKGROUND: Sedation in the context of palliative medicine is the monitored use of medications to induce varying degrees of unconsciousness to bring about a state of decreased or absent awareness, in order to relieve the burden of otherwise intractable suffering. Sedation is controversial in that it diminishes the capacity of the patient to interact, function, and, in some cases, live. Because of this, the initiation of sedation may give rise to emotions and ethical dilemmas. **METHOD:** A literature review has been made following the computerized databases: PubMed, Embase, Cochrane, Ovid Medline and Psychinfo for studies of interest in order to define current practices and research findings. **RESULTS:** Sedation is used in palliative care in several settings: transient controlled sedation, sedation in the management of refractory symptoms at the end of life, emergency sedation, respite sedation, and sedation for

psychological or existential suffering. **CONCLUSIONS:** 1) Determining symptom refractoriness and intolerable suffering requires a full multidimensional assessment of the symptom(s) and expertise of the professional caregivers involved. 2) Existential Suffering like Palliative Sedation requires a high level of medical and nursing expertise and communicative skills from the professional caregivers involved. 3) The inability to communicate may worsen existential suffering. 4) While some experts believe that Palliative Sedation should be initiated only under exceptional circumstances and only after consultations with experts in this area, others maintain that the decision to offer the use of Palliative Sedation to relieve intolerable suffering is a valid medical practice in Palliative Care. **RESEARCH IMPLICATIONS:** The initiation of palliative sedation may give rise to emotions and ethical dilemmas. Some of ethical dilemmas and controversial questions are only starting to be researched or even raised: a) What should be the criteria to decide whether existential suffering is a refractory symptom appropriate for palliative sedation? b) Who should be involved in the decision to sedate? c) How do professionals judge levels of symptom tolerability when the suffering is a refractory symptom? **CLINICAL IMPLICATIONS:** Which is the next step, if professionals cannot agree about the type of suffering that a patient is experiencing? Is there any evidence that fatigue and burnout of physicians results in increased use of Palliative Sedation? Is the Existential Suffering considered as a refractory symptom by Palliative Care Clinicians? **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.5.1

Oncologists May Have Difficulty in Assessing Their Patients' Physical and Psychological Symptoms

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BACKGROUND: Accurate evaluation of symptom severity is crucial to the provision of optimal symptom management. The purpose of this study was to investigate the accuracy of oncologists' recognition of their patients' physical and psychological symptoms. **METHOD:** Two oncologists and a sample of randomly sampled outpatients with breast cancer that they saw at a breast cancer outpatient clinic at a Japanese university hospital participated. This study was approved by the Institutional Review Board and full written informed consent was obtained from each patient. Patients reported the severity of their 12 physical and 2 psychological symptoms using EORTC-QLQ-C30 and HADS, respectively. Oncologists completed a survey in which they indicated their

recognition of each patient's level of these symptoms immediately following their consultation. These two data were compared statistically by calculating Cohen's kappa index, sensitivity, specificity, PPV, and NPV. **RESULTS:** Complete data were available from 408 patients. Among them, 23% had advanced cancer (stage III, IV, or recurrence). Kappa index was generally low, mean was 0.12, ranging 0 (for constipation) to 0.43 (for hair loss). Sensitivity was less than 40% and specificity was greater than 85% for all other physical symptoms except pain (59% and 70%, respectively). Sensitivity and specificity for anxiety was greatest (78%) and lowest (27%) and PPVs for anxiety and depression were lowest (22% and 19% respectively) among all of symptoms. **CONCLUSIONS:** Oncologists' recognition may not accurately reflect their patients' physical and psychological symptoms. Especially low PPVs for depression and anxiety indicated that detection of presence of psychological distress must be the difficult task for them. Incorporating standard symptom assessment in clinical practice may heighten oncologists' awareness of their patients' symptoms. **RESEARCH IMPLICATIONS:** A small number of physicians included in this study and that majority of participants was in good condition may limit the external validity of the findings. Further research should be conducted taking these limitations into account. Also clinical trials to investigate the efficacy of interventions helping physicians recognizing patients' symptoms on improving patients' outcome should be done. **CLINICAL IMPLICATIONS:** Oncologists may have less-than-optimal level of awareness of patients' reported physical and psychological symptoms. Psycho-oncologists are expected to facilitate physicians to heighten their recognition of their patients' symptoms. **ACKNOWLEDGEMENT OF FUNDING:** This work was supported in part by Grants-in-Aid for Cancer Research and the Third Term Comprehensive 10-Year Strategy for Cancer Control from the Ministry of Health, Labour and Welfare, Japan.

P3.5.2

Screening for Psychological Distress, Anxiety and Depression in Cancer Patients During the Chemotherapy

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BACKGROUND: Distress is considered by many, the sixth vital sign in cancer care. Researches refer to high incidence of distress in cancer population.

Levels of emotional distress should be evaluated in appropriate intervals as other vital signs are. Neglecting distress levels may lead losses in the therapeutic and preventive plan, with implications in adherence and coping with treatment. This procedure is standard in several countries, but not in Brazil. **METHOD:** In view of such reality, the present study objective was evaluate the incidence of distress, anxiety and depression during chemotherapy, among 169 patients, with age between 17 and 86 years (median = 53), with 18 different diagnoses of cancer, being those of major incidence: Oncohematologic (26%); Breast cancer (22.5%); Gastrointestinal (17.7%). This research was authorized by the ethics committee. The procedures of gathering data included the consent of the patients and in application of the Distress Thermometer (DT) and the Hospital Anxiety and Depression Scale (HAD). The data were analyzed according to criteria defined in literature and with help of the software SPSS 15.0. **RESULTS:** During the treatment 32.4% of patients were diagnosed with distress, 25.3% with anxiety and 25% with depression. While evaluating distress incidence in the diagnostics of greater incidence it was verified that: 1) Oncohematologic: 31.2% of patients showed distress, 23.2% with anxiety and 22.6% with depression; 2) Breast cancer: 26.7% of patients with distress, 23.8% with anxiety and 23.1% with depression; 3) Gastrointestinal: 28.4% of patients with distress, 25.1% with anxiety and 24.3 with depression. **CONCLUSIONS:** The high incidence of distress showed the necessity of an effective management of the emotional consequences of the diagnostic and treatment of cancer. Establishing a routine of screening for psychological distress and intervention, one may increase the possibility of bringing about a preventive evaluation of symptoms and psychological and psychiatric disturbances. The small difference showed between the main diagnostics in this study, assume that the distress, anxiety and depression are related to the impact of the diagnostic and the consequences of the treatment as a whole. **RESEARCH IMPLICATIONS:** The present study suggests that the prevalence of this suffering is independent of the type of cancer diagnosis. This research implicates the need of a deeper study of both variables (type of cancer and distress, anxiety and depression), and also an analysis of possible correlations with others variables. **CLINICAL IMPLICATIONS:** The screening for psychological distress may provide a preventive actuation in the reduction or elimination of psychiatric and psychologic disorders. These procedures subside action of intervention and prevention in relation to cancer patients and contribute to justify the adoption of evaluation measure of distress in oncologic treatment units. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.5.3

Symptom Indicator of Severity of Depression in Cancer Patients: A Comparison of the DSM-IV Criteria with Alternative Diagnostic Criteria

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BACKGROUND: Although the severity of major depression should be a relevant indicator for treatment implementation in cancer patients, especially the administration of antidepressants, determining the severity of major depression in cancer patients as well as diagnosing major depression have been challenging. The objective of this study was to explore the performances of several diagnostic criteria items for judging the severity of major depression among cancer patients. **METHOD:** Using modern item response theory, we examined the performances of the diagnostic criteria outlined by the DSM-IV and two sets of conceptual diagnostic criteria (the Endicott and the Cavanaugh criteria) in a series of 728 cancer patients who had been referred to the Psychiatry Division and diagnosed with major depression using an inclusive approach. **RESULTS:** While all the DSM-IV diagnostic criteria, including feelings of worthlessness and suicidal ideation had a low ability for discriminating the severity of depression, two proposed items (not participating in medical care and social withdrawal) appeared to be good markers of moderately severe major depression among cancer patients. In addition, the items, 'fearfulness or depressed appearance in face or body posture' and 'brooding, self-pity, or pessimism' may be good markers for mild major depression, while the item, 'cannot be cheered up, doesn't smile, no response to good news or funny situations' may be a good marker for severe major depression. **CONCLUSIONS:** Our findings suggest that each individual symptom differs in nature and may occupy a specific position regarding the judgment of major depression severity in cancer patients. In addition, the present study suggests alternative criteria may have utility in diagnosing depression severity in cancer patients. **RESEARCH IMPLICATIONS:** The findings suggest the usefulness of alternative diagnostic approaches (the Endicott and the Cavanaugh criteria), rather than the DSM-IV approach, when diagnosing and/or assessing major depression among cancer patients. **CLINICAL IMPLICATIONS:** Cancer

patients with depression who exhibit the symptom 'cannot be cheered up, doesn't smile, no response to good news or funny situations', may be appropriate candidates for the administration of antidepressants. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported in part by a Grant-in-Aid for Cancer Research from the Japanese Ministry of Labor, Health and Welfare.

P3.5.4

Clinical Experience of the Use of a Pharmacological Treatment Algorithm for Major Depressive Disorder in Patients with Advanced Cancer

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BACKGROUND: We have developed a pharmacological treatment algorithm for major depressive disorder in patients with advanced cancer, and have used the revised version in clinical practices. The objective of this study was to describe the applicability, the dropout rate, and the reasons for the choice of antidepressants within the framework of the algorithm and for dropout cases in this population. **METHOD:** This study was conducted by means of a retrospective chart review. The subjects of this study were cancer patients referred to the Psychiatry Division between August 2002 and October 2003. Psychiatrists treated major depressive disorder in advanced cancer patients on the basis of the algorithm. For discussing the problems related to the algorithm, we reviewed the reasons for the non-application of the algorithm and the reasons for dropout of patients within a week of initiation of treatment. **RESULTS:** The algorithm was applied in 54 of 59 cases (applicability rate, 92%). The reasons for the non-application of the algorithm were as follows: the need to add a benzodiazepine to an antidepressant in 4 cases and the need to choose alprazolam despite the depression being moderate in severity, in order to obtain a rapid onset action and reduce anxiety in a patient with short prognosis. Nineteen of the 55 patients dropped out within a week of initiation of treatment based on the algorithm. Delirium was the most frequent reason for dropout. **CONCLUSIONS:** The applicability rate was high, but several problems were identified, including those related to the combination of antidepressants and benzodiazepines, pharmacological treatment of depression in patients with short prognosis, and delirium due to antidepressants. This study clarified problems of the algorithm and indicated treatment precaution. We are revising and developing the algorithm based on these considerations.

RESEARCH IMPLICATIONS: This study clarified problems of the algorithm. Some of them seemed to be related to difficulty in treatment of major depressive disorder in patients with advanced cancer. They may be useful information for development of treatment in this population. **CLINICAL IMPLICATIONS:** Clinicians may use this algorithm and this report is informative when they treat major depressive disorder in patients with advanced cancer. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported in part by a Grant-in-Aid for Nervous and Mental disorders and a Grant-in-Aid for Cancer Research of the Japanese Ministry of Labor, Health and Welfare.

P3.5.5

Concerns About Reporting Fatigue in Cancer Patients Receiving Active Treatment

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BACKGROUND: Assessing fatigue intensity is the first step for fatigue management in clinical settings but concerns about reporting fatigue could affect the results. Therefore, the purposes of this study was to explore concerns about reporting fatigue in cancer patients receiving active treatment and to identify significant factors related to those concerns in patients with mild fatigue (Group 1) and with moderate to severe fatigue (Group 2). **METHOD:** Patients with various types of cancer ($N = 295$) were recruited from an outpatient chemotherapy center, and from 7 oncology and hematology units in a teaching hospital in Northern Taiwan. Data was collected by using structured questionnaires to explore study variables with concerns about fatigue communication, characteristics of fatigue (i.e., intensity, duration, and interference with daily life), functional status, demographic characteristics (age, gender, marital status, education level, and occupation), and disease/treatment variables (time since having been diagnosed, cancer diagnosis, treatment settings, and type of treatment). **RESULTS:** Group 1 was statistically more lacking of concern about reporting fatigue and general medication concerns than Group 2, but the fear of stigma in Group 2 was significantly higher than in Group 1. Patients with self-reported overall worst fatigue or with more interferences had significantly less total concerns but this negative relationship was only shown in patients reporting average fatigue intensity higher than 3. In Group 1, cancer diagnosis and years of education were the significant factors associated with concerns about reporting fatigue; while, fatigue interferences was the only factor attributing to the concerns in Group 2. **CONCLUSIONS:** The major concerns about reporting fatigue between the patients with mild fatigue and the patients with moderate or

severe fatigue are different. The concerns about reporting fatigue were related to degree of interferences caused by fatigue and were associated with the level of education and cancer diagnosis. Fatigue interferences is the most important factor associated with the level of concerns about reporting fatigue, especially in the patients with the moderate or severe fatigue. **RESEARCH IMPLICATIONS:** Fatigue management programs should be tailored based on different education level, cancer diagnosis, and fatigue intensity. The major concerns about reporting fatigue should be explored before conducting any intervention study. **CLINICAL IMPLICATIONS:** Not only intensity of fatigue but also its interferences should be assessed in clinical settings. Initiating the fatigue communication and applying individual education programs should be tailored to different levels of education, fatigue intensity and its interferences based on different based on types of cancer diagnosis. **ACKNOWLEDGEMENT OF FUNDING:** The authors gratefully acknowledge National Taiwan University for its support.

P3.5.6

Psychological Distress in Cancer Patients: Relationship with Fatigue and Pain

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BACKGROUND: Management of psychological distress is an important issue of cancer care. Relationship between psychological distress and fatigue and pain is under-reported and underestimated. The aims of this study were to describe the prevalence and severity of distress, fatigue, and pain in advanced cancer patients and to identify their relationship while symptom management. **METHOD:** 500 patients with advanced cancer from 11 cancer centers (male/female-285/215, mean age 54.2) were included in the study. The patients completed the M. D. Anderson Symptom Inventory at two time points, baseline and one month later. Fatigue and pain management was provided according to physicians prescriptions. Symptom treatment response was evaluated as a difference between symptom severity at base-line and one month later. Symptom treatment response was classified as improvement (decrease of symptom severity); stabilization (no change of symptom severity), and worsening (increase of symptom severity). Correlations between symptoms were measured using Spearman coefficient. **RESULTS:** 70% of patients experienced distress;

85%-fatigue, and 70%-pain. 65% of patients reported moderate-to-severe symptoms. Fatigue treatment resulted in improvement in 199 (43%) patients; stabilization-92 (20%) patients; worsening-175 (37%) patients. Pain treatment resulted in improvement in 198 (51%) patients; stabilization-60 (15%) patients; worsening-132 (34%) patients. Fatigue improvement as well as pain reducing were associated with distress severity decrease ($p^2 = 0.24$ and $R^2 = 0.23$, respectively). **CONCLUSIONS:** 70% of advanced cancer patients experience psychological distress; in the majority of them it is moderate-to-severe. The higher the degree of pain or fatigue severity change, the higher the degree of distress severity change. **RESEARCH IMPLICATIONS:** These findings may contribute to symptom cluster research. **CLINICAL IMPLICATIONS:** The results obtained demonstrate the importance of adequate treatment of fatigue and pain to reduce psychological distress in cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.5.7

Bereavement Dream?—A Case of a Japanese Women Suffering from Unpleasant Dream

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BACKGROUND: The death of a person is a stressful event. Such stress is related to the physical and psychological well-being of the bereaved. As a mental disorder, major depressive disorder (MDD) is common. Some dream of the deceased, called a 'Bereavement Dream'. Some MDD patients also experience distressing dreams. These two are sometimes difficult to differentiate. Herein, we report one patient who developed depression after the loss of her mother, and had unpleasant dreams about her. **METHOD:** A 63-year old woman was referred for psychiatric consultation because of generalized fatigue and gradual onset of insomnia. Questioning her about recent events, she said that her mother had died of colonic carcinoma at the age of 92, 5 months ago. Two months after the death, she suddenly started dreaming of her mother getting angry with her almost every night. The dream caused much distress, making her afraid to fall asleep. She also thought that her mother might not be resting in peace. **RESULTS:** Her psychiatric features fulfilled the DSM-IV criteria for MDD, single episode. The bereavement of her mother was considered to be one of the causes for MDD. She

was administered 25 mg/day of sertraline hydrochloride. After that, her symptoms gradually disappeared, and the frequency of unpleasant dreams regarding her mother was reduced. Five months later, physical and psychiatric symptoms of MDD completely disappeared. Subsequently, she has not suffered from any unpleasant dreams of her mother at all. **CONCLUSIONS:** In this patient, symptoms of depression and unpleasant dreams about her mother died of cancer appeared simultaneously, and disappeared with the remission of depression, suggesting that the 2 events did not incidentally appear at the same time, but were associated. It may be appropriate to regard the dream as a symptom of depression, rather than considering it as a 'Bereavement Dream'. **RESEARCH IMPLICATIONS:** None. **CLINICAL IMPLICATIONS:** 'Bereavement Dreams' are often observed in the bereaved. However, when the patient dreams of the deceased and is adversely affected, it is better to consider MDD as a differential diagnosis. Because the dream is a symptom of MDD, these symptoms might improve through antidepressant treatment as well as psychotherapy. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by a grant-in-aid from the Ministry of Health, Labour and Welfare, and the UNIVERS foundation.

P3.5.8

Prevalence and Predictors of Insomnia in Women with Invasive Ovarian Cancer

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BACKGROUND: Insomnia is both a common and neglected problem in cancer patients. The estimated prevalence of insomnia in cancer patients varies between 20% and 50%, substantially higher than

the general population. To date, little is known about the risk factors for insomnia in patients with cancer. This study examines the prevalence and predictors of insomnia in a population-based sample of women with ovarian cancer. **METHOD:** Participants were 772 women participating in the Australian Ovarian Cancer Study—Quality of Life study. Insomnia was assessed using the Insomnia Severity Index. Demographic, disease and treatment variables, and psychosocial variables, including anxiety and depression, support care needs, social support and coping, were investigated as potential predictors of insomnia. **RESULTS:** Participants were a mean age of 60 years. Twenty seven percent of women reported sub-threshold insomnia and 17% reported moderate to severe insomnia. Three variables were identified as significant predictors of moderate to severe insomnia: younger age (<50 years: OR = 2.36 CI 1.06–5.26); 50–59 years: OR = 2.73 CI 1.33–5.64) relative to 70+ years; higher unmet needs in the physical/daily living domain (OR = 1.02 CI 1.01–1.03); and elevated anxiety (sub-clinical anxiety: OR = 1.83 CI 1.04–3.24; clinical anxiety: OR = 2.03 CI 1.08–3.85, relative to no anxiety). **CONCLUSIONS:** In contrast to predictors of primary insomnia in the general population, women with cancer aged <60 years were more likely to report clinical levels of insomnia than women 70+ years. Consistent with primary insomnia, elevated levels of anxiety predicted insomnia in women with ovarian cancer. **RESEARCH IMPLICATIONS:** Given that both anxiety and insomnia are relatively common in women with cancer, further studies examining the potentially bi-directional nature of the relationship, as well as the impact of early identification of, and targeted interventions for, insomnia are required. **CLINICAL IMPLICATIONS:** Routine screening of patients for sleep disturbance and psychological distress, including anxiety, will enable early identification of patients who may benefit from the initiation of targeted interventions. **ACKNOWLEDGEMENT OF FUNDING:** The Australian Ovarian Cancer Study-Quality of Life study was funded by The Cancer Council New South Wales and The Queensland Cancer Fund. The Australian Ovarian Cancer Study (AOCS) is funded by the U.S. Army Medical Research and Materiel Command, the National Health and Medical Research Council (NHMRC) of Australia, and the Cancer Councils of New South Wales, Queensland, South Australia, Tasmania, Victoria and Western Australia. P. Butow and P. Webb are funded by NHMRC.

P3.5.9

Negative Mood and Anxiety During Repeated Cycles of Outpatient Cancer Chemotherapy

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BACKGROUND: Distressing physical symptoms are common during outpatient treatment for cancer. However, the psychological challenge of receiving cancer treatment is often not monitored as closely as the physical symptoms. The purpose of this study was to describe the prevalence and severity of self-reported negative mood and anxiety over two cycles of outpatient chemotherapy and to examine the relationship of psychosocial symptoms to physical symptoms. **METHOD:** 250 cancer patients self reported daily, the presence and severity (1–10 scale) of 11 common symptoms during cycles 2 and 3 of their chemotherapy protocol. The symptoms followed were: fatigue, trouble sleeping, pain, nausea/vomiting, constipation, diarrhea, sore mouth, fever, distress over appearance, depressed mood and anxiety. Data were collected through an automated, computer based telephone system. The majority of participants were female (76%), Caucasian (93%), married (73%) with a mean age of 55 years. A variety of cancer diagnoses and chemotherapy protocols were represented with the most common being treatment for breast cancer. **RESULTS:** Depressed mood (77%) and anxiety (72%) were reported at least once by most study participants. Using a 1–10 scale when present, the mean severity was 4.24 for depressed mood and 4.19 for anxiety. More participants reported anxiety and depressed mood during cycle 2 than cycle 3, however those still reporting depressed mood in cycle 3 reported significantly higher levels ($p = .017$). Depressed mood and anxiety were highly correlated with other symptoms including: distress over appearance, fatigue, pain, trouble sleeping and overall symptom interference with daily life. These Pearson correlations ranged from .43 to .61 with all p values < .0001. **CONCLUSIONS:** Self-reported depressed mood and anxiety are common symptoms during chemotherapy. On average they are present at moderate levels (4 on a 1–10 scale). While prevalence fell between cycle 2 and 3 suggesting possible adaptation, those who continued to report depressed mood in cycle 3, reported higher levels. In addition, as physical symptoms such as fatigue, pain and sleep disturbance increased in severity so did negative mood and anxiety. **RESEARCH IMPLICATIONS:** Psychosocial symptoms should also be monitored in studies of physical symptoms. Further work is indicated to examine the patterns and fluctuations in mood during multiple cycles of treatment and the relationship with physical symptoms with the intent of identifying those at greatest risk for psychological distress during cancer treatment. **CLINICAL IMPLICATIONS:** Moderate levels of depressed mood and anxiety are commonly reported by patients receiving chemotherapy. Clinicians should monitor psychological distress along with monitoring other symptoms throughout

treatment cycles. Higher levels of psychological distress may be anticipated as physical symptoms increase. Patients reporting depressed mood over several cycles of treatment may represent those with escalating psychological distress. **ACKNOWLEDGEMENT OF FUNDING:** This study was supported by a research grant from the National Cancer Institute of the National Institutes of Health, U.S.A. (R01 CA89474).

P3.5.10

Passive to Taking Up Spiritual Pain as the Treatment Target is Early Death Risk Factor in the Terminal Cancer Patient

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BACKGROUND: Cancer is associated with an increased risk of suicide and a substantial number of cancer outpatients report thoughts that they would be better off dead or thoughts of hurting themselves. The purpose of this research is to reveal that passive to the treatment relation construction with the palliative care team, especially passive to taking up spiritual pain as the treatment target is as an early death risk factor in the terminal cancer patient. **METHOD:** We targeted 144 terminal cancer in-patients who had been hospitalized to receive their last unavoidably in Nippon Medical School hospital palliative care department in 2008. At hospitalization, patients completed the Patient Health Questionnaire-9 (PHQ-9) in the previous 2 weeks. Patients also completed the pain scale. We evaluated the examination situation of the spiritual pain with psycho-oncologist and investigated the survival period from the day of the patient's hospitalization to the death day. **RESULTS:** Data were available on 110 patients. The result of PHQ-9 total score is as follows: None or Mild depression (Group 1)—9; 16.4% (18 case of 110), Moderate depression (Group 2) >10–14; 24.5% (27 case), Moderately severe depression (Group 3) >15–19; 36.4% (40 case), Severe depression (Group 4)—20; 2.7% (25 case). Survival period is as follows: Group 1; 36.5 days, Group 2; 31.3 days, Group 3; 24.2 days, Group 4; 17.8 days. In each group, the ratio of the passive treatment attitude patient to spiritual pain and their average survival period, Group 1; 11.1% (2 case) 31.5 days, Group 2; 29.6% (8 case) 27.6 days, Group 3; 40.0% (16 case) 21.1 days, Group 4; 64.0% (16 case) 17.2 days. **CONCLUSIONS:** In each group, the ratio of a passive patient to taking up spiritual pain as the treatment target had risen with the depressive severity. In addition, these patients' survival period has been shortened in each group, especially significantly shortened in Group 3. Passive to taking up spiritual pain as the treatment target is as important as depressive severity for an early

death risk factor in the terminal cancer patient. **RESEARCH IMPLICATIONS:** It is important in palliative care treatment to take up spiritual pain as the treatment target in the terminal cancer patient. However, all patients do not necessarily hope for spiritual pain as the target of treatment. It is thought that it is influenced from an individual and a social cultural background. We will try to examine the correlation of a passive treatment attitude for the spiritual pain to the depressive severity. **CLINICAL IMPLICATIONS:** We should pay attention not only the management of the pain but also the management of the mood distress and the treatment attitude to spiritual pain. Even if the terminal cancer patient has received palliative care treatment, we should confirm whether we can construct the steady treatment relation with them and to intervene to their spiritual pain. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.5.11

Fatigue, Anxiety and Inflammation Markers Early in Breast Cancer Diagnosis

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BACKGROUND: Fatigue, depression, and anxiety are the most common and the most debilitating symptoms associated with cancer and cancer treatments. These symptoms often affect patient's ability to engage in cancer treatments and produce a profoundly negative impact on their quality of life. Evidence suggests that specific psychosocial and biological factors are associated with these symptoms. Longitudinal assessment of symptoms and of potential biomarkers could help us delineate the pathophysiology, clinical correlates, predictors and risk/protective factors. **METHOD:** The present study is the first phase of a two-phase prospective, descriptive, correlational pilot study. A total of 100 women with abnormal breast imaging are assessed at two time points, pre and post-biopsy. Behavioral assessments include the Hospital Anxiety and Depression Scale (HADS), the Brief Fatigue Inventory (BFI), the Pittsburgh Sleep Quality Index (PSQI), the European Organization for Research and Treatment of Cancer Quality of Life (EORTC-QOL). Markers of inflammation under investigation include interleukin-6 (IL-6), tumor necrosis factor- α (TNF- α), and c-reactive protein (CRP). Data on demographic, psychosocial and clinical information are also collected. Statistical analyses include mixed-model analysis for repeated measures over time and

correlational analysis between the behavioral assessments (e.g. anxiety and fatigue) and between the behavioral assessments and inflammation markers (e.g. anxiety and IL-6). **RESULTS:** To date, a total of 48 women have undergone the assessment battery. Preliminary analyses indicate that approximately 45–50% of women, irrespective of diagnosis, reported clinically significant anxiety symptoms at both assessments. Similarly approximately 20% of women, irrespective of diagnosis, reported clinically significant fatigue symptoms at both assessments. The severity of anxiety and fatigue symptoms improved from pre to post-biopsy assessment. Fatigue symptoms significantly correlated with high anxiety levels and decreased quality of life. High anxiety symptoms also correlated with high fatigue levels. Preliminary analyses showed significant correlation of pre-biopsy high anxiety levels with CRP levels but did not show any other correlation between IL-6, CRP levels and fatigue or anxiety symptomatology. None of the assessed psychosocial and demographic factors correlated with anxiety and fatigue symptoms. **CONCLUSIONS:** It is important to note that a subset of women reported clinically significant fatigue prior to any cancer treatments. Study findings suggest that the same subpopulation of women are at risk for significant overall distress with high anxiety levels and decreased quality of life from the time of diagnosis. It is possible that these women experience persistence and exacerbation of these symptoms with future intensive cancer treatments. It is critical that we identify these women early with appropriate screening and consider early focused interventions. Reported evidence from past studies, conducted in patients during or post cancer treatments, suggests association of cancer-related fatigue and depression with inflammatory markers. Lack of any such correlation in our study suggests that the reported associations in past studies might be related to cancer treatments. **RESEARCH IMPLICATIONS:** It is critical that future prospective studies investigate persistence and/or exacerbation of symptoms in the identified subset of women experiencing these symptoms at the time of diagnosis. Specific focused interventions can be investigated in this subset of women to reduce symptom distress at the time of diagnosis and during and post cancer treatments. Future research can include comprehensive assessment of risk (e.g. psychiatric history) and protective (e.g. psychosocial support) factors in this subset of women. **CLINICAL IMPLICATIONS:** Study findings suggest that a subset of women are at risk for significant symptom distress from the time of diagnosis. Identification of these women early on can help us direct our limited supportive care resources. Study findings suggest that it is possible to identify these women with brief screening

questionnaires. This pilot study is a critical first step towards the development of an evidence-based infrastructure for symptom management. **ACKNOWLEDGEMENT OF FUNDING:** We acknowledge the support of the Connecticut Breast Health Initiative Foundation Grant for this project. Many thanks to all Neag Comprehensive Cancer Center staff who made the implementation of this project possible.

P3.5.12

Sleep Disturbances in Cancer Patients

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BACKGROUND: Sleep disturbances occur in about 12% to 25% of the general population and are even more frequent in cancer patients, but this is yet a neglected symptom in oncological clinical practice with many potential consequences: daytime fatigue, increased physical symptoms and a higher risk for developing anxiety or depression. In the present study we investigate the prevalence of sleep disturbances in cancer patients and their behaviour regarding the referral of this symptom during clinical visits. **METHOD:** All consecutive patients afferent to the Day Hospital Oncology Unit in three months time are involved in the study, if fulfilling the inclusion criteria (Age: 18–80 years old; Performance Status: ECOG 0–2; Not having a psychiatric disorder; Valid Informed consent). Questionnaires used are: the Pittsburgh Sleep Quality Index (PSQI) to assess Sleep Quality and the EORTC QLQ-C30 for Quality of Life. A semistructured clinical interview is conducted by clinical psychologists to insomniac patients asking if they have raised the topic of sleep disorders during any medical visit, if they have been prescribed some medication and are willing to take it. **RESULTS:** Preliminary descriptive data regard 46 patients, 68% women, aged 25 to 80 years and all undergoing a chemotherapy treatment. Answers to the sleep item of the EORTC (Have you had trouble sleeping?) were: no (47%), a bit (22%), a lot (20%), very much (11%). Subjective sleep quality, a PSQI subscale, was considered: very good (13%), quite good (56%), quite bad (24%), very bad (7%). Forty% of poor sleepers did not ask to any doctor to solve their problem. The reasons of this under-referral are: they don't want

to assume medications; don't consider sleep as a priority; don't feel sleepy during the day; believe that the problem could stop by itself. Thirty-three % of patients who were prescribed a medication, did not assume it. **CONCLUSIONS:** The study is ongoing, approximately 120 patients will be enrolled in the next two months and more in depth statistical analyses will be carried out, correlating also sleep troubles with physical symptoms. Anyway preliminary data revealed that 31% of patients interviewed have some trouble sleeping, there is a concordance in both PSQI quality subscale and the EORTC insomnia subscale. Despite the presence of this symptom, less than half of the patients refer the problem during medical visits. Moreover, when a medication is prescribed, a third of patients don't assume it. Thus, insomnia is an under-referred and undertreated symptom in cancer patients. **RESEARCH IMPLICATIONS:** This study will shed light on the prevalence of sleep disorders in cancer patients, screened for cancer site, using a specific sleep tool which is the PSQI. It will also describe correlations of insomnia with other physical symptoms (e.g. fatigue). Moreover it will help in explaining why sleep disturbances are undertreated in the oncological setting. **CLINICAL IMPLICATIONS:** Results of this study will help clinicians in understanding the relevance of this problem in patients' Quality of Life and the need for including a systematic assessment of sleep during routine visit. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.6.1

Reasons for Treatment Decision in Prostate-cancer Patients

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BACKGROUND: Patients with localized prostate cancer can choose between radical prostatectomy and external beam radiation. The aim of this study is to evaluate patients' strategies in the process of decision making and their reasons for treatment decision. **METHOD:** Patients of the University Hospital of Heidelberg with localized prostate cancer are consecutively interviewed either following surgery ($N = 15$) or shortly after the beginning of radiation therapy ($N = 5$). The semi structured interview focuses on the time and process of decision-making from the patients' perspective

e.g. impact of other persons' advice, recommendations and subjective believes of their cancer and treatment options. **RESULTS:** The majority of participants report having contacted up to 7 friends and family members with regard to previous experiences with prostate cancer. All patients used internet or booklets for further information. Most patients want to make the final selection of their treatment themselves after considering their physicians opinion. Many patients consulted several physicians prior to deciding about their treatment. Physicians often did not recommend one single treatment. Other patients' experiences and physicians' advice was deemed highly influential on the treatment decision. First results indicate that patients who opt in favour of radiation therapy frequently rely on other patients' experiences. Patients choosing prostatectomy more often state subjective believes with regard to cancer and treatment: 'cancer must be cut out as soon as possible', 'surgery eliminates cancer while radiation lets it in'. **CONCLUSIONS:** Treatment decision in prostate cancer patients is determined by attitudes and experiences of others as well as physicians' advices. **RESEARCH IMPLICATIONS:** There is substantial variation among patients' reasons for treatment decision. **CLINICAL IMPLICATIONS:** None. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.6.2

'I Want to be a Cancer Patient': Two Case Reports on Munchausen's Syndrome

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BACKGROUND: The Munchausen's Syndrome, first described by the English doctor Richard Asher in 1951, refers to a factitious disorder present in patients who are repeatedly admitted in medical emergencies for apparent serious diseases and are looking forward to intensive medical care. The authors present two challenging case reports, highlighting the importance of a thorough medical investigation before setting into Munchausen's Syndrome stigmatizing diagnosis. **METHOD:** Two cases studied in an Oncological Center are presented, with emphasis on the medical data, diagnostic process, multidisciplinary approach, family-social-occupational implications and outcome. The authors carried out a review on Munchausen's Syndrome, using Medline database, focusing on the last decade publications on the subject. **RESULTS:** Both cases have several similarities, as female gender, age group (young adults), marital status (single), health related profession (doctor; psychologist), life event trigger (family and social isolation; affective rupture) and likely Munchausen's Syndrome diagnosis. With the on going diagnostic

process, one of cases ended out on an atypical presentation of Crohn's Disease. However, the stigmatizing label had already been set, adding psychological damage to the patient (adjustment depressive disorder). The second case confirmed to be a Munchausen Syndrome in a patient with a previous eating disorder diagnosis (anorexia nervosa, restrictive type). **CONCLUSIONS:** From the Munchausen's Syndrome review in recent literature, the authors conclude that this rare diagnosis is even rarer on oncologic settings. It should always be an exclusion diagnosis, made after a careful medical screening carried on by an expert and multi-disciplinary team, which should include the psycho-oncologist. Both patients presented classical Munchausen's clinical profile, which can be misleading by it self. The first case incurred into a misdiagnosis, while the other led to strong suspicion. **RESEARCH IMPLICATIONS:** The authors suggest research, namely retrospective, since this is a rare syndrome. More information should lead to a future protocol in order to accurately assess and diagnose these cases. Development of more evidence-based strategies leading to better outcome could reduce the negative family-social-occupational repercussions usually associated with Munchausen's Syndrome. **CLINICAL IMPLICATIONS:** Authors aim to alert clinicians working with oncology patients for the importance of an exhaustive etiological study prior to a definitive Munchausen's diagnosis. A Munchausen Syndrome false diagnosis may: 1) dangerously postpone the treatment of the subjacent disease, 2) create resistances in doctor-patient relationship and 3) seriously damage the psychosocial balance of patient and family. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.6.3

Multinational Association for Supportive Care in Cancer (MASCC) Risk-Index Score: A Safe and Feasible Marker for Predicting Outcome of Febrile Neutropenia Episodes in Patients with Haematological Malignancies

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BACKGROUND: Febrile neutropenia (FN) is common and potentially life threatening problem for patients with haematological malignancies. It is important to define which of these patients are considered as low or high risk, in order to manage FN episodes. In this study, we try to determine whether the MASCC Risk Index-Score can predict the outcome of FN episodes in patients with haematological malignancies, by separating them in risk groups. **METHOD:** This is a retrospective study

of 100 FN episodes in patients with haematological malignancies, hospitalized in our Clinic from January 2007 to May 2008. MASCC Risk Index-Score was calculated for each FN episode. This Score is based on seven independent factors, present at the onset of the FN episode. These factors are: 1) burden of illness: absent/mild symptoms (5 points), moderate symptoms (3 points), 2) no hypotension (5 points), 3) no chronic obstructive pulmonary disease (4 points), 4) presence of solid tumor/absence of previous fungal infection (4 points), 5) outpatient status (3 points), 6) no dehydration (3 points), 7) age <60 years (2 points). MASCC Risk Index-Score ≥ 21 indicates low-risk patients. MASCC Risk Index-Score <21 indicates patients in high risk for developing serious complications. In our study, MASCC Risk Index-Score was compared to the outcome of each FN episode. The results were statistically analysed with Chi-Square, Fisher Exact Test and Logistic regression. **RESULTS:** 46/100 (46%) FN episodes were scored with MASCC Risk Index-Score ≥ 21 . 40 of them (40/46, 86.95%), had favourable outcome (immediate response to therapy). 6/46 (13.04%), had unfavourable outcome (no response to the initial therapy, worsening of the patient's status, death). 54/100 (54%) FN episodes were scored with MASCC Risk Index-Score <21. 4 of them (4/54, 7.4%), had favourable outcome. 50/54 (92.59%) had unfavourable outcome. Conclusively, MASCC Risk Index-Score predicts the outcome of FN episodes, with worthy predictive value (87%), sensitivity (90.9%) and specificity (89.3%). **CONCLUSIONS:** MASCC Risk Index-Score is safe and feasible way to predict the outcome of FN episodes in patients with haematological malignancies, as it accurately identifies patients at low or high risk for serious complications. It could be used for evaluation of patients, when admitting to the Hospital. Low risk patients could be managed safely with early hospital discharge and oral antibiotics, always under the attendant physician's recommendations. **RESEARCH IMPLICATIONS:** Managing only high risk FN episodes with broad spectrum antibiotics and antifungal drugs can protect from emerging new multi-resistant microbes. **CLINICAL IMPLICATIONS:** MASCC Risk Index-Score helps clinicians to make up quick, safe, affordable decisions about managing FN episodes. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.6.4

The Human Papillomavirus (HPV) Vaccine: Acceptability by Young Adults Three Years After Regulatory Approval in Canada

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BACKGROUND: In 2006, the HPV vaccine was approved in Canada for females age 9 to 26. This vaccine protects against several oncogenic HPV types. Three years after its introduction, controversy regarding the vaccine is still alive and public knowledge, attitudes and acceptability remain unknown. Furthermore, with the possible forthcoming approval of the HPV vaccine for males, the community has new questions and more potential uncertainty. **METHOD:** A sample ($n = 200$) of McGill University students (ages 19–26) will be surveyed using a questionnaire assessing the following variables: 1) demographics, 2) knowledge about HPV and the HPV vaccine, 3) perceived advantages and disadvantages of the HPV vaccine, 4) perceived severity of and susceptibility to HPV, 5) media influence, 6) physician and significant others' recommendation and 7) intolerance of uncertainty. **RESULTS:** Using the health belief model as a theoretical guiding framework, we hypothesized that perceived severity of HPV and risk of HPV will predict the acceptance of vaccination. In addition we explore the role of Intolerance for uncertainty, as a personality variable that may have a significant impact in young adults decisions to receive the HPV vaccine. Finally, we investigate the role of media and its impact on knowledge and intentions to receive the HPV vaccine. **CONCLUSIONS:** The results of this study will allow us to understand the important factors that influence the acceptability of the HPV vaccine in Canadian young adults (male and female). **RESEARCH IMPLICATIONS:** This study provides an assessment of knowledge, attitudes and beliefs of young adults and determining factors associated with acceptability of the HPV vaccine. **CLINICAL IMPLICATIONS:** Results of this survey will provide a basis for designing effective interventions and improving future immunizations programs. **ACKNOWLEDGEMENT OF FUNDING:** Canadian Institutes of Health Research.

P3.6.6

Algorithm-based Treatment for Depression in Cancer Outpatients: Efficacy and Tolerability Evaluation of Newer Antidepressants

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BACKGROUND: Cancer is often burdened by psychological comorbidity, mainly represented by depression and anxiety disorders, that worsen quality of life, and could also interfere with the course of illness itself. Thus, to diagnose and treat these diseases is mandatory. Nevertheless, the clinical features of cancer patients and the potential pharmacodynamic/kinetic interactions complicate

the treatment's choice. Few studies were performed about antidepressants' efficacy and tolerability in organic comorbidity, and no guidelines exist for cancer patients. **METHOD:** Our study was aimed at evaluating effectiveness and safety of new antidepressants (SSRIs, SNRIs, NaSSA, Substituted Benzamides) in depressed oncological population, using a specific treatment algorithm. 620 consecutive cancer depressed outpatients, afferent to the Psychooncology Unit, required an antidepressant treatment, according to clinical assessment by an experienced psycho-oncologist, were enrolled. Patients were assigned to different antidepressant group according to a specific decision algorithm. Patients were assessed baseline, after 4 and 16 weeks with rating scales for depression and anxiety (MADRS, HADS, CGI), coping styles (MINI-MAC), pain (VAS, QUID), quality of life (EORTC-QLQ-30) and side effects (DOTES). **RESULTS:** Patients were assigned to the following treatment groups: amisulpride (127), sertraline (102), citalopram (90), venlafaxine (74), mirtazapine (60), paroxetine (55), escitalopram (73), duloxetine (27), fluoxetine (12). All drugs had a global positive effect, qualitatively different, on depressive symptoms, with significant improvement in almost all emotional tests. Amisulpride (50 mg) particularly improved somatic symptoms ($p < 0,001$). Pain decreased with SNRIs ($p < 0,001$). Dropout rates with mirtazapine (42%), paroxetine (29%), sertraline (21%) and venlafaxine (19%) were higher than other groups (about 10%). No severe adverse events were reported. Preponderant side effects were: weight gain with amisulpride (70%); nausea (15%–26%), anorexia (8%–15%) with sertraline and citalopram; sedation (75%) with mirtazapine; headache (8%–15%), constipation (25%–50%) with venlafaxine and paroxetine; agitation (8%), insomnia (21%) with duloxetine. **CONCLUSIONS:** These results represent a comparative evaluation of new antidepressants in oncological clinical practice. These drugs showed to be effective on several depressive symptoms, with a good tolerability profile. Overall, no significant differences in efficacy was observed between drugs; however, each antidepressant showed a peculiar spectrum of action for emotional, somatic and cognitive symptoms. Our study suggests the importance of a proper selection of antidepressant in this population, tailored to the patient's specific medical condition, considering expected side effects, pharmacokinetics and potential drug interactions. Safety should match expected differential efficacy for specific depressive syndromes and concurrent somatic symptoms. **RESEARCH IMPLICATIONS:** Our study underlies the need of less rigid categorization of depression in cancer patients and broader inclusion criteria with respect to age, comorbid conditions, and concurrent somatic symptoms for further

research in oncological context, to demonstrate the relative effectiveness and tolerability. Our results could suggest the demand of further investigation about the biological aspects of comorbid depression, in order to achieve an even more individually tailored intervention, based on a compromise between efficacy and tolerability. **CLINICAL IMPLICATIONS:** No guidelines exist for comorbid depression in cancer patients, and the treatment choice is based on limited evidence, individual clinical expertise, and data derived from general or other medically ill populations. Our study suggests some clinical practice criteria to optimize interventions, achieve a broader efficacy on both physical and psychological symptoms, with positive effects on quality of life and prognosis. Rigorous assessment of clinical conditions should also bring to further increased tolerability and treatment compliance. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.6.7

Pilot Evaluation of a Decision Aid for Chinese Women Considering Breast Cancer Surgery for Localized Breast Cancer

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BACKGROUND: We developed and piloted a decision aid (DA) booklet for Chinese women with localized breast cancer (BC) considering breast cancer surgery. This is probably the first DA designed specifically for non-Caucasian cancer patients. The current study tested the acceptability of the DA booklet to assist Chinese women facing breast cancer treatment decision-making (TDM). **METHOD:** Chinese women diagnosed with localized breast cancer were invited to evaluate the DA booklet. A total of 95 women received the DA booklet at the end of their initial diagnostic consultation. Questionnaires evaluating attitudes toward the DA booklet, patients' understanding of BC treatment and preference for decision involvement were completed four days after the initial consultation. The questionnaire was completed using a face-to-face interview. **RESULTS:** Most women (88%) had read/partly read the DA booklet; 73% found it useful in choosing BC surgery. Most found that the DA was easy to understand (89%), facilitated their understanding of information obtained from their surgeon (87%), and was not anxiety provoking (77%). Women found the DA eased TDM (84%). Women who read (mean 7.17) or partly read (mean 4.71) the DA had a better understanding of BC than those who did not

read the booklet (mean 2.91, $p < .001$). Women preferring passive participation were less likely to read the booklet compared to those preferring active/shared decision making participation ($p = .025$). **CONCLUSIONS:** Our findings suggest that the DA booklet is acceptable to Chinese women deciding for breast cancer surgery. Consistent with previous studies, the DA booklet increased Chinese women's knowledge of BC and its treatment. **RESEARCH IMPLICATIONS:** The DA booklet has been revised to make it more parsimonious and enhance its clarity, particularly for sub-literate women. The revised DA booklet is being evaluated in a randomized controlled trial. **CLINICAL IMPLICATIONS:** Previous studies showed difficulties in treatment decision making (TDM) leads to persistent psychological distress among Chinese women with BC. If effective in improving health outcomes, the DA could be used to facilitate TDM, thereby minimizing subsequent psychological distress. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by Hong Kong Cancer Fund.

P3.7.1

Efficacy of Several Psychiatric Treatment Methods in Treatment of Patients with Newly Diagnosed Breast Cancer

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BACKGROUND: Psychological adjustment on breast cancer have impact on quality of life of affected women. Mechanisms of adjustment process are various, and becoming ill of cancer is highly traumatic stress event which have influence on development of psychiatric disorders. **Aim:** To evaluate impact of different psychiatric treatment methods on quality of life in patients with newly diagnosed breast cancer. **METHOD:** Sample consisted of 120 women with breast cancer treated on Department for Oncology on Clinical Hospital Osijek. Patients were divided in four groups, and each group was treated with different psychiatric treatment method (psychopharmacology and/or psychotherapy treatment, one group was control and wasn't in any kind of treatment). We used: detailed clinical examination with psychiatric interview (DSM-IV criteria), specially structured non-standardized questionnaire for estimation of potential ethyological factors for psychiatric disorders in patients, HAM-A, HAM-D and WHOQOL-BREF. Tests were done at the first day of investigation, after one and two months. **RESULTS:** Statistically significant differences were

found on HAM-A and HAM-D between the first and the second evaluation and the first and the third evaluation for all groups that were in psychiatric treatment ($p < 0.0000$), pointed on reduction of anxiety and depression. Control group showed trend of raising results on HAM-A and HAM-D during time. Differences between all groups and measurement for social and environmental domain (WHOQOL-BREF), showed no statistically significant differences. WHOQOL-BREF results showed statistically significant difference on physical and psychological domain and the best results were in the group with combined treatment. **CONCLUSIONS:** All psychiatric treatment methods are effective in treatment of patients with newly diagnosed breast cancer. Combination of psychopharmacology and psychotherapy methods showed best results in improving patient's life quality. **RESEARCH IMPLICATIONS:** This investigation represent results of original approach in valuation of several therapeutic procedures of liaison psychiatrist in treatment of women with breast cancer. **CLINICAL IMPLICATIONS:** Results of this investigation will help clinicians in conception of therapeutic procedures and interventions in treatment of women with breast cancer. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.2

Distress Thermometer: Adaptation and Validation Study of a Brief Screening Instrument to Detect Distress in Cancer Patients

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BACKGROUND: The high incidence of distress in oncological patients showed the necessity of acting strategies. Since 1997, the National Comprehensive Cancer Network (NCCN) recommends the adoption of a specific measuring instrument for the assessment of cancer patients, in the Distress Management. Considering the existence of clinical and scientific interest to develop future meta-analyses studies in the field of Oncology, this study aimed to translate and test the feasibility and validity of the Brazilian version of Distress Thermometer (DT). **METHOD:** The English language version of the DT was translated into Portuguese (Brazilian language). The effectiveness of the DT in assessing distress was verified by comparison with the Hospital Anxiety and Depression Scale (HAD), a clinically established tool for evaluating distress. To that end, a sample of 83 patients of both genders (36.1% male and 63.9% female), with age between 20 and 82 years ($M = 43$ years), with 15 types of cancer,

responded to the TD and the HAD. The data were analyzed according to the criteria defined in literature and with the software SPSS 15.0. **RESULTS:** Receiver operating characteristics (ROC) demonstrated that the DT has good diagnostic utility relative to the HAD (area under the curve = 0.82). The ROC curves indicate that using a cut-off of 4 versus 5, maximizes sensitivity (82%) and the specificity (98%); however, the alternative lower cut-off of 3 versus 4 increases sensitivity (100%) and reduces specificity (90%). With the cut-off score of 4, the prevalence of psychological distress was 39.8%. **CONCLUSIONS:** Using the DT appeared feasible, acceptable and effective for psychological distress screening among cancer patients. Our results indicate that the Brazilian version of the distress thermometer, developed by the NCCN, can be used to monitor change in psychological distress over time, and to identify a number of factors liable to influence distress, but further works is needed to confirm this. **RESEARCH IMPLICATIONS:** The Distress Management is standard in several countries, but not in Brazil. This validation may be: 1) increase the research about the preventive actuation in the reduction or elimination of feasible psychiatric and psychological disorders; 2) evaluation the influence of the distress in quality of life; 3) investigate if the Distress Management contribute to justify the adoption of evaluation measure of distress in oncologic treatment units. **CLINICAL IMPLICATIONS:** This study has shown that the DT offers a simple way of screening for psychological distress in cancer patients. A generalization of this method, allowing detection of anxiety and depression disorders and quality of life assessment, is acceptable for the patients and for the oncologist, and could result in more effective psycho-oncological management of cancer patients. **ACKNOWLEDGEMENT OF FUNDING:** We would like to thank Dr Jimmie C. Holland for the attention, for the permission to use the distress thermometer, and for the advice.

P3.7.3

The Development of a Personal Digital Assistance (PDA) System to Collect Symptoms in Home Hospice Patients

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BACKGROUND: Previous studies reported that cancer pain was associated with psychosocial

factors and that inappropriate pain assessment caused inadequate pain control. A computerized ecological momentary assessment (cEMA), a real-time data collection technique, may achieve a better assessment in the natural settings. Therefore, the aim of the present study is to develop a personal digital assistance (PDA) system to collect symptoms in cancer patients in the natural settings using a cEMA technique. **METHOD:** The subjects were terminal cancer patients receiving hospice care at home. Inclusion criteria were having cancer-related pain, being with analgesics, being 20 and above years old, being expected to tolerate the participation, and not having a current or recent history of cognitive impairment or psychiatric disorder. Participants were asked to record symptoms in a PDA several times per day for a week when they took per-request medications and when an alarm beeped. At the end, the usability of the device was asked and overall response rates were calculated. **RESULTS:** Twelve cancer patients finished the entire schedule. There were 417 recordings of symptoms at the sound of the beep. The overall response rate was 91.1% at the sound of the beep. Five subjects made 87 recordings of symptoms in taking per-request medications. The other seven subjects did not take any per-request medication. The response rate was 77.1% in taking per-request medications. The user-friendliness of the device was 8.8 ± 1.8 with numerical rating scale (NRS) from 0 (worst) to 10 (best). **CONCLUSIONS:** The developed system using a PDA to collect symptoms is acceptable to cancer patients receiving hospice care at home. Therefore, the system may be able to help monitor and manage symptoms such as pain and mood states in cancer patients. **RESEARCH IMPLICATIONS:** This study indicates that a cEMA technique might be applicable to even severe cancer patients to evaluate symptoms in the natural settings. **CLINICAL IMPLICATIONS:** A cEMA technique might be applicable to even severe cancer patients to evaluate symptoms such as pain and mood states, which might lead to better management of cancer patients at home. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.4

The WHOQOL-BREF is Useful in Women with Malignant and Benign Breast Problems

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BACKGROUND: It has become increasingly important to focus on patient-centred outcomes, such as quality of life (QOL), in women with breast cancer (BC) and benign breast problems (BBP). To

measure QOL, the 26-item WHOQOL-BREF, an abbreviated form of the World Health Organization Quality of Life instrument-100 items (WHOQOL-100), was developed. The aim of this study was to assess the psychometric properties of the WHOQOL-BREF in women with BC and BBP. **METHOD:** Women visiting the department of surgery of a Dutch hospital with a palpable lump in the breast or an abnormality on a screening mammography ($N = 409$) were asked to participate in a study on QOL. All participants completed the WHOQOL-BREF and measures of anxiety (STAI), depressive symptoms (CES-D), and fatigue (FAS). The moment of completion was before women received a diagnosis of BC or BBP. Internal consistency was estimated using Cronbach's alpha. Pearson correlation coefficients were calculated to provide information on construct validity, and a confirmatory factor analysis was conducted to test the four-domain structure in the total group. **RESULTS:** Confirmatory factor analysis of the WHOQOL-BREF showed that the associations between the latent variable QOL and the four domains were 0.64 (Physical Health), 1.11 (Psychological Health), 0.76 (Social Relationships), and 0.84 (Environment). Convergent validity was shown by moderate ($r = 0.30-0.49$) to high ($r > 0.49$) correlations between scores on the FAS, STAI-State, and the Physical Health and Psychological Health domains of the WHOQOL-BREF. There were lower correlations (r). **CONCLUSIONS:** The social skills impairment and the ensuing relational difficulties typically reported in children surviving brain tumors seem to be aggravated by the acquired inability to appropriately infer the mental and emotional states of others, understand social situations and adjust one's behavior accordingly. This finding seems to be more common to children with supratentorial tumor. A possible explanation for this is the malfunctioning of cortical structures. More specifically, of frontal lobes, which would determine cognitive difficulties impacting abilities essential for the tasks and the activities typical of social life. **RESEARCH IMPLICATIONS:** This study explored the relationship between emotional empathy and social functioning. It is an 'attempt' that deserves to be replicated in other studies in order to better define the link between social difficulties in children with cognitive and neuropsychological impairments due to brain tumors and disordered cognitive and emotional role taking. It is necessary to administer measures specifically designed to detect relational difficulties to larger samples and compare acquired brain lesions of different etiologies. **CLINICAL IMPLICATIONS:** Social difficulties are the main problem of this population upon re-entry into community. The need for an appropriate rehabilitation treatment soon becomes evident. A targeted intervention to enhance cognitive and emotional role

taking can have a beneficial effect on the social functioning of children surviving brain tumors. **ACKNOWLEDGEMENT OF FUNDING:** We gratefully acknowledge the financial support of AIRC (Associazione Italiana per la ricerca contro il cancro).

P3.7.5

Dreams in Oncological Patients

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BACKGROUND: This study analyzes the dreams in 32 oncological female outpatients of the S. Giovanni Battista Hospital in Torino, Italy, with the aim to estimating the cancer's influence on the oneirical content and on the quality of life. Moreover the correlations between personality structure, emotional aspects and dreams will be evaluated. **METHOD:** The population is divided in two different groups: 16 subjects with breast cancer and 16 with lung cancer. All the participants to the study were assessed through: structured interview about their dreams, to evaluate the most emotionally positive and negative ones; Rorschach test to assess the personality structure; the Hospital Anxiety and Depression Scale to estimate anxiety and depression; the Visual Analogue Scale and Questionario Italiano del Dolore to self-evaluate the component of pain; the EORTC QoL C30 questionnaire to describe the quality of life. Rorschach protocols has been scored following the Passi Tognazzi technique. Dreams analysis is conducted according to Individual Psychology approach. **RESULTS:** The dreams of 75% breast cancer patients demonstrated negative feelings related to body image and sexual identity. Positive dreams content shows needs of tenderness and holding. Lung cancer patients had dreams with negative contents characterized by deep anguish of suffocation (65%) and death (62%). In breast cancer group the statistical analysis showed significant correlations between HADS depression scores and Rorschach answers related to affective frailty; HADS anxiety scores and percentage of human and devitalized answers; EORTC score and number of anatomic answers. Lung cancer patients group demonstrated a positive correlations between HADS depression subscale and the percentage of Rorschach's devitalized and black inkblots answers. **CONCLUSIONS:** Data show a qualitative difference between groups in the affective material as revealed in the dreams narrative. According to Individual Psychology such altered self perception, in both study groups, the so called 'organ inferiority complex', is considered as a threat to identity and self esteem. **RESEARCH IMPLICATIONS:** Our study underlines that further data are needed to explain the correlations between

dreams and emotional symptoms in oncological population. **CLINICAL IMPLICATIONS:** Oneirical content seems to be influenced by oncological disease: the significant correlations with the rating scales score and with some personality tracts, as they emerge from a Rorschach protocol, show that dreams make a connection between 'individual lifestyle and current problems' (Adler, 1935), first of all the cancer disease. Moreover the use of a projective technique together with the analysis of dreams concur to find the best psychotherapeutic strategy. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.6

Screening for Psychological Distress in Cancer Patients. Polish Adaptation of the Distress Thermometer and the Problem List: A Validation Study

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BACKGROUND: The primary purpose was to investigate the screening properties of the Distress Thermometer (DT) and to identify their optimal cutoff in Polish cancer patients. Secondary objectives were: 1) to find out whether demographic or clinical factors differentiated patients who scored above or below this cutoff score and 2) to determine whether patients who scored above or below this score differed in their reports of practical, family, emotional, spiritual and physical problems. **METHOD:** Cancer patients ($n = 179$) who were recruited from 2 sites completed the DT and identified the presence or absence of 34 problems using the Problem List (PL). Participants also completed the Beck Depression Inventory (BDI), an 12-item version of the General Health Questionnaire (GHQ-12), the state version of the State-Trait Anxiety Inventory (STAI-S) and the European Organization for Research and Treatment of Cancer Core Quality of Life Questionnaire (EORTC QLQ-C30). **RESULTS:** Receiver operating characteristic (ROC) curve analyses of DT scores yielded area under the curve estimates relative to the BDI cutoff score (0.75), the GHQ-12 cutoff score (0.78), the STAI-S cutoff score (0.80), indicative of good overall accuracy. The ROC analyses also revealed that a DT cutoff score of 4 had optimal sensitivity and specificity relative to the mentioned measures. Additional analyses indicated that compared with patients who had DT scores < 4 , patients who had DT scores ≥ 4 reported more practical ($p < 0.05$), emotional ($p < 0.001$), and physical problems ($p < 0.01$). The examination of

DT scores in relation to demographic and clinical variables and the patients' quality of life indicated no significant differences between these two groups of subjects. **CONCLUSIONS:** Findings confirm that the single-item DT compared favorably with the BDI, the GHQ-12, and STAI-S as a method for distress screening in cancer patients. **RESEARCH IMPLICATIONS:** Consistent with the previous studies, a DT cutoff score of 4 was found to be optimal for identifying clinically significant distress, anxiety and depression. **CLINICAL IMPLICATIONS:** The DT and the PL were found to be simple yet effective screening instruments for detecting psychosocial distress in Polish cancer patients, and for identifying problems that warrant intervention. **ACKNOWLEDGEMENT OF FUNDING:** The contribution of Jolanta Zycinska to this study was supported by WP/BST/25/08 grant.

P3.7.7

Rehabilitation of Cancer Patients: The Role of Sense of Coherence. Observational Study in Florence, Italy
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BACKGROUND: Generally, psychological assessment in cancer patients focuses on distress. Sense of Coherence (SOC) was proposed by Antonovsky in order to explain how people cope successfully with stressful (even extremely stressful) life experiences. The objective of this study was to investigate the SOC-Distress association in cancer patients attending a rehabilitation centre, by comparing the score of the 3 item SOC questionnaire (SOC3) with the score of the 13 item Psychological Distress Inventory (PDI). **METHOD:** The sample study totalled 666 patients who were recruited from breast cancer patients attending the Oncological Rehabilitation Centre of Florence for the first time between January 2007 and December 2008. Patients were administered the PDI along with the SOC3. The Sense of Coherence was evaluated using an Italian version of the Swedish SOC3 questionnaire, translated from the published. English version according to the standard forward-backward translation procedure. In this preliminary analysis, Pearson correlation coefficient and Chi square statistic were used to determine the association between PDI and SOC. **RESULTS:** 610 patients completed the two measures (PDI and SOC) with <4 or 0 missing (for PDI and SOC3, respectively). SOC3 score and PDI score did correlate strongly ($r = 0.48$, $p < .0001$). Using the suggested PDI cutoff score for cancer patients (>35), patients with high distress showed lower SOC3 score. The 88.5% of subjects who

scored the highest SOC3 score (= 0) and only 25% of patients who scored the lowest SOC3 score (= 6) were not clinically distressed according to PDI. The differences were statistically significant ($p < .0001$). **CONCLUSIONS:** The combination of PDI and SOC3 could be a practicable screening tool for assessing not only the extent of distress but also the strengths and the resources that play an important role in rehabilitative oncological patients. **RESEARCH IMPLICATIONS:** Future research needs to explore better which version (29, 13, 3 item) of the SOC questionnaire would be better suitable in a clinical context, and how SOC could influence both the level of distress and the psychological support process in cancer patients. **CLINICAL IMPLICATIONS:** Rehabilitating a cancer-affected person means offering all the possibilities to activate his internal resources and to elicit his needs. Therefore the assessment of resources together with distress could help to individualise the most suitable rehabilitation pathway. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.9

The Influence of Pain on Physical Performance of Patients with Cancer
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BACKGROUND: Physical dysfunction is a frequent consequence of cancer and its treatments. Improvement of physical function therefore should be a primary goal of treatment; the use of appropriate assessment and outcome measures is fundamental. The purposes of this study were to investigate the psychometric properties of a Japanese language version of Physical Performance Test (PPT) Battery and characterize physical function in patients with cancer referred for rehabilitation. **METHOD:** A total of 105 patients with cancer participated in this study. All patients had a diagnosis of cancer. The subjects completed the Japanese language version of the PPT Battery: the time taken to complete various tasks, the distance walked in 6 minutes, and the distance reached forward while standing were measured. Two self-report questionnaires, one on sensory evaluation of pain and the other on affective evaluation of pain; the Functional Independence Measure (FIM), which evaluates activities of daily living; and Brief Fatigue Inventory (BFI) and European Organization for Research and Treatment of Cancer Quality of Life Questionnaire were simultaneously administered to the subjects. This study was approved by the ethical committee of our institution, and informed consent was obtained from all participants. **RESULTS:** The results for reliability showed that the ICC values for inter-rater reliability and intra-rater reliability were

0.89 or more for every item. The results for validity showed significant associations between the scores for all of the items in the Japanese language version of the PPT Battery and total scores for the FIM and BFI. **CONCLUSIONS:** Significant associations were found between scores for the Japanese language version of the PPT Battery and pain. Pain has a substantial impact of physical performance of patients with cancer. Fatigue also impacts physical performance. **RESEARCH IMPLICATIONS:** Compromised ability to perform certain physical tasks affects quality of life. Further investigation of the roles of these relevant variables is needed. I wish to assess the mid- to long-term efficacy of intervention by a rehabilitation approach that includes improvement of the affective state due to the pain rather than an approach whose only purpose is to alleviate the pain itself. **CLINICAL IMPLICATIONS:** The results also suggested that it might be possible to improve the activity limitations of patients with chronic pain by improving their affective state in response to the pain. **ACKNOWLEDGEMENT OF FUNDING:** This research was supported by Grant-in-Aid for Young Scientists B (18790436).

P3.7.10

Cancer Genetics: Development and Validity Testing of a Screening Instrument for Psychosocial Problems

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BACKGROUND: Approximately 20% of individuals undergoing genetic counseling and/or testing for cancer experience significant psychosocial problems during or after the genetic counseling process. These problems (i.e., generalized distress, decisional conflict, cancer worries, family communication, cancer-related grief, concerns about insurance, etc.) can be addressed effectively with professional support. However, without appropriate screening tools, 30% of counsees with psychosocial problems remain undetected in daily practice. Therefore, the development of a screening instrument in cancer genetics is warranted. **METHOD:** The screening instrument will be developed to cover multiple psychosocial domains including general distress and specific problems encountered during genetic counseling. The developmental process will consist of four phases; generation of relevant issues, operationalization of these issues into a set of items, pre-testing the instrument and large scale field testing of psychometric and screening properties. The developmental work and field testing will be carried out in the Netherlands Cancer Institute and will include, in total, approximately 500 counsees.

Field testing will include a comparison of the screening instrument with a structured interview by an experienced psychosocial worker ('gold standard'). **RESULTS:** Not Applicable. **CONCLUSIONS:** Not Applicable. **RESEARCH IMPLICATIONS:** To our knowledge, there is currently no validated screening instrument for assessing psychosocial problems in cancer genetics. If successful, this project will yield a screening questionnaire that can be used and evaluated in other settings. It will also facilitate further research aimed at ameliorating the various psychosocial problems prevalent in the oncogenetic setting. **CLINICAL IMPLICATIONS:** Implementing this screening instrument in clinical practice should improve the detection of counsees with psychosocial problems. Appropriate referring of the counsees will allow the provision of tailored psychosocial interventions. **ACKNOWLEDGEMENT OF FUNDING:** This study is supported financially by the Dutch Cancer Society. (grant number NKI 2008-4016).

P3.7.11

Attitude Towards Randomised Clinical Trials, Clinical Research and Patient Care: Development of a Questionnaire for Cancer Patients

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BACKGROUND: Worldwide only 5% of eligible cancer patients participate in randomised clinical trials (RCTs). This limits progress in cancer research. The specific perspective of cancer patients needs to be explored to understand the irrational beliefs which patients associate with RCTs. According to Verheggen (1998), the attitudes of patients towards (a) RCTs, (b) clinical research in general and (c) patient care are relevant factors which influence whether patients choose to participate in such trials or not. **METHOD:** A 53 item questionnaire assessing attitudes towards (a) randomised clinical trials, (b) clinical research and (c) patient care was developed. To this end, interviews with cancer patients and physicians were evaluated to collect items which could be included in the questionnaire. Following an item selection by psycho-oncologists, the first version of the questionnaire was given to a consecutive sample of 180 patients with cancer of the University Hospital Freiburg (Germany). 104 completed questionnaires were statistically analysed. The willingness of patients to be personally involved in an RCT was also assessed with the aim of exploring a correlation between the attitudes and the willingness

to participate. **RESULTS:** Principal component analyses were undertaken individually for each of the three categories into which items had already been allocated. These formed five scales: positive attitude to RCTs ($\alpha = .85$), negative attitude to RCTs ($\alpha = .81$), attitude to random allocation ($\alpha = .72$), attitude to clinical research ($\alpha = .63$) and attitude to physician ($\alpha = .73$). The willingness to participate in a RCT was significantly correlated ($p < .05$) with the positive attitude to RCTs ($r = 0.40$), the negative attitude to RCTs ($r = 0.27$) and the attitude to clinical research ($r = 0.27$). **CONCLUSIONS:** With this instrument it is possible to explore patients' motivations and fears concerning randomisation and their personal involvement in clinical trials. The results show that patients' views about the advantages and disadvantages of randomised clinical trials and research in general are likely to be predictive of whether or not patients will agree to take part in a study. **RESEARCH IMPLICATIONS:** The five scales of the developed questionnaire constitute a differentiated picture of patients' attitudes to RCTs and take the unique psychological situation of cancer patients into consideration. Thus, it serves as a good tool for exploring the perspectives of cancer patients towards their own trial participation. It enables further research, for example, the comparison of patients at different stages of their illness or with regard to correlations between these scales and other external factors. **CLINICAL IMPLICATIONS:** The scales for measuring positive and negative attitudes towards RCTs can be used by physicians to identify the fears and hopes of their patients. This information can help to respond more individually to each patient. Therefore, the informed consent consultation can be better adapted to the individual patient's needs. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.12

Psychosocial Risk Screening in Oncology: Experience in a Day Hospital, Portuguese Institute of Oncology of Coimbra

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BACKGROUND: In oncology, distress prevalence is great, although psychological/psychiatric morbidity is underdiagnosed causing negative consequences. The need for early detection and treatment of this distress has led to the search of simple effective screening methods. The purposes of our study were to measure the

prevalence of distress in a group of cancer patients undergoing chemotherapy, understand the congruence between the distress assessment by nurses and patients and experiment Distress Thermometer in daily clinical practice. **METHOD:** A cross-observational study was done between April and December 2008 with 95 patients performing the second chemotherapy treatment and who agreed to participate. The Distress Thermometer (questionnaire that identifies the level of distress and causes of it) was used by nurses who asked patients to answer it and also registered the level of distress they perceived in their patients. We considered 'high distress' level a score of 5 or more and 'low distress' level a score under 5. Subsequent evaluation of the individuals with 'high distress' who accepted was performed by a liaison psychiatrist. The data was processed in Excel, version 2003. **RESULTS:** In the group of high distressed patients (40%) dominated female sex (84.21%) with breast (52.63%) and gastrointestinal cancer (26.31%), in active treatment (44.74%) with a mean age of 51 years. Emotional problems were the main reason, according to patients, of their distress (89.47%). Sixteen (42.10%) patients accepted and were evaluated by the liaison psychiatrist, 4 (10.53%) refused the evaluation, 2 patients (5.26%) died and 16 (42.10%) have not been evaluated. Of those evaluated, 9 had Adjustment Disorders and 3 had Depressive Disorders. In the majority of cases, the assessment by staff did not coincide with self evaluation, and the undervaluation was more frequent when the distress was minor. Only two patients had been already perceived as distressed and referred to psychosocial support. **CONCLUSIONS:** The results of the study corroborate the existence of a significant prevalence of distress—40%, which reinforces the need for routine screening. Also the high prevalence of emotional problems perceived as the main reason for distress, along with medical problems, shows the necessity of giving patients the opportunity for expressing their concerns. The distress thermometer proved to be a useful tool and of easy application in identifying patients in distress in clinical daily routine. There was also an adequacy of the referral of these patients. **RESEARCH IMPLICATIONS:** Our results suggest that distress is undervalued by staff and, thus, it seems necessary that research investigate the reasons for this. Also there is a need for very simple instruments of screening easy of integrate in clinical daily routine. **CLINICAL IMPLICATIONS:** As psychological distress is very high in oncology and, as staff doesn't ask and undervalue it, routine screening is necessary and possible in clinical practice with great benefits for patients. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.13

Screening of Cognitive, Functional and Affective State in Old Cancer Patients

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BACKGROUND: cancer is a major health problem in all developed countries and its incidence increases with age. The older cancer patient's clinical evaluation and treatment is influenced by conditions such as disabilities, comorbidities, and functional status, along with cancer type and stage. Geriatric syndromes may complicate the diagnosis and the treatment of cancer and vice versa and may substantially affect quality of life. A multidimensional and multidisciplinary approach to elderly cancer patients is needed. **METHOD:** We enrolled 118 cancer patients (67 males/51 females; mean age 70.97, SD 5.6; mean education 7.8, SD 3.8). Patients were affected by the following primary site cancer: pulmonary 16.1%, breast 19.5%, gastrointestinal 43.2%, genital-urinary 11.9%, other 9.3%. Treated group consists of 45 patients (mean age 69.8, SD 4.81; mean education 7.8, SD 3.81) submitted to standard-dose chemotherapy. Control group consists of 73 patients (mean age 71.7, SD 5.96; mean education 8.0, SD 3.78). All patients were assessed by rating scales: Mini Mental State Examination (MMSE), Activities of Daily Living scale (ADL), Instrumental Activities of Daily Living scale (IADL), Geriatric Depression Scale (GDS). **RESULTS:** Overall MMSE mean was 27.8 (SD 2.4). Sample showed: 9.3% possible cognitive impairment (MMSE mean 22.2, SD 2.5); 13.6% cognitive dysfunction (MMSE mean 25.9, SD 0.9); 77.1% normal cognitive functioning (MMSE mean 27.5; SD 2.7). 19.5% of the sample had a compromise on ADL and IADL at 44.9%. The 34.7% of the sample showed a depressive mood. The two groups did not show differences in cognitive functioning. Treated group showed more impairment than control group on IADL ($p = 0.036$). Correlations are present in treated group between GDS with MMSE ($p = 0.006$), attention MMSE sub-item ($p = 0.006$), ADL ($p = 0.008$) IADL ($p = 0.000$). **CONCLUSIONS:** Chemotherapy doesn't worsen cognitive functioning, but has an impact on daily life autonomies. In treated group, depressive mood correlates positively with cognitive, particularly with the attention, and functional status. **RESEARCH IMPLICATIONS:** This study advises a correct screening assessment of cognitive, functional and

affective state of cancer patients, using rating scales. It describes correlations between cancer treatment, MMSE sub-items and functional and affective state. **CLINICAL IMPLICATIONS:** This study suggests to clinicians the necessity of a multidimensional approach to elderly cancer patients, to permit a better diagnosis and identify patients at risk. A multidisciplinary evaluation should allow to define the adequate treatment and to increase the compliance to it. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.14

Correlation Between Pain and Emotional Symptoms in Patients Referred to a Psycho-oncology Unit

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BACKGROUND: It is well known that pain contributes to increase emotional distress in cancer patients, but rarely are assessed in a systematic manner. **Purpose:** The main goal of the study is to systematically assess the pain and emotional problems experienced by cancer patients, referred to a Psychooncology Unit to receive psychotherapeutic support, measured with 0–10 scales, and find the correlation between pain, the other symptoms evaluated and the Hospital Anxiety and Depression Scale (HADS). **METHOD:** One hundred and seventy-eight cancer patients (73 males, 105 females), from a Catalan public hospital were assessed during eight consecutive visits to the Psychooncology Unit, in relation to different symptoms (pain, mood, anxiety, worry, sadness and fatigue), from January 2005 until December 2006. The measurement of symptoms was performed using a 0–10 scale, and the Hospital and Depression scale (HADs) was given at the first visit. The psychotherapeutic support consisted in cognitive behavior stress management intervention, that included anxiety reduction (relaxation training and guided imagery) and cognitive restructuring. 'Pain' was correlated with all the symptoms evaluated (mood, anxiety, worry, sadness and fatigue), and with HADs subscales. The level of significance for the Pearson's correlation coefficients analysis were set at 1% (0.01). **RESULTS:** In the first visit, we found a positive significant low association between 'pain' and: 'mood' ($r = 0.355$), 'anxiety' ($r = 0.282$), 'sadness' ($r = 0.290$), and the subscale 'Anxiety' (HADs) ($r = 0.352$). We found a positive significant moderate association for 'pain' and 'fatigue' ($r = 0.509$). From the second visit to the fifth we found moderate positive significant correlations between 'pain' and: 'mood' ($r = 0.508$; $r = 0.716$), 'anxiety' ($r = 0.579$; $r = 0.665$), and 'sadness'

($r = 0.520$; $r = 0.601$) respectively. The correlation between 'pain' and 'worry' still low during these second and the fifth visits ($r = 0.452$; $r = 0.489$). During the sixth visit, we found not significant correlation between 'pain' and 'anxiety' nor 'worry'. In the seventh visit the significant correlation between 'pain' and all the symptoms have disappeared. The eighth visit we found only good positive significant correlation between 'pain' and 'sadness' ($r = 0.821$). **CONCLUSIONS:** In our study we can conclude that after the sixth visit the positive significant correlation between 'pain' and symptoms studied, except sadness, despair. **RESEARCH IMPLICATIONS:** It seem to be necessary investigate why decrease the correlation between 'pain' and the other symptoms after the 6th visit, and if occurs the same in a control group. **CLINICAL IMPLICATIONS:** Reduced emotional distress can impair patient's ability to cope with pain. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.15

Screening for Distress—The HFK-B: A New and Very Short Questionnaire

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BACKGROUND: The well known questionnaire (HFK) for assessment of psychosocial strain and need for according support in oncological patients, designed by Strittmatter et al. for patients with dermatological malignancies has been further developed. Using minor changes in the wording of some items the new version is now valid for a broader range of oncological patients. The psychometric characteristics of this new version (HFK-B) have been tested and evaluated with these patients. **METHOD:** Using a panel of experts some items of the original questionnaire have been newly worded to avoid the specificity of dermatology symptoms, especially the focus on visible impairment, following the dermatological treatment. The calibration sample consisted of 61 patients with various gastro-intestinal tumors, the evaluation sample of 356 patients. For validation the Brief-Symptom-Inventory was used as 'gold standard'. Furthermore it was validated using the scales 'emotional functioning' and 'global health' of the EORTC QLQ-C30. **RESULTS:** The reliability of this new version is equal (minimally better) to the original version (Cronbach's alpha: $\alpha = .82-.87$). The correlation of the HFK-B with the criterion variables (BSI, EORTC subscales) varied between $r = .49$ and $r = .74$. The indication for psychosocial support showed an excellent degree of sensitivity (93%) while using the 'summary criterion' had a

sufficient specificity of 79%. **CONCLUSIONS:** The HFK-B is a new screening instrument for the assessment of psychosocial strain resp. need for additional psychosocial support. It has excellent sensitivity, identifying 93% of the targeted patients correctly. It is valid now not just for broad variety of diagnoses but as well for relatives of cancer patients. **RESEARCH IMPLICATIONS:** The HFK-B has very good psychometric characteristics, it is diagnostic independently applicable and well accepted by patients and clinicians. **CLINICAL IMPLICATIONS:** The practicability and comprehensibility of the questionnaire are very good. A special training of the users is not necessary. **ACKNOWLEDGEMENT OF FUNDING:** None.

P3.7.16

Anxiety and Distress in Cancer Patients that Visit the Oncological Office for First Time

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BACKGROUND: Cancer is a disease that impact the patient physical and psychologically. The psychological disorders that begin after diagnosis, in the prognostic, treatment and chronic stages have repercussion on Patient's Quality of Life, therefore is relevant its exploration by multidisciplinary teams in Oncology services for prevention and recovery. In the present investigation the objective is to determine the level of anxiety and distress of patients in their first visit to Oncology service. **METHOD:** The sample was constituted of women and men, literate, ages between 20–70, that assisted to a first visit to oncology office. All patients had different kinds of Cancer with definitive diagnosis and they were with or without Oncological Treatment. **RESULTS:** We are now in data collection that is why we can not mention results. **CONCLUSIONS:** This study has practical application to Psychooncologist work, to make the identification easier for patients that needs psychological counseling and those areas affected by disease, to determine what specialist of multidisciplinary team will attend the patient needs and finally to give a better and more individualized service to the patient with cancer. **RESEARCH IMPLICATIONS:** Our research may help to know the levels of anxiety and distress in cancer patients but do not differentiation stages of the disease which could be a line of investigation for future work. **CLINICAL IMPLICATIONS:** Nivesles know the anxiety and distress of the cancer patient allows us to design intervention programs and thus increase the quality of life of patients and families. **ACKNOWLEDGEMENT OF FUNDING:** Ministerio del poder popular para la salud.

P3.7.17

Comparison of the Mini Mental State Examination (MMSE) and Montreal Cognitive Assessment (MoCA) to a Comprehensive Neuropsychological Assessment Battery in Patients with Brain TumorsRobert Olson¹, Grant Iverson², Maureen Parkinson³, Hannah Carolan³, Ann-Louise Ellwood⁴, Michael McKenzie¹¹BC Cancer Agency, Vancouver, BC, Canada,²University of British Columbia, Vancouver, BC, Canada, ³BC Cancer Agency, Surrey, BC, Canada,⁴BC Cancer Agency, Kelowna, BC, Canada

BACKGROUND: Brief cognitive screening measures are often selected by clinicians and researchers for brain tumor patients, primarily because of their ease of use. Currently, the Mini Mental State Examination (MMSE) is the most commonly chosen, despite a reported low sensitivity. The primary objective of this study was to compare the sensitivity of the MMSE with the Montreal Cognitive Assessment (MoCA). **METHOD:** 52 patients with brain tumors were prospectively accrued. Patients were administered the MMSE, MoCA, and a 4-hour 'gold standard' neuropsychological assessment (NPA), by different, blinded investigators, though only 63% of accrued subjects completed the NPA. Quality of life and community integration were measured with the Functional Assessment of Cancer Therapy-Brain (FACT-Br) and Community Integration Questionnaire (CIQ), respectively. McNemar's test was used to compare sensitivity and specificity at pre-defined cutoff scores and receiver operating characteristic curve analyses were used to examine outcomes across all cutoffs. Correlations were assessed with Spearman's rank correlation coefficient. **RESULTS:** 56% of patients met criteria for the DSM-IV diagnosis of Cognitive Disorder NOS on NPA. Using pre-defined cutoffs, the MoCA was more sensitive than the MMSE (55.5% versus 16.6%; $p = .016$), although MoCA specificity was poor (60%). MMSE scores below 27 were 100% specific; however, this applied to only three subjects. Furthermore, 39% of cognitively impaired subjects scored perfectly on MMSE. A MoCA cutoff of 22 had 28% sensitivity and 93% specificity, and a cutoff of 28 had 94% sensitivity and 20% specificity. The MoCA correlated with the FACT-Br ($r = .319$, $p = .04$) and CIQ ($r = .427$, $p = .005$), while the MMSE did not correlate with either ($p > .2$). **CONCLUSIONS:** The MoCA is more sensitive than the MMSE, though at no cutoff is it both sensitive and specific. Despite its limitations, the MoCA may offer cost saving in the oncology clinic as a cognitive screening tool. Furthermore, the MoCA is better able to detect cognitive impairment that is related to functional limitations and quality of life. **RESEARCH IMPLICATIONS:** Many clinical trials have reported conclusions based on the results of the

MMSE, which, based on our findings, might have very significant methodological limitations. The MoCA may offer a marginal benefit in clinical trials, though brief, well tolerated assessments with acceptable sensitivity and specificity should be sought out. **CLINICAL IMPLICATIONS:** The MMSE should be reconsidered as a standalone cognitive screening measure in patients with brain tumours. Although the MoCA has limitations, it may offer cost savings in the oncology clinic. Individuals with MoCA scores a) below 22 are likely cognitively impaired, b) above 27 are likely cognitively normal, and c) 22–27 would likely benefit most from NPA. **ACKNOWLEDGEMENT OF FUNDING:** This study was funded by the Fraser Valley Interdisciplinary Research Grant and the Hershey & Yvette Porte Neuro-Oncology Research Grant.

P3.7.18

Dependence of Cognitive Screening Test Results on the Population Being StudiedRobert Olson¹, Maureen Parkinson², Michael McKenzie¹¹BC Cancer Agency, Vancouver, BC, Canada, ²BC Cancer Agency, Surrey, BC, Canada

BACKGROUND: Two prospective studies in patients with brain tumors were performed comparing two cognitive screening tests, the Mini Mental State Examination (MMSE) and the Montreal Cognitive Assessment (MoCA). The initial study assessed the feasibility of these brief cognitive screens, and the second 'diagnostic' study compared the sensitivity and specificity of these screening tests against a 4-hour gold standard neuropsychological assessment (NPA). This abstract presents a post-hoc analysis exploring the MoCA and MMSE scores in different populations. **METHOD:** Entry criteria were similar for each study, with the exception of a) diagnostic study patients consented to NPA in addition to the MoCA and MMSE, and b) the diagnostic study included patients with primary brain tumors in addition to brain metastases. 92 patients (40 feasibility and 52 diagnostic study patients) were prospectively accrued to the two studies. Nearly 3/4 of approached subjects declined the diagnostic study, primarily because of the lengthy NPA. Furthermore, only 63% of subjects who consented to NPA completed it. T-tests were used to compare the test results and Fisher's exact test was used to compare categorical data. **RESULTS:** Feasibility study patients had lower mean MoCA and MMSE scores compared to diagnostic study patients (MoCA 20.5 versus 24.2, $p = 0.0001$; MMSE 26.38 versus 28.38, $p = 0.02$). Feasibility study patients were also older ($p = 0.0001$) and less educated ($p = 0.02$) than diagnostic study patients. Within the diagnostic study patients, those who

completed the NPA had higher mean MoCA and MMSE scores compared to those who did not complete the NPA, though only MoCA scores were significant (MoCA 25.0 versus 22.6, $p = 0.045$; MMSE 28.6 versus 27.8, $p = 0.17$). The primary, and only statistically significant clinical or demographic difference between these two groups, was the lower proportion of patients who had brain metastases (versus primary brain tumours) in the patients who completed the NPA (39% versus 75%, $p = 0.03$). **CONCLUSIONS:** Results of cognitive assessments are highly dependent on the population being studied. In addition, conclusions may vary depending on the cognitive screening assessment chosen, likely dependent on the psychometric properties of the tests. Furthermore, comprehensive neuropsychological assessments are a potential barrier to study participation as well as a source of selection bias. **RESEARCH IMPLICATIONS:** Because extensive neuropsychological assessments are a potential source of selection bias in clinical trials, efforts to use the most feasible neuropsychological assessments should be made. **CLINICAL IMPLICATIONS:** Translating results from clinical trials to clinical practice should be made with caution, because patients with better prognosis brain tumors are more likely to participate in studies with lengthy neuropsychological assessments. Furthermore, study conclusions are dependent on the cognitive assessments chosen. **ACKNOWLEDGEMENT OF FUNDING:** A portion of this study was funded by the Fraser Valley Interdisciplinary Research Grant and the Hershey & Yvette Porte Neuro-Oncology Research Grant.

P3.7.19

Evaluation of the Reliability and Validity of the Mandarin Version of Demoralization Scale for Cancer Patients

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BACKGROUND: Demoralization indicates one expression of existential distress that the people suffering from advanced disease eventually leading to death may face. Their clinical expressions may meet the DSM-IV criteria of major depressive disorder or not; however, they were truly exhausted by existential distress. We translate the Demoralization scale (DS) developed by David W. Kissane *et al.* into Chinese, and test the validity and reliability in Taiwanese cancer patients. **METHOD:** The DS was translated and adapted into the Mandarin version DS by a professional team. The Mandarin version DS was completed by patients with cancer of any stage from outpatient departments. We excluded patients who were confused with MMSE result of <24 , unwilling for interview,

inability to read Chinese, and psychosis or mental retardation. All the data were analyzed using SPSS 12.0 to test the validity and reliability. **RESULTS:** The sample of 229 patients comprised 61 men and 167 women. The cancer type were breast 51.8%, head and neck 14.8%, cervical 13.5%, gastrointestinal 10.5%, lung 3.9%, hematologic 2.6%, testis 1.3%, skin 0.4% and others 0.9%. 226 patients completed the questionnaire. The Mandarin version DS has acceptable reliability with Cronbach's alpha 0.972. To test the validity, we use the Barlett test of sphericity which revealed significance with p value <0.0001 . The principle components analysis of the DS yielded 5 factors, and the internal reliability is acceptable with the Cronbach's alphas in the range of 0.64 to 0.85. **CONCLUSIONS:** Our study support the Mandarin version DS as a valid and reliable self-report questionnaire for Taiwanese cancer patients. **RESEARCH IMPLICATIONS:** From this study, we can realize that demoralization in cancer patients is not only limited to Western society, but also seen in Asian groups though there are few culture differences. Further divergent validity is needed to differentiate demoralized and depressed patients. Tests of reliability are also needed in different patient samples before this scale is ready to use clinically. **CLINICAL IMPLICATIONS:** Clinically, this scale can be used in both outpatients and inpatients to screen whether the patient is demoralized. This scale only contained 24 items and completing the scale is not time-consuming. If demoralization is explored in cancer patients, these patients can be referred to specialist like psychiatrists, psychologists or social workers for further evaluation and treatment. **ACKNOWLEDGEMENT OF FUNDING:** We thank Miss Hsin-chin Lu for guiding the statistics, and Dr Yuh-cheng Yang, Dr Yun-Liang Lai, Dr Ruey-kuen Hsieh, Dr Kou-hwa Chang, Dr Yu-je Chen, Dr Yi-fang Chang, and Dr Yi-shing Leu for assisting in this project. The survey was supported by Mackay Memorial Hospital.

P3.7.20

Which Emotional Domains Contribute to Perceived Distress in Early Cancer?

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BACKGROUND: Distress is extremely common but poorly defined. Many measures of distress simply measure depression or anxiety. We wished to examine the contribution of individual emotional components of distress using path analysis. **METHOD:** Using data from 129 patients (mean age was 57.7 years and their mean time from diagnosis 7.3 months) attending a local

chemotherapy suite, we measured perceived distress using the Distress Thermometer (DT). The DT was chosen because it is the simplest possible measure of distress, without prejudice of cause or type. Predictor variables included depression, anxiety, anger measured by the Emotion Thermometer, HADS-D, HADS-A and HADS-T on the Hospital Depression and Anxiety Scale and the linear score on the Patient Health Questionnaire (PHQ9). Multiple regression and path analysis were used. AMOS5 (for SPSS) was used to generate the paths and calculate Standardized regression weights. RESULTS: Using multiple regression (stepwise entry) the variables most associated with distress were 1. anxiety (AnxT = R2 0.53) and 2. depression (DepT = R2 0.65) with a small contribution of anger (R2 0.67). However this does not allow for complex inter-relationships. We therefore used path analysis to model the relative contribution of each emotional subcomponent to overall distress (figure). The overall contribution to distress was 0.618 (62%). 41% of the variance in distress is explained by anxiety, 32% depression, 19% anger and 14% desire for help (each factor was inter-related). P SRW*: DT ← HADSA 0.084-.119; DT ← HELPT 0.009-.140; DT ← ANXT 0.001-.413; DT ← ANGT 0.004 .187; DT ← DEPT 0.001-.323; DT ← HADSD 0.034-.166; DT ← PHQ9 0.021-.184; (*Standardized regression weight). CONCLUSIONS: Distress is a broad concept that has been defined in many ways. Distress is not synonymous with psychiatric disorder and although many with distress want professional help about a third do not. Distress is most closely linked with anxiety. Smaller contributions are made by depression and anger. A significant proportion of perceived distress may be linked with non-emotional items such as physical symptoms or desire for help. RESEARCH IMPLICATIONS: Future studies of distress may usefully consider subcomponents of anxiety, depression and anger. Similarly it is useful to define mental disorder separate to defining distress. CLINICAL IMPLICATIONS: Distress is relatively simple to elicit but complex to fully understand. Patient rated distress remains a useful clinical concept. ACKNOWLEDGEMENT OF FUNDING: None.

P3.7.21

The Possible Role of the WHO Verbal Autopsy in Completing Death Certificate Data in Botswana

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BACKGROUND: To describe the causes of death in Botswana for the years 2005 and 2006 using Botswana death certificate data, in order to ascertain the comprehensiveness of death certificate data vis-à-vis stated cause of death. METHOD:

The Republic of Botswana's Registry of Births and Deaths was used to identify the causes of non-traumatic death among the adult population (those >18 years of age). Cause of death was grouped into major categories (e.g. HIV/AIDS, tuberculosis, cardiovascular disease, cancer, diabetes, and unknown). RESULTS: There were 26,410 death records for adults during 2005 and 2006, from the Botswana Registry. From the total number of death records, 12,710 identified a cause of death and 5546 were listed as unknown. From the unknown death reports, 108 had a secondary cause listed, such as HIV/AIDS-related deaths, and hypertension. These 108 deaths occurred at home but in towns that had at least a primary hospital to which the decedent was brought and the receiving medical official listed the secondary cause from a verbal report by family. The remaining 5438 death records of unknown cause were all deaths that occurred at home. CONCLUSIONS: Death records failed to identify a cause of death in 21% of adults who died in Botswana over a two-year period. All of the unknown causes of deaths occurred in the villages at home. RESEARCH IMPLICATIONS: The WHO verbal autopsy questionnaire could be implemented to reduce the number of unknown deaths. Even in villages throughout Botswana that do not have primary hospitals, health posts are staffed by registered nurses. All deaths could be reported to the health-post nurse by the family or caregiver. With knowledge of the cause of death for people who die at home in villages, public health programs can be targeted to support the patients and their families. CLINICAL IMPLICATIONS: This knowledge would assist the health-post nurses to identify the most common end of life problems based on the underlying illnesses. ACKNOWLEDGEMENT OF FUNDING: None.

P3.7.22

Distress in Patients of Solca Cancer Hospital in Quito—Ecuador

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BACKGROUND: It's necessary to do a search for Distress Level in cancer patients in Quito Ecuador, to find prevalence in Ecuador, and compare with other cancer centers. We search for information about Distress Thermometer use and validation around the world. Distress Thermometer it's an easy way to detect emotional affectation, it can be managed easily by patients and applicators, it bring usefully information. METHOD: We use a transversal analytical epidemiological design, in a representative number of Cancer patients of

SOLCA, related to the patient movement in the hospital. Inclusion and exclusion criteria were applied. It was very important to use an informed consent for application of questionnaire in the patients. We used the Thermometer Distress recommended by NCCN (Guidelines in Oncology). Test was applied by Post graduate medical residents in Psychiatry and in Clinical Oncology on patients. We use the SPSS Base 12 for processing. **RESULTS:** Of 177 patients. 67% report punctuations over 4, 19.8 were men, with 51.4% of distress, and 80.2 women, with 70.4% with distress level. In age, we group between 16 to 25 years ($n = 12$) 41% with distress, 26 to 45 years ($n = 49$) 67.3 with distress, between 46 to 65 years ($n = 92$) distress of 70.7%, and from 66 to 82 years ($n = 24$) 62.5% of distress. Instruction level does not affect distress level, same related to labor situation, have a partner or not, have religious believes or practice, screened persons in retirement present higher distress level (85.7%). Due to limited number of patients we couldn't relate cancer type and level of distress. In Emotional Problems of the 118 persons who report distress, positive answers were growing in number,

with 30.5% ($n = 36$) with 6 answers positives (maximum). **CONCLUSIONS:** We found high levels of distress in SOLCA Hospital patients (67%, $n = 177$), we need to do an early distress detection workup, and constantly along his/her disease evolution. We do a 'profile' of the cancer distressed patient: women, over 26 years of age, without relation with educational level or relation with a partner, with high risk at retirement age. With more related problems in any area, more possibilities to develop high distress level. It's important to give this information first in our hospital, and to all the people who work with cancer patients and especially with his psychic area in Ecuador. **RESEARCH IMPLICATIONS:** When you have a broader image of the problem, you can manage it better. To have information from other latitudes help to search and understand this problem, and to orient for better measures to resolve it. **CLINICAL IMPLICATIONS:** Need to use Distress Thermometer as sixth vital sign. These will help the patient and his/her family to get a complete, broader, and faster attention from his clinician. **ACKNOWLEDGEMENT OF FUNDING:** None.

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