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P3-0438

Comparing Psychosocial Adjustment of Korean Childhood Cancer Survivors and Their Mothers to Age and Gender Matched Controls

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BACKGROUND: Few Asian studies have investigated the psychosocial adjustment of childhood cancer survivors and mothers as well as their interaction. This study plans to (1) compare the psychosocial adjustment of mothers and >2 years off treatment survivors and their mothers with matched controls (2) examine mothers' psychosocial adjustment factors on survivors' psychosocial adjustment. METHOD: The participants consisted of 470 survivors aged 6–18 years and their mothers recruited from the Long-Term Follow-Up(LTFU) clinic at Severance Hospital as well as age/gender matched healthy controls. K-CBCL, PedsQL™, and SCI were administered to assess the psychosocial adjustment of survivors and K-PSI, K-MSI, and K-BDI were completed to assess the psychosocial adjustment of the mothers. *T*-test, ANOVA and multivariate logistic regression were conducted. RESULTS: Compared with controls, survivors scored poorer in almost all sub scales of CBCL, PedaQL and SCI ($p < 0.05$), except for the externalizing behavior problems and the emotional QoL. Survivors' mothers scored higher in the parental distress subscale of PSI and BDI than controls' mothers, whereas no significant differences were found for the difficult child subscale of PSI and global distress score of MSI ($p < 0.05$). Survivors' mothers with clinically significant parental distress and depression placed their children at a higher risk for low social competence, poor internalizing and total behavior problems, as well as low emotional and social QoL. CONCLUSIONS: Survivors and their mothers reported poorer psychosocial adjustment in various domains of multidimensional measurement than controls and their mothers. Survivors show poorer outcomes in the domains related to physical and emotional health, social skills and school life. Survivors' mothers show poorer outcomes in parental distress and depression. In addition, mothers' parental distress and depression were also revealed to be important predictors of the social and emotional adjustment of the survivors. RESEARCH IMPLICATIONS: First, further studies should evaluate survivors' various psychosocial aspects such as body image and social supports. Also, the findings of the current study show that parental distress and depression of mothers have a significant influence on survivors' psychosocial adjustment. Thus researchers need to investigate specific factors that contribute to mothers' parental distress and depression. CLINICAL IMPLICATIONS: The present study suggests that routine screening programs for survivors' and their mothers' psycological adjustment are needed. In addition, as mothers' psychological states significantly influence the psychosocial adjustment of survivors, interventions to prepare mothers to manage parental distress and depression may be beneficial in enhancing social and emotional health of survivors. ACKNOWLEDGEMENT OF FUNDING: This study is funded by BK 21(Brain Korea 21.)

P3-0443

A Longitudinal Perspective on Post-Traumatic Growth Following the Diagnosis of Breast Cancer: The Mediating Role of Mindfulness and Attachment Security

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BACKGROUND: Research has focused attention on positive change that takes place following a crisis and has examined both immediate responses as well as the long-term effects of severe life stressors on positive growth. However, the scope of these studies is still limited as most studies are descriptive and do not attempt to explain the dynamics that instigate change. Moreover, studies of post-traumatic growth following diagnosis with cancer usually do not examine growth over time. METHOD: The current prospective longitudinal study examined the role of psychological resources on post-traumatic growth. In this study two groups of women will be followed over time: The study group consisting of 30 women between the ages of 40–65 who have been diagnosed with stage I or II breast cancer in the past 12 months and a matched control group of 30 women. Both samples will be studied three times over a period of 2 years and will complete self-report questionnaires and will be interviewed. In addition, medical and demographic information will be obtained from patient hospital records. RESULTS: The results of this research are based on two stages of analysis. At the first stage, we conducted a qualitative analysis of the 180 interviews of both the study group and the control group at three times of measurement. In this stage we content-coded responses and extracted 15 unique codes that reveal the effects of a diagnosis of breast cancer on women's self-concept and relational strivings. We are currently conducting a longitudinal quantative analysis of the data and these findings will be ready for presentation at the time of the conference. CONCLUSIONS: This research reveals the profound impact of being diagnosed with breast cancer on the self-concept of survivors. This research is unique in the sense that it represents a prospective longitudinal study of women diagnosed with breast cancer from the time of diagnosis up until 2 years later. Specifically, both the qualititive and quantitative aspects of this research are examined longitudinally and provide us with a unique perspective on the possibility of personal growth over time. RESEARCH IMPLICATIONS: Most of the research on the psycho-social aspects of breast cancer is based on cross-sectional designs which do not provide an understanding of how women's coping strategies unfold over time Today, when coping with cancer is understood as a long-term process, it is imperative to continue to examine psychosocial functioning beyond the time frame of the current research, and to use both qualitative and quantitative measures to provide a richer understanding of patient well-being. CLINICAL IMPLICATIONS: This research will provide the basis for the development of clinical interventions designed to help women cope over time with the diagnosis of breast cancer, and will inform clinicians on how to promote growth and an existential sense of meaning in the face of severe adversity. ACKNOWLEDGEMENT OF FUNDING: This research was funded by a grant from the Israel Cancer Society.

P3-0422

Different Effects of Reflective Pondering and Brooding on Depression Among Breast Cancer Patients – The Mediating Role of Active Coping

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BACKGROUND: In this study, we aim to clarify the adaptive and maladaptive effects of different types of cognitive processing (reflective pondering and brooding) on depression among breast cancer patients. We proposed a hypothesized model, in which, controlling for T1 depression, brooding predicts depression directively, whereas reflective pondering predicts lower level of depression through the mediating of active coping. METHOD: A longitudinal study was conducted with 311 female newly-diagnosed breast cancer patients at the third month after the cancer surgery (T1) and 12 month after the surgery (T2). The Hospital Anxiety and Depression Scale (HADS) was used to assess depression. The Ruminative Responses Scale-short form (RRS-SF; Treynor, Gonzalez, & Nolen-Hoeksema, 2003) was used to assess reflective pondering and brooding. The Chinese version of the brief COPE (Carver, 1997) was used to assess active coping. The HADS and the RRS-SF were assessed at both T1 and T2. The brief COPE (Carver, 1997) were assessed at T2. RESULTS: According to the criterion proposed by Ho and Bentler (1999), the hypothesized models fit the data well ($(\chi_{(616)})^2/$ df = 2.13; CFI = 0.95; RMSEA = 0.061). Controlling for T1 depression, T1 brooding predicted T2 brooding ($\beta = 0.45$; $p < 0.05$), and T1 reflective pondering predicted T2 reflective pondering ($\beta = 0.70$; $p < 0.05$). T2 brooding predicted T2 depression ($\beta = 0.49$; $p < 0.05$), whereas T2 reflective pondering did not significantly predicts T2 depression ($\beta = 0.04$). However, T2 reflective pondering predicted T2 active coping ($\beta = 0.54$; $p < 0.05$) and T2 active coping predicted T2 depression ($\beta = -0.37$; $p < 0.05$). CONCLUSIONS: Ruminative style has two aspects: reflective pondering and brooding (Treynor, Gonzalez, & Nolen-Hoeksema, 2003). Brooding has maladaptive effects (e.g., increase depressive level) on general population and cancer patients. Although reflection is thought to be associated with problem solving and the promotion of mental health, the results have shown that reflection does not always have an adaptive effect on depression. Marroquín, Fontes, Scilletta, and Miranda (2010)argue that whether reflective pondering is adaptive likely depends on the active nature of the surrounding coping response. The results supported that the adaptive effect of reflective pondering is mediated by active coping. RESEARCH IMPLICATIONS: With regard to depression among cancer, reflective pondering was associated with a lower level of depression through the full mediating of active coping; brooding, with a higher level of depression. The results indicate that reflective pondering per se does not have an adaptive effect, but through improving active coping, it has a adaptive effect on cancer adaptation. CLINICAL IMPLICATIONS: To improve life quality and reduce depressive mood among cancer patients, two different types of cognitive processing (reflective pondering and brooding) should be differentiated. Interventions that designed to reduce brooding and increase

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reflective pondering is helpful. ACKNOWLEDGEMENT OF FUNDING: This study was funded by National Science Council grant no. 99-2410-H-004-074-MY3.

P3-0466

HRQoL Changes After Treatment of Childhood Cancer: A 6-Year Longitudinal Study

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BACKGROUND: Previous HRQoL studies in childhood cancer survivors report that only subgroups of long-term survivors show poorer adjustment than controls. However, the cross-sectional studies have experienced difficulties when investigating how HRQoL may change or in response to changes in various cancer-related factors over time. Taking these into consideration, this study plans to (1) examine HRQoL changes in Korean childhood cancer survivors and (2) determine the relationship of cancer-related factors and HRQoL on the longitudinal perspective. METHOD: The participants were 100 survivors aged 6–18 years from the LTFU clinic at Severance Hospital as well as age/gender matched healthy controls. Survivors participated at 2(T1, $N = 100$), 4(T2, $N = 90$), 6 (T3, $N = 63$) years after off-treatment. Repeated measures ANOVAS were conducted for the 4 subscales of HRQoL (physical, emotional, social and school QoL) to examine changes over time. Independent T-tests were conducted to examine differences between the survivors at T1/T3 and with the controls. RESULTS: All subscales of HRQoL of survivors increase across time ($p < 0.005$). The HRQoL at T3 shows no significant differences, whereas the HRQoL at T1 was significantly lower than controls ($p < 0.05$). The percentage of survivors with a scores below the cut-off score at T1 (24–31%) was higher than at T4 (15–19%) and controls (13–16%). Survivors who meet the criteria show significantly lower HRQoL than other survivors time; female (social QoL), clinical radiation (emotional QoL) and reporting low HRQoL at T1(all HRQoL). CONCLUSIONS: Although HRQoL of survivors increases over time, subgroups of survivor are at risk for chronic low QoL after treatment. Female gender, history of clinical radiation and low HRQoL at the end of treatment were risk factors for HRQoL. RESEARCH IMPLICATIONS: The limitations of the current study are a small sample size and a high attrition rate from time 1 to time 3. Researchers need to recruit more participants and prevent attrition through a more accessible system for long-term survivors, such as web based follow-up system. Further research need to also determine protective factors, not only risk factors based on longitudinal perspectives. CLINICAL IMPLICATIONS: The routine screening of HRQoL in childhood cancer survivors is needed. Clinicians should pay attention to survivors who report low HRQoL at <2 years after treatment-off. Professionals also need to develop an aftercare program based on longitudinal view and developmental stages of the individual survivors. ACKNOWLEDGEMENT OF FUNDING: This study is supported by BK 21(Brain Korea 21).

P3-0235

Long-Term Subjective Cognitive Impairment Following Systemic Therapies of Standard Treatment Protocols for Primary Breast Cancer: Results From a Follow-Up of a Nationwide Cohort of Danish Breast Cancer Survivors

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BACKGROUND: Many breast cancer (BC) patients are concerned about cognitive impairment following treatment. Most studies have focused on the effects of specific treatment modalities (e.g. chemotherapy or endocrine treatment). However, investigating the effects of systemic treatment according to treatment protocols, rather than specific treatment modalities, may offer a better understanding of this issue. We compared the level of long-term subjective cognitive impairment (SCI) between standard treatment protocols in a large nationwide cohort of primary BC survivors. METHOD: Data on 1946 recurrence-free survivors allocated to one of five standard treatment protocols was analyzed. Baseline questionnaire data were collected 3 months post-surgery and SCI was assessed with the Cognitive Failure Questionnaire (CFQ) at a 7–9 year follow-up. Because protocol allocation is partly determined by menopause status, survivors were stratified and compared accordingly in order to eliminate possible confounding effects. Treatment data were provided by the Danish Breast Cancer Cooperative Group: Protocols ($N = N_{\text{Pre-menopause}}/N_{\text{Post-menopause}}$): A = No adjuvant treatments ($N = 139/248$); B = Chemotherapy (CEF) + Endocrine treatment (Tamoxifen)

(N = 514/0); C = Endocrine treatment (Tamoxifen + Examestane) (N = 0/731); D and E = Chemotherapy (CEF or CMF, respectively) (n = 104/181). RESULTS: Mean age of survivors was 63.3 years (SD = 8.2) with a mean CFQ score of 31.3 (SD = 12.6). CFQ was associated with age ($r = -0.14, p < 0.001$), and a statistically significant difference between pre- (M = 33.1, SD = 13.6) and post-menopausal survivors (M = 30.2, SD = 11.8) was observed ($t(1943) = 5.0$, $p < 0.001$). Neither unadjusted univariate analyses (CFQ means = 30.2–34.4, p = 0.5–1.0), nor age-adjusted analyses (p = 0.6–1.0), revealed significant differences on CFQ total score between any of the treatment protocols when stratified by menopausal status. Frequency of SCI status, defined as a CFQ score above 2SD of the mean of a normative sample (mean = 31.2, SD = 11.2), was observed in 4.5% of all survivors. CONCLUSIONS: On average, survivors allocated to different standard treatment protocols did not differ in their level of SCI 7–9 years post-surgery, suggesting that survivors undergoing chemotherapy, endocrine treatment, or a combination of both, do not experience higher levels of long-term SCI compared with women who do not receive systemic treatments following primary BC. The long-term prevalence of SCI for the entire sample was low. RESEARCH IMPLICATIONS: To our knowledge, this is the largest study investigating long-term SCI in breast cancer survivors and the first study to compare SCI by standard treatment protocols. Previous studies have mainly focused on specific treatment modalities (e.g. chemotherapy or endocrine treatment). However, BC treatments are heterogeneous in nature, involving multiple treatment components. Comparing applied treatment protocols may offer a more ecologically valid approach to the investigation of cancer-related cognitive impairment in future studies. CLINICAL IMPLICATIONS: While reports of SCI during and shortly after cancer treatments are generally found to range from 20 to 80%, our results suggest that the long-term prevalence of SCI in BC survivors is surprisingly low. As awareness and concerns about cognitive issues increase, it may be helpful for patients, when discussing treatment options, to know that the risk of experiencing long-term SCI as a consequence of systemic therapies appear appears to be very limited. ACKNOWLEDGEMENT OF FUNDING: We are grateful for the financial support to the present study by The Danish Cancer Society and The Danish Council for Independent Research.

P3-0361

Quality of Life, Unmet Needs and Psychological Well-Being in Prostate Cancer Survivors: Implications for Follow-Up Care

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BACKGROUND: As incidence increases and survival rates improve, the prevalence of prostate cancer survivors is rising rapidly. It is recognised that men can experience a range of physical and psychological problems following diagnosis and treatment. However, hospitals clinics, are struggling to cope with the demand for follow-up. This cross-sectional study explored quality of life, unmet needs and psychological well-being in men with prostate cancer, with a view to informing new models for follow-up care. METHOD: Men diagnosed with prostate cancer 9–24 months previously and whose condition was stable, from two cancer centres in the UK, were sent an invitation to participate in the study and complete a postal questionnaire (N = 508). Men across all treatment types (surgery, radiotherapy, hormone therapy and those on active surveillance) were included. The questionnaire measured: prostate-related quality of life (EPIC-26); unmet needs (SCNS); anxiety and depression (HADS), self-efficacy (modified Self-efficacy Scale), health status (EQ-5D) and satisfaction with care (questions developed for study). A single reminder was sent to non-responders after 3 weeks. Data were analysed by age, co-morbidities and treatment group. RESULTS: 315 men returned completed questionnaires (62% RR). Urinary, bowel, and sexual functioning was reported as a "moderate" or "big" problem in the last month for 15.2% (48), 5.1% (16) and 36.5% (105) men respectively. The most commonly reported moderate/high unmet needs related to changes in sexual feelings/relationships, managing fear of recurrence/uncertainty, and concerns about worries of close others. 16.2% (51) men had possible/probable clinical levels of anxiety and 10.2% (32) depression. Outcomes varied by treatment type. The presence of problematic side-effects/symptoms was associated with higher anxiety, poorer self-efficacy, and greater unmet needs. CONCLUSIONS: This study provides new information on quality of life issues in men who are living with and beyond prostate cancer, across the range of treatment options. Ongoing problems are not uncommon in men who have completed primary treatment, and impact on psychological well-being. Further efforts are needed to provide patient-centred follow-up care, tailored to individual's needs. RESEARCH IMPLICATIONS: Future research should develop and test interventions designed to support prostate cancer survivors

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in the areas of need highlighted by this study. We have developed a nurse-led intervention designed to improve men's prostate-related quality of life and promote self-management. We are currently testing the feasibility, acceptability and estimated effectiveness of delivering this intervention to men in a primary care setting. CLINICAL IMPLICATIONS: This study highlights important quality of life issues for prostate cancer survivors. Methods for identifying those men with on-going problems, alongside new interventions and models of care, are needed to improve quality of life in prostate cancer survivors. ACKNOWLEDGEMENT OF FUNDING: This work was funded by Prostate Cancer UK, as part of a larger grant.

P3-0403

Perceived Stress, Social Support and Cancer-Related Quality of Life of Cancer Patients: A Cross-Sectional Study of Chinese With Cancer

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BACKGROUND: Quality of life predicts responses to medical treatment, mental and physical health status, and longevity of people with cancer. Western literature suggested that the presence of stress and the lack of social support predict poor quality of life, nevertheless little known about how these factors contribute to cancer-related quality of life of Chinese. This study is to explore the associations between stress, social support and quality of life of Chinese cancer patients. METHOD: This study adopts a cross-sectional survey study design utilizing self-report data. A total of 231 Chinese with cancer were surveyed (F = 137; M = 94). Participants completed an inventory packet composing of the Functional Assessment of Cancer Therapy–General Scale (FACT-G), Perceived Stress Scale (PSS), and Multidimensional Scale of Perceived Social Support (MSPSS). Regression analyses were performed to identify the relationship between cancer-related quality of life, stress, and perceived social support. RESULTS: Findings of this research suggested that patients' perceived stress was associated with physical well-being ($\beta = -0.487$, $p \leq 0.05$), social/family well-being ($\beta = -0.123$, $p \leq 0.05$), emotional well-being ($\beta = -0.649$, $p \leq 0.01$), and functional well-being ($\beta = -0.592$, $p \leq 0.01$). Participants who reported higher level of stress were also those who reported compromised quality of life in general. Our study also suggested that only emotional well-being is associated with perceived social support; as such, support from friends, mediated the relationship between perceived stress and emotional well-being. CONCLUSIONS: Consistent with existing literature on stress coping, cancer patients who are relatively more stressful suffer from compromised quality of life. However, inconsistent with literature on the buffering role of social support, our findings indicated that emotional well-being is only associated with perceived social support from friends, but not family support. Chinese cancer patients who are relatively less stressful reported better emotional well-being because they have better social support networks. RESEARCH IMPLICATIONS: The association between family support and cancer-quality of life should not be taken for granted. To better understand the role of social support and perceived stress in affecting the different aspect of quality of life of people with cancer, further research in dismantling the relationships among these factors are necessary. CLINICAL IMPLICATIONS: Perceived stress is detrimental to cancer patients' subjective well-being; and thus there is an imminent need to provide psychosocial support that enhances mood management, nurture strengths in stress coping and facilitate emotion ventilation. To enhance emotional well-being of cancer patients, it would be effective in relieving stress *vis-à-vis* the enhancement of social support networks outside the family. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0526

A New Measure of Body Image Concerns for Use in Head and Neck Cancer Patients: Initial Scale Development Using Cognitive Interviewing

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BACKGROUND: Our previous needs survey with 127 head and neck cancer (HNC) patients indicates that 54% present body image concerns post-treatment, associated with psychological distress and quality of life compromise. In-depth interviews with 14 HNC patients from another study revealed that both functional impairments and disfigurement influenced body image, and that the experience was very interpersonal. Current psychometric measures specifically covering these dimensions are needed in HN oncology. METHOD: The aim of this study is to develop and validate a novel patient-reported measure designed to evaluate body image concerns in HNC patients. The measure is based on the US Food and Drug Administration Qualification of

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Clinical Outcome Assessments and the conceptual model developed from our qualitative interviews. An initial pool of items based on interview transcripts will be evaluated by three groups of experts in HN oncology, body image, and psychometrics; with items rated on clarity, representativeness and adequate construction. Cognitive interviews will be conducted with HNC patients to refine the items and following standards in the field. RESULTS: This presentation will guide the audience through the different steps involved in developing the initial pool of items in our measure of body image concerns, present the conceptual framework for the measure, as well as the future planned steps to validate the instrument using Classical Test Theory and Item Response Theory. CONCLUSIONS: Developing and validating a novel patient-reported measure specifically designed to evaluate body image concerns in HNC patients is important from both a research and clinical perspective. It will allow us to conduct studies to better understand the experience of body image in HNC patients and measure the impact of body image rehabilitative therapies, to evaluate how new physical treatment modalities influence body image concerns and satisfaction in HNC patients, and potentially provide a useful screening tool for body image distress in ENT clinics. RESEARCH IMPLICATIONS: This study presents the preliminary first steps in developing a self-reported measure of body image concerns in HN oncology, an essential step to further our study of this important domain affecting HNC patients' quality of life during and beyond treatments. CLINICAL IMPLICATIONS: The developed tool could eventually be used for screening of body image distress in HNC patients. ACKNOWLEDGEMENT OF FUNDING: This study has been possible through funding from the Fonds de recherche Québec-Santé (FRQS), from which the Principal Investigator is also awarded a Clinician-Scientist Salary Award.

P3-0132

Symptoms, Unmet Supportive Care Needs, and Quality of Life of Breast Cancer Survivors

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BACKGROUND: Issues pertinent to persistent and/or late-emerging symptoms following the cancer and its treatment, as well as unmet needs are not uncommon in breast cancer survivors post-treatment and may hamper their quality of life (QoL). This study aimed to explore symptoms and unmet supportive care needs, and its relationship with QoL in breast cancer survivors. METHOD: This is a cross-sectional study of 250 breast cancer survivors (mean age was 54.7 ± 8.2 years) who had completed primary cancer treatment between 2007 and 2011 (mean duration of the time since completion of the primary cancer treatment was 28.9 ± 17.8 months). The enrolled subjects completed the Memorial Symptom Assessment Scale (MSAS), Supportive Care Needs Survey (SCNS-34), and the SF-12v2. A multivariate regression analysis was performed to examine the relationship between symptoms, unmet needs, and QoL after controlling for age, adjuvant cancer therapy and length of survivorship. RESULTS: 89% reported having at least one symptom (mean 5.33), while 50% reported at least one unmet need (average 2.65). The highest mean was in MSAS PSYCH subscale (0.41), followed by GDI (0.40). The highest mean of unmet needs was in Health care system/Information (23.0), followed by Patient care/Support needs (14.8). The lowest mean of QoL was in Physical (50.6) and Mental Composite (53.0) scales. Multivariate regression revealed that a higher total number of symptoms ($\beta = -0.261$ to -0.457, $p < 0.01$) and unmet needs ($\beta = -0.149$ to -0.322, $p < 0.01$) were significantly associated with a poor QoL in various domains. CONCLUSIONS: Our results suggest symptoms and unmet needs are prevalent among breast cancer survivors in the half-year to five year post-treatment period. The levels of QoL in various domains are related with the total number of symptoms and unmet needs after controlling for age, adjuvant cancer therapy and length of survivorship. RESEARCH IMPLICATIONS: Future longitudinal study should be directed towards assessing the trajectory of the symptom cluster and unmet supportive care needs, and their relationships with the pattern of QoL in various domains of the women throughout the breast cancer survivorship continuum. CLINICAL IMPLICATIONS: As a higher number of symptoms and unmet needs are significantly associated with a poor level of QoL, interventions addressing post-treatment symptom burden and supportive services for breast cancer survivors are needed. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0252

Fear of Recurrence in Cancer Survivors: A Study From the Population-Based PROFILES Registry

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BACKGROUND: Fear of cancer recurrence (FCR) is a normal concern for most cancer survivors. Because of the variation in objective risk, for some a recurrence is more realistic than for others. Only few studies have compared the severity of FCR between different types of cancer. The aim of the current study was to compare the severity of FCR among different groups of cancer survivors and to assess the relationship between FCR, demographics and medical characteristics. METHOD: Data were obtained by submitting a research proposal to PROFILES (Patient Reported Outcomes Following Initial Treatment and Long-Term Evaluation of Survivorship), a registry for the study of physical and psychosocial impact of cancer and its treatment using a growing population-based cohort of survivors. Data are freely available for non-commercial scientific research. PROFILES is linked to clinical data of the Eindhoven Cancer Registry. In the current study datasets from six population-based studies on survivors were obtained. 2780 cancer survivors from the PROFILES Registry with stage I or II disease who completed the Impact of Cancer Scale to assess FCR were selected. RESULTS: Survivors were diagnosed with melanoma (N = 469), colorectal cancer (N = 861), endometrial cancer (N = 688), thyroid cancer (N = 218), Hodgkin (N = 103) or Non-Hodgkin lymphoma (N = 276). Mean age was 64 years (range: 20–85), 64% was female, 0–5 years post diagnosis (59%) and diagnosed with stage I disease (66%). Results indicate FCR to be present in almost half of all cancer survivors regardless of cancer type (39–45%). No significant difference between specific groups of cancer patients in the severity of FCR was found. Younger age, being female, shorter time since diagnosis, disease stage and comorbidity were associated with higher FCR. CONCLUSIONS: These preliminary findings indicate that FCR is a common ground for concern in cancer survivors. No significant group differences in self-reported levels of FCR were found between specific groups of cancer patients. While the objective risk of recurrence varies among different cancer groups, our results suggest otherwise for experienced levels of FCR. Certain demographics (age, gender) and medical characteristics (time since diagnosis, stage of disease and comorbidity) were found to be associated with FCR. RESEARCH IMPLICATIONS: This is one of the first large scale studies that compares prevalence of FCR in survivors of different cancer types. Certain demographics and medical variables were found to be associated with FCR. To better understand and possibly predict who is at risk for high levels of FCR, further research should address other factors (e.g. psychosocial or behavioral) that might contribute to FCR. CLINICAL IMPLICATIONS: These findings support the notion that FCR is not necessarily bound to one specific cancer type. In clinical practice, increased awareness and the understanding that individual patient characteristics can influence FCR may help health care professionals to provide better supportive care.

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P3-0481

Psychological Predictors of Health Anxiety, Quality of Life and Depression in Cancer Patients Who Have Completed Treatment With Curative Intent: A Prospective Study

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BACKGROUND: Fear of cancer recurrence can become persistent and may develop into health anxiety, characterised by preoccupation with physical sensations and heightened perceptions of risk of serious illness (or recurrence). Research investigating psychological predictors of health anxiety and related outcomes is lacking. This study aims to investigate whether mental defeat, existential concerns, beliefs about emotions and intolerance of uncertainty predict levels of health anxiety, quality of life, depression and anxiety in cancer patients in remission. METHOD: This study employed a quantitative prospective design. Eighty five participants aged 18–80, who have completed cancer treatment with curative intent will be recruited using convenience sampling from three UK sites; Great Western Hospital, Swindon, Salisbury District Hospital and a Macmillan website. Validated self-report questionnaires are being used to measure mental defeat, existential concerns, beliefs about emotions and intolerance of uncertainty, health anxiety, quality of life, depression and anxiety at two time points, 4 weeks apart. Data collection is near completion. Data will be analysed using multiple regression to examine the relative contribution of predictor variables to the specified outcome variables. RESULTS: Data collection is near completion. Final results will be presented at the conference following regression analyses to demonstrate the relationships between and relative influence of mental defeat, existential concerns, beliefs about emotions and intolerance of uncertainty on health anxiety, quality of life, depression and anxiety in cancer patients who have completed treatment with curative intent. Time since last follow up appointment will be controlled for in the analyses, to allow for a usual increase in anxiety around this time. CONCLUSIONS: Final results will allow conclusions to be presented regarding whether specific psychological factors (health anxiety, beliefs about emotions, intolerance of uncertainty and existential concerns) predict quality of life, depression and anxiety. This study is the first to use a prospective design to measure relationships between

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these variables, which is crucial to the development of early detection and targeted interventions. It is also unique in investigating the impact of mental defeat, a recently identified cognitive process which is a strong predictor of distress in chronic pain, unhelpful beliefs about emotions and existential concerns on psychological outcomes. RESEARCH IMPLICATIONS: Implications for research will be presented following analysis of the data. It is hoped that this study will elucidate cognitive and emotional factors that are predictive of health anxiety, quality of life, depression and anxiety. It will inform further research into early detection and targeted empirically grounded interventions for cancer patients who have completed treatment with curative intent, building upon a recent successful UK trial of Cognitive Behavioural Therapy for health anxiety in medical settings. CLINICAL IMPLICATIONS: It is anticipated that this study will lead to potential future screening for common forms of psychological distress enabling early detection and prediction of clinical need. This will inform the development of holistic assessment of needs recommended by NICE guidelines for improving care for adults with cancer (2004), and NCSI (2010). Results will inform clinical management by healthcare professionals of elevated levels of anxiety, for example excessive reassurance seeking and associated unnecessary healthcare usage. ACKNOWLEDGEMENT OF FUNDING: This study was conducted in part fulfilment for the degree of Doctorate in Clinical Psychology at the University of Bath, and funded as part of this training.

P3-0038

Psychological Symptoms Associated With Tobacco Cessation and Their Predictive Role of Smoking Relapse Following Cancer Surgery

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BACKGROUND: Although cancer patients are generally strongly advised to quit smoking in order to improve treatment efficacy, quality of life and survival, up to 37% of patients who were smokers at the time of the cancer diagnosis continue smoking throughout the cancer care trajectory. This study aimed to assess the rate of smoking cessation and to identify psychological predictors of smoking cessation (SC) and smoking relapse (SR) in cancer patients following cancer surgery. METHOD: As part of a larger epidemiological study, 110 smokers with a first diagnosis of nonmetastatic cancer completed the Hospital Anxiety and Depression Scale, the Insomnia Severity Index and the Fear of Cancer Recurrence Inventory. Quitters ($n = 55$) and pair-matched non-quitters ($n = 55$) were compared on each symptom at pre-quitting, post-quitting and at a 4-month follow-up. Relevant demographic, medical and psychological variables were investigated as potential predictors of SC and SR. RESULTS: Of the quitters, 27 (49.1%) experienced a relapse. A large proportion of the relapses (59.3%) occurred within 4 months following SC. At baseline, quitters had significantly higher levels of anxiety ($p < 0.01$) and fear of cancer recurrence ($p < 0.05$) than non-quitters. At post-quitting and at the 4-month follow-up, a significantly greater decrease in levels of anxiety ($p < 0.05$) and fear of cancer recurrence ($p = 0.01$) was observed among quitters. Having a breast cancer diagnosis was a significant predictor of SC (odds ratio [OR] = 16.3), while depression was a significant predictor of SR (OR = 1.18). CONCLUSIONS: This study highlights the importance of paying more attention to the psychological symptoms associated with nicotine withdrawal. Special attention should be paid to the management of depressive symptoms in order to prevent smoking relapse. RESEARCH IMPLICATIONS: The results of this study provide a better understanding of predictors of smoking cessation and smoking relapse among cancer patients. CLINICAL IMPLICATIONS: The results of this study highlight the importance of paying a special attention to the psychological symptoms associated with nicotine withdrawal among cancer patients, especially the management of depressive symptoms in order to prevent smoking relapse. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0444

Peer Volunteers in Cancer Self-Management: What Are the Key Characteristics to Look for? Findings From a Phenomenological Study Among Men With Prostate Cancer

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BACKGROUND: Self-management supports psychological and physical cancer rehabilitation, but for sustained benefit programmes need to be narrowly targeted and promote motivation and adherence. This is best delivered in a supported approach and peer volunteers are increasingly engaged for this purpose. Effectiveness of programmes is mixed and peer volunteers' recovery and well-being is seldom acknowledged as a potential variable. This study identified the characteristics of successful coping in prostate cancer as a contribution to peer selection processes. METHOD: A homogenous, purposive sample of seven men who had had treatment for prostate cancer was interviewed about

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their experiences of coping positively with prostate cancer, as part of a larger RCT study. The interviews were conducted initially to make a motivational film for use in a self-management programme. A methodology was developed to produce experiential modelling in film based on phenomenological interviewing and participatory research. Interpretative Phenomenological Analysis was used at the qualitative research stage, and in-depth analysis of the interview data for this study took place subsequent to film making. RESULTS: Analysis of men's lived experiences revealed four themes distinguishing adverse and constructive experiences. All the men talked about *The Disrupting Event* where their diagnosis initially represented a difficult time when both existential and embodiment issues prevailed. Beyond this, three further constructive themes epitomising successful coping were apparent: (1) *the Evolved Self* (2) *Regaining control*; and (3) *Connectedness*. There was some overlap between these constructive themes and men's initial concerns illustrating how they had harnessed and re-shaped their earlier responses and moved towards personal development and well-being. CONCLUSIONS: The innovative methodology developed for the film making naturalistically captured men's experiences of successful coping based on what they wanted other men to know. In this way the data can be considered contiguous with relevant peer volunteer characteristics. Leadership or support roles may potentially best be carried out by peers who can demonstrate self-awareness of their potential and individual qualities, and a readiness for leadership and role model status. The relevance and importance of careful selection is discussed. RESEARCH IMPLICATIONS: More research needs to be carried out around how we select and use peer volunteers for supporting self-management in cancer rehabilitation. Gender and tumour site difference in key selection criteria should be explored further. A move to develop standardised tools for peer selection should also be considered. CLINICAL IMPLICATIONS: Peer volunteers for leadership or support roles in cancer self-management programmes are increasingly important where there is little health service provision or where health service economics cannot provide professional support; peer programmes are also often preferred by participants. Peers play a crucial role in programme outcomes and work with peer volunteers would benefit by more emphasis on careful selection in respect of their psychological and psychosocial development. ACKNOWLEDGEMENT OF FUNDING: This qualitative study was contained within Project Funding from Dimbleby Cancer Care for the SMaRT trial: Self-management of urinary symptoms after treatment for prostate cancer: an exploratory randomised controlled trial. ISRCTN 20069765 UKCRN Portfolio 9433.

P3-0495

Detecting Dysfunctional Fear of Cancer Recurrence in Non-Metastatic Breast Cancer Patients Wishing Psychological Help: Usefulness of a "Fear of Cancer Recurrence Inhibition Task"

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BACKGROUND: Fear of cancer recurrence (FCR) is a common concern in non-metastatic breast cancer patients wishing psychological help. Dysfunctional and functional FCR should be differentiated. The aim of this study is to determine the usefulness of a "FCR Inhibition Task" in detecting patients with dysfunctional FCR. The presence of intrusive thoughts in this inhibition task may a sign of dysfunctional FCR and should thus be associated with numerous negative psychological consequences. METHOD: 242 patients wishing psychological help participated in the "FCR Inhibition Task" consisting in exposure to FCR through the completion of the Fear of Cancer Recurrence Inventory (FCRI) followed by a guided-relaxation exercise to assess their ability to inhibit FCR intrusive thoughts. Patients reported their ability to inhibit FCR intrusive thoughts during the guided relaxation on two Visual Analog Scales (VAS). Patients also completed the Hospital Anxiety and Depression Scale (HADS) and the Mental Adjustment to Cancer scale (MAC). RESULTS: Eighty-five percent of patients reported a severe FCR (score > 13 on the FCRI severity subscale). Forty-six percent of patients were unable to inhibit FCR intrusive thoughts during the "FCR Inhibition task." Patients unable to inhibit FCR intrusive thoughts reported higher anxiety ($p = 0.001$) and depression levels ($p = 0.011$) (HADS). They reported higher levels of FCR ($p < 0.001$) (FCRI total score). They also reported less fighting spirit ($p < 0.001$), more anxious preoccupations ($p = 0.001$) and more hopelessness/helplessness ($p = 0.001$) (MAC). CONCLUSIONS: The inability to inhibit FCR intrusive thoughts is associated with numerous negative psychological consequences and reflects thus a dysfunctional FCR. RESEARCH IMPLICATIONS: The "FCR Inhibition Task" should be used as a measure of dysfunctional FCR in further research designed to assess the efficacy of psychological interventions aimed at reducing FCR. CLINICAL IMPLICA-

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TIONS: The "FCR Inhibition task" may also be used as a screening measure of dysfunctional FCR. ACKNOWLEDGEMENT OF FUNDING: This study was supported by the "Plan Cancer" of Belgium, by the "Centre de Psycho-oncologie" (Training and Research group) of Belgium and by the "Université Libre de Bruxelles" of Belgium.

P3-0087

Empowering Childhood Cancer Survivors: What Information Do Long Term Follow-Up Clinic Attendees and Non-Attendees Need?

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BACKGROUND: Currently, specialised long term follow up (LTFU) services aim to provide lifelong, risk-based medical care and information to meet the needs of childhood cancer survivors (CCS). Surveillance is recommended for early detection and intervention,where indicated, to minimise late-effects of cancer therapy. This national study assessed the needs of CCSs who did/did not regularly attend a LTFU clinic. METHOD: Childhood cancer survivors (>5 years from diagnosis), including adult CCSs and parents of CCSs <16 years of age, from four paediatric oncology centres were invited to complete a questionnaire. Data was analysed using PASW20. The current sample comprises 209 participants (target $N = 1000$): 47% male; 64% adult survivors (mean age 32 years, mean time since diagnosis 24 years), 36% parents of CCSs (mean age of child 13 years, mean time since diagnosis 10 years). RESULTS: Many CCSs (42%) do not attend LTFU clinics. The majority of non-attendees (65.4%) report that they are not satisfied with the care they are receiving (compared with only 11.2% of clinic attendees). Non-attendees recognised that attending clinic is important to learn about potential health problems (96% endorsed as "important/very important"), to get reassurance about their health (96%), and to learn about appropriate screening (91%). LTFU non-attendees reported that they had unmet information needs about possible late-effects of treatment (endorsed by 80% of non-attendees), the development of second cancers (65%) and the follow-up care they should receive (57%). CONCLUSIONS: As over 40% of CCSs do not attend a LTFU clinic, relying on a "one-size-fits-all" model of care to provide essential medical care and information is not practical. Empowering survivors to overcome their barriers to receiving care and to coordinate their complex care using alternate pathways is critical. RESEARCH IMPLICATIONS: Future intervention research is necessary in this area of critical need, to ensure the needs of the growing populations of CCS are met. CLINICAL IMPLICATIONS: New clinical strategies to assist CCS to re-engage in their survivorship care are vital to the ongoing care of this at-risk population. However, lack of awareness regarding the availability of a LTFU clinic (57%) and lack of prompts/reminders to attend once disengaged (51%) are key clinical barriers to attending LTFU which are still to be addressed. ACKNOWLEDGEMENT OF FUNDING: Jordana McLoone is supported by a translational research grant from the Kids Cancer Alliance, which is funded by the Cancer Institute of NSW. Claire Wakefield is supported by a Career Development Fellowship from the National Health and Medical Research Council of Australia (APP1067501) and an Early Career Development fellowship from the Cancer Institute of NSW (ID: 11/ECF/3-43). The Behavioural Sciences Unit is supported by the Kids with Cancer Foundation.

P3-0158

Help-Seeking Behavior of Patients With Hematological Malignancies Treated With Autologous Stem Cell Transplantation

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BACKGROUND: Patients with hematological malignancies undergoing autologous stem cell transplantation face a life-threatening illness and stressful treatment. Despite the high number of patients reporting problems in the years after transplantation, relatively few patients report a need for additional professional care. The aim of this qualitative study was to explore patients' needs and help-seeking behavior in relation to their experienced problems. METHOD: A qualitative research design following the grounded theory approach was used. Twenty patients, treated with autologous stem cell transplantation in the past 2 years, were invited to participate in an individual semi-structured interview. Thick description, peer review, and a member check were used to ensure the validity

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and reliability of the research process. RESULTS: Twenty interviews were conducted. The sample comprised seven males and 13 females who were between five and 19 months post-transplant. Patients from six different hospitals in the Netherlands participated. From the interviews, specific factors contributing to patients' help-seeking behavior were identified. Patients' personal goals, future perspective, and phase of recovery determined whether a symptom was experienced as a problem. Patients preferred to deal with problems themselves or with support from (close) relatives rather than bring in professional help. Patients' appeal for professional help depended on their coping strategies, social support, and knowledge of available care. CONCLUSIONS: Patients' help-seeking behavior after autologous stem cell transplantation is determined by multiple factors. The mere presence of a symptom does not lead to help-seeking behavior: the relationship between symptoms and help-seeking behavior is moderated by interference of a symptom with personal goals and issues related to time. Patients seem to prefer to deal with problems without professional care. Patients' coping strategies, social network, and knowledge of available care seem to determine whether they actually seek care. Our findings argue for a highly flexible approach to tailor professional care to patients' needs. RESEARCH IMPLICATIONS: Our study design enabled us to generate explanatory hypotheses, but testing these hypotheses in future (quantitative) research is an essential next step. CLINICAL IMPLICATIONS: First, a personalized approach seems needed to tailor professional care to patients' needs. The factors we identified as contributing to help-seeking behavior should be considered, and supportive physical and psychological care should be organized accordingly. Instead of fixed format, we would argue that a highly flexible approach is indicated. Second, patients with a limited social network should be monitored closely and offered help in organizing support. Third, knowledge of psychological help-options could be enhanced. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0377

"Returning to Normal": Patients and Close Relatives' Perceptions of Allo-HSCT Rehabilitation Process

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BACKGROUND: Negative impact of allo-HSCT (hematopoietic stem cell transplantation) correlated medical effects on physical and psychological conditions are well described. Non malignant late effects are heterogeneous and, although often not life threatening, they significantly impair quality of life (QOL). Despite evidence suggests considerable disruption to families, the impact of HSCT on patients' close relatives has not been sufficiently explored. Combining quantitative and qualitative approaches, our study aimed to enlighten this essential issue for allo-HSCT survivors. METHOD: We have performed an exploratory study about allo-HSCT impact on patients' and close relatives' QOL (EBMT 2013). Twenty-eight patients treated between 2007 and 2010 and their close relatives (n = 48) filled a questionnaire about HSCT impact on their sexual, couple, family, professional and social life, as well as on perceived support. QOL and dyadic adjustment were also evaluated. Quantitative data was completed by semi-structured interviews (n = 28 patients and 18 close relatives), recorded and analysed by themes, referring to IPA. In-depth analysis of the theme "returning to normal" enlightens patients' and their families' experience of HSCT course. RESULTS: Patients were mainly concerned by long-lasting procedures' effects and by the feeling of "being a burden" to their close relatives. On the other hand, changes in family dynamics, disruptions in daily routine tasks and the responsibility of being the main provider of physical and emotional support were the principal close relatives' concerns. Time of rehabilitation appeared as an important aspect of patients' and their close relatives' experiences. Despite their efforts to adapt to their physical condition, many patients do not consider themselves to « have returned to normal ». This deception is a central cause of patients' rehabilitation difficulties. CONCLUSIONS: Difficulties in "returning to normal" explain allo-HSCT patients' and their close relatives' demoralization, due to the gap between the expectations regarding treatment outcomes and the reality of post-transplantation condition. Hoping better and faster rehabilitation, patients and their close relatives are deceived and feel discouraged in facing repeatedly infections and symptoms which appear as *ever-lasting*. Besides, a discrepancy between patients' physical and psychological has also negative consequences on patient-family relationships. Coping with their own expectations and with their close relatives demands appears as a main reason of patients' difficulties. Its' repercussions on close relatives are relevant, arousing their feelings of helplessness. RESEARCH IMPLICATIONS: Despite its limitations, our study demonstrates the relevance of quantitative and qualitative methods, viewed as complementary, for investigating QOL. Furthermore, it shows the interest of a retrospective approach integrating close relatives' issues for the comprehension of patients' late concerns. The current tendency to transfer a part of HSCT care to outpatient setting may accentuate family caregivers' role. Data on this topic are still scarce and the current study may pave the way for future research. CLINICAL IMPLICATIONS: As patients' difficulties are related to the gap between expectations and rehabilitation, it seems fondamental to better inform patients and close relatives about HSCT course. To assess patients and close relatives' problems, health providers should adapt their attitudes concerning patients' rehabilitation difficulties. Psycho-oncologists may contribute to medical staff training, to enhance their abilities to understand patients' demoralization and address this issue. Besides, psychological follow-up should be offered to patients and their close relatives after allo-HSCT. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0385

Connections Between Chemotherapy-Induced Cognitive Changes and Psycho-Social Functioning in Cancer Patients Before and After Treatment

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BACKGROUND: Research investigating cognitive well-being in cancer patients does not always find a link between cognitive deficits, distress, or fatigue. However, psycho-oncology research often finds that cancer survivors have a lower quality of life and higher distress levels. The main aim was to investigate the links between objective cognitive performance and several psycho-social variables. METHOD: Our cross-sectional study focused on group of 30 newly diagnosed cancer patients and 75 cancer survivors who were compared to individually matched healthy controls. All participants were young adults, aged between 16 and 50 years old. Patients had been diagnosed with lymphoma, sarcoma, breast cancer, or germ cell tumour. We administered a lengthy neuropsychological battery that evaluated memory, attention, executive and motor functions. The psycho-social assessment included measures of quality of life, depression, anxiety, fatigue, illness perception, and subjective cognitive complaints. RESULTS: Pre-treatment patients show some cognitive deficits in attention and visual memory. These are more marked in survivors, especially for verbal memory, attention and executive function tasks. The variance in cognitive functioning in new patients is higher and explained by multiple factors. In survivors, physical functioning and symptomatology explain the attention deficits, which in turn explain the variance in memory performance. CONCLUSIONS: Cancer survivors experience high distress and low quality of life, linked to subjective and objective chemo-brain symptoms. It is yet unknown whether higher distress levels lead to the objective cognitive problems, or if the awareness of a lower objective performance is what gives rise to both low mood and poor quality of life. We discuss future directions on how to address this question. RESEARCH IMPLICATIONS: Long term emotional distress and chronic fatigue are variables that have previously been linked to poor cognitive outcomes. In order to fully understand whether they lead to a decreased cognitive performance, will require modelling a time-dependent function of the progression of cognitive and emotional symptoms. Similarly, pilot trials investigating cognitive outcomes in pre-and post-treatment cancer patients before and after counselling interventions may prove useful in understanding whether chemo-brain is actually a by-product of distress. CLINICAL IMPLICATIONS: Distress levels and fatigue seem to explain a greater amount of variance in pre-treatment patients. The availability of counselling services for patients struggling with their diagnosis may alleviate the cognitive symptoms from the beginning of their treatment and prevent subjective and objective cognitive side-effects. By contrast, the amount of variance these variables explained was lower in survivors compared to pre-treatment patients, which may suggest that cognitive interventions may also be necessary. ACKNOWLEDGEMENT OF FUNDING: We acknowledge the support of the Medical Research Council of the United Kingdom.

P3-0115

Who Are at Risk for Cancer-Related Stigma?

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BACKGROUND: Stigma related to cancer affects patients in various aspects. In our previous study, the authors demonstrated that intensity of perceived stigma associates with higher psychological distress, poor quality of life and lower perceived social support. This study aimed to explore associated factors (demographic, social and clinical characteristics of cancer survivors) of stigma among Japanese cancer patients. METHOD: A nationwide web-based survey was conducted in Japan in 2012, enrolling 628 survivors of various types of cancer. The participants were asked to report the

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intensity of their perceived stigma related to cancer, using a single self-rated four-point scale. Bivariate analyses and subsequent logistic regression analysis were conducted to identify associated factors of perceived stigma. RESULTS: Out of 628 participants, 582 participants provided complete data for analysis. Among them, 356 survivors (61.2%) endorsed perceived stigma. Logistic regression analyses demonstrated that younger age (Odds Ratio [OR] = 0.96), low income (OR = 0.40), low performance status (OR = 0.43), breast, urinary, or gynecological cancers compared to lung cancer (OR = 4.27, 4.01, 4.00, respectively) have significant association with perceived stigma. Type of received cancer treatment (e.g. surgery, chemotherapy, radiotherapy, or hormonal therapy), years since cancer diagnosis, and history of smoking did not have significantly association with perceived stigma. CONCLUSIONS: Perceived stigma related to cancer is not uncommon among Japanese cancer survivors, even after several years from cancer diagnosis. Considering its significant association with other patient-reported outcomes (quality of life and psychological distress), perceived stigma should be taken into clinical consideration, especially among those who are at higher risk. RESEARCH IMPLICATIONS: Source of stigma and its association with cancer survivors' background characteristics and other outcomes need to be investigated, with a scope of developing effective intervention for stigma-related distress and disadvantages. CLINICAL IMPLICATIONS: Clinicians should consider evaluating perceived stigma among survivors, and their potential implications on outcomes such as self-esteem, social relationships, and employment stability. Extra consideration should be provided toward younger cancer survivors and survivors of breast, urinary and gynecological cancers, with lower income and lower performance status. ACKNOWLEDGEMENT OF FUNDING: This work was supported by the Grant-in-Aid from Japanese Ministry of Health Labor and Welfare. The authors have declared no conflicts of interest.

P3-0150

How Do Information and Support Needs Differ Among Cancer Survivors With Different Demographic, Treatment and Psychosocial Characteristics? A Survey

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BACKGROUND: It is well-known that cancer survivors may experience psychosocial problems after treatment. However, it is less clear which information needs cancer survivors have and how they are related to demographic, treatment and psychosocial characteristics. We conducted a survey to gain more insight in cancer survivors' unmet information needs and their relationship to factors such as time since last treatment, coping, anxiety and depression. The results give insight in differences in information needs among cancer survivors. METHOD: Cancer survivors (all types of cancer, primary treatment finished up to 1 year) were recruited through eight hospitals in the Netherlands. Hospital staff handed out the survey, which participants could fill in and return to the Open University. Validated measures were used to assess unmet needs and indicators of psychosocial health, such as quality of life (EORTC QLQ-C30), psychological distress (HADS), coping (MAC), problem solving skills (SPSI-R), illness perception (IPQ-R), and returning to work. A translated and extended version of the Cancer Survivors Unmet Needs questionnaire (CaSUN) was used to assess information and support needs. RESULTS: Of all respondents ($n = 273$), 62.6% had unmet needs. Most endorsed needs included support regarding experienced emotions, concerns and stress, dealing with complications, returning to work, and help to quit smoking. Men and respondents with higher education reported significantly more unmet needs. Having used aftercare was positively associated with having unmet needs, while the time since last treatment was negatively associated with having unmet needs. A negative adjustment style was strongly associated with more needs regarding comprehensive cancer care, quality of life and relationships. Anxiety and depression were positively associated with needs on the domain of existential survivorship. CONCLUSIONS: Within the first year after treatment, cancer survivors experience a variety of unmet information and support needs. There is a strong need for psychosocial support, up to date information, and managing life after treatment. Which type of support is needed most, depends on several factors, of which having a negative adjustment style, feelings of depression, and the use of aftercare are important contributors. Future interventions should give special attention to these factors in order to fulfil and solve survivors' specific needs within the various need domains. RESEARCH IMPLICATIONS: The results of the study provide important directions for research and interventions for improving quality of life of cancer survivors. The results of the study gave input for the development of an online tailored intervention (*de Kanker Nazorg Wijzer*; *the Cancer Aftercare Guide*). This intervention aims to encourage self-management in cancer survivors in order to help them to deal with psychosocial and lifestyle problems they encounter during life after cancer. CLINICAL IMPLICATIONS: The results of the study provide indications of the most prominent needs of cancer survivors and consequently for improving patients'

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aftercare. Within the first year after treatment, survivors experience a great variety in information needs. While providing information and support to cancer survivors, one should personalize the information and support to the cancer survivors' background and psychosocial characteristics. This way, specific and relevant information is provided, while not overwhelming survivors with information. ACKNOWLEDGEMENT OF FUNDING: This research project is funded by the Dutch Cancer Society (grant number NOU2011-5151).

P3-0171

Correlates and Predictors of Benefit Finding and Post-Traumatic Stress in Childhood Cancer Survivors

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BACKGROUND: The focus of research on psychosocial consequences of childhood cancer has been moved to the topic of positive outcomes recently. However, the majority of studies consider negative and positive consequences separately. The purpose of this study is to analyze correlates and predictors of both Benefit finding (BF) and Posttraumatic stress symptoms (PTSS) in childhood cancer survivors. The study presents particular results of the Quality of Life Longitudinal Study in Paediatric Oncology Patients research project. METHOD: The cross-sectional part of the study dealing with relationship of BF and PTSS with each other and with medical and psychological variables was conducted on 63 children. Data for the longitudinal part of the study concerning predictors of BF and PTSS were available for 48 of these children. In Time 1 assessment, all children were 2–5 years in remission. The assessment in Time 2 followed after 3 years. The variables were assessed through Benefit Finding Scale for Children, Child Posttraumatic Stress Reaction Index, Rosenberg Self-esteem Scale, Minneapolis Manchester Quality of Life, Child Depression Inventory and Social and Health Assessment. RESULTS: The correlation of PTSS and BF has been found positive, but not significant. The results revealed significant positive correlations of PTSS with negative emotionality, depressive symptoms and severity of late effects and negative correlation with self-esteem. In terms of BF, only negative correlation with depressive symptoms has been found significant. The relation of BF with other monitored psychological and medical variables emerged positive, but non-significant. Regression analysis revealed that PTSS (T2) could be predicted by negative emotionality (T1) and BF (T2) by warmth of parenting style (T1). CONCLUSIONS: In the group of childhood cancer survivors included in the QOLOP project, both positive and negative outcomes can be identified. The risk of occurrence and development of PTSS as a consequence of paediatric cancer appears to be more connected to emotional characteristic of the survivors, whereas the presence of BF appears to be more influenced by external factor of parental attitudes towards their children and parenting. RESEARCH IMPLICATIONS: Further research is needed to verify the proposed assumption concerning the predictors of PTSS and BF. CLINICAL IMPLICATIONS: This study provides clinicians important insight into the areas which can modify the overall outcome of peadiatric cancer and therefore help childhood cancer survivors reduce negative psychosocial consequences. ACKNOWLEDGEMENT OF FUNDING: This study is supported by the Czech Science Foundation (GACR), grant no.P407/11/2421 and the Czech Republic's support for long-term strategic development of research organizations (RVO: 68081740).

P3-0628

Work Ability and Psychosocial Factors of Cancer Survivors

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BACKGROUND: Cancer is the disease with the greatest economic impact on the world, because of the deaths and the loss of productivity (work ability). The main objectives of this study are: (1) verify the Work Ability Index (WAI) in participants with a diagnosis of malignant tumor, in comparison with participants with benign tumor and without disease; (2) verify the psychosocial risk factors associated to health that can lead to work absence in the three groups. METHOD: It was developed a correlational study. The sample consisted of 197 participants divided into three groups: "Cancer" (33.5%), "benign tumor" (33.0%), and "without disease" (33.5%). The average age stands at 42.57 years (SD = 10:29), and 66% of them are female. The instruments used were the Work ability Index (WAI) and the Copenhagen Psychosocial Questionnaire (COPSOQ). RESULTS: It was found that "cancer" group members have worse work ability than the "benign tumor" group participants, and

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"no disease" group participants, and this variable is influenced by psychosocial health related factors, such as stress, burnout, depressive symptoms and sleeping problems. The type of tumor is not associated with a worse WA, however the results suggest that the general health and sleeping problems may be impaired due to the type of tumor. It was also found that participants of "cancer" and "benign tumor" groups are in a risky situation of work absence face health related psychosocial factors. CONCLUSIONS: It is concluded that cancer impairs the WA of Portuguese patients. Gender, age, type of treatment and demands at work can interfere with WA. Similarly, stress, depressive symptoms and sleeping problems can lead to work absence in cancer patients. RESEARCH IMPLICATIONS: This study contributes to the knowledge of the impact of cancer on WA of the Portuguese patients and stresses the importance of this variable. It will be important to continue to study this area, particularly the impact of the type of tumor. CLINICAL IMPLICATIONS: Through this study it's possible to understand the importance of work with cancer survivors at psychological and occupational level, creating adequate rehabilitation programs for this population. ACKNOWLEDGEMENT OF FUNDING: Fundação Ciência e Tecnologia [Foundation for Science and Technology], FCT.

P3-0172

Coping Strategies in Childhood Cancer Survivors: Gender Differences and Relation to Current Depression

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BACKGROUND: The way the pediatric cancer patients cope with their disease can affect their further experiences and long-term coping. The purpose of this study is to map the coping strategies used by childhood cancer survivors and the relationship between coping strategies and the rate of depression. The study of coping in childhood cancer survivors is part of the Brno Quality of Life Longitudinal Study in Paediatric Oncology Patients (QOLOP) and the data collection is still ongoing. METHOD: The research group consists of 40 adolescent and young adult childhood cancer survivors (age 15–21) who have been in remission for 5–8 years. Coping strategies were assessed through two scales of KIDCOPE, one assesses coping strategies used by children during their disease and treatment (particular situation associated with the disease) and the second one is focused on current coping in other situations from current daily life. Childhood's Depression Inventory (CDI) assesses depression symptoms. Data analysis was performed using descriptive statistics and nonparametric tests. The relationships between variables were found using correlation. RESULTS: The results show a positive correlation between coping strategies adolescents and young adults used in particular situation associated with their disease and coping strategies they use in other situation from current daily life. The most used coping strategy among girls in both situations was social support. Among boys the most used coping strategies were cognitive restructuring and social support in particular situation, distraction in other situation. In terms of depression, there is a negative correlation between overall adaptiveness of coping associated with the disease and overall depression (stronger negative relationship was found between active coping strategies and overall depression). CONCLUSIONS: This study pre-notifies about the use of coping strategies by pediatric cancer patients during the treatment and long-term after curing and their relation to current depression. Higher overall adaptiveness of coping during the treatment is related to higher overall adaptiveness of coping used in other situation from current daily life and lower rate of depression. Simultaneously use of active strategies is more closely related to lower rate of depression. RESEARCH IMPLICATIONS: Further research should focus on identifying the causality between coping and depression. CLINICAL IMPLICATIONS: The findings of this study inform clinicians about the distinct types of coping strategies and their contribution to better adjustment. ACKNOWLEDGEMENT OF FUNDING: This study was supported by the Czech Science Foundation (Grant No. P407/11/2421) and the Czech Republic's support for long-term strategic development of research organizations (RVO: 68081740).

P3-0333

How Do Women After Breast Cancer Experience Themselves and Their Cognitive Changes? An Interpretative Phenomenological Analysis

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BACKGROUND: Most of the literature on cognitive dysfunction after cancer is focused on chemobrain, on the direct and indirect effects of chemotherapy on the brain. Cognitive complaints – subjective experienced changes in cognition – are investigated on the fringe of the former research. Questionnaires do provide us with an indication of the nature and the severity of cognitive complaints, but they do not give a clear view of the complexity of the experience of cognitive complaints. METHOD: 15 women with diagnosis of invasive breast cancer, treated with chemotherapy and included in the longitudinal PECOG-study participated in semi-structured interviews. Participants were at least 6 months after chemotherapy, complaining of cognitive changes and willing to participate in an in-depth interview focusing on the experience of having cognitive complaints after breast cancer treatment. Interviews were recorded and transcribed verbatim and were analyzed for recurrent themes using Interpretative Phenomenological Analysis (IPA). Themes were identified and clustered in a meaningful way, in close connection to the own words of participants. Interviews were discussed with co-researchers and given back to participants.

RESULTS:

1. Participants all linked the experience of cognitive dysfunction with negative emotions; anxiety, uncertainty, loss of control and loss of Self.
2. All participants experienced the shift of attention to the inside. This could be in a rigid way – more worrying/rumination – but also in a flexible, reflective way.
3. Having (had) cancer makes these women think about their lives, it makes them scared but also sensitive to what they really want, to what is important for them and to set priorities.
4. Several participants expressed difficulties in sharing the experience of having cognitive problems with their environment.

CONCLUSIONS: This report describes an IPA-study designed to enhance our understanding of cognitive changes after chemotherapy, by means of in-depth descriptions of the patients themselves. Participants automatically linked their cognitive dysfunction to feelings of frustration, failure and uncertainty. This relationship works in both ways; as a threatening experience caused by cognitive failures, which in its turn disproportionately directs attention to failure. A more surprising theme emerged: participants emphasized specifically a more self-reflective way of thinking, in close connection to the experience of having had cancer. An experience not easily shared with an environment that did not share the same experience. RESEARCH IMPLICATIONS: A biological narrative understands cognitive impairment after cancer in terms of brain pathology. A psychological narrative might express cognitive complaints as a subjective experience and might understand cognitive dysfunction as a result or expression of stress-regulation and perhaps allow some biological contribution adding to the vulnerability to develop cognitive dysfunction. CLINICAL IMPLICATIONS: Interpretative Phenomenological Analysis (IPA) is intended to take the health care professional to the heart of the lived experience of having cognitive complaints after breast cancer treatment, what cognitive complaints mean to the patients, in their own words, within their personal and social reality. ACKNOWLEDGEMENT OF FUNDING: We received a Grant from Astra-Zeneca.

P3-0387

Chemotherapy and Cognitive Function – Is There a Chemotherapy-Induced Cognitive Impairment?

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BACKGROUND: Since the 1970's there has been growing interest in the possible association between chemotherapy and the cognitive impairment noticed by cancer patients treated with chemotherapy. These patients often present complaints related to memory changes, inability to focus attention and inability to perform multitasking, all those interfering with their daily social and professional activities. For instance, in 15–75% of breast cancer patients treated with chemotherapy some degree of cognitive function impairment is referred. METHOD: Our objective is to gather the information available about the chemotherapy-related cognitive impairment, in order to understand what cognitive functions are affected, what are the mechanisms that lead to this impairment, what factors intervene in this phenomenon and what treatments are available. We searched for articles on this subject using as keywords – cancer, chemotherapy, cognitive impairment, *chemobrain* and *chemofog*. RESULTS: The most affected cognitive areas are attention, memory, information processing velocity and visuospatial skills. Various factors could also influence the appearance of cognitive deficits – age, fatigue, impact of surgery, hormonal treatment, menopause, medications, genetic predisposition, comorbidities and paraneoplastic phenomenon. The proposed mechanisms are direct neurotoxicity, secondary inflammatory response and microvascular damage. Imaging studies, like Magnetic Resonance Imaging and Positron Emission Tomography, show reduction of gray matter and cortical/subcortical white matter. The therapeutic measures available consist of cognitive rehabilitation strategies and psychosocial support. Symptomatic treatment with methylphenidate and modafinil and neuroprotective treatment with ginkgo biloba, donepezil and antioxidants has been employed. CONCLUSIONS: Most studies show that there is a causal effect between cancer treatment with chemotherapy and the appearance of cognitive function impairment. This may occur in an important number of patients, during treatment or persisting

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many years after, having a major impact on these patients quality of life as well as that of family and friends. In spite of the number of studies that have been done in this area, the knowledge about the chemotherapy-related cognitive impairment is still incomplete. More studies with different methods are needed to further understand this subject. RESEARCH IMPLICATIONS: Ongoing research on this area, looking to answer the still unanswered questions, is an investment that should be considered because of the growing success in cancer treatment and the growing number of cancer survivors, never forgetting the importance of a life after cancer with the most quality possible. CLINICAL IMPLICATIONS: As the number of cancer survivors increases, it is fundamental for the health care professionals involved to understand the effects of the treatments used – what are they, what are the mechanisms that cause them, how to detect, evaluate and treat them – in order to provide complete information and proper care to these patients. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0247

Breast Cancer Experience Through the Body: A Consecutive Six-Year Longitudinal Study of 24 Women

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BACKGROUND: An increasing number of women survive breast cancer, but this survival comes at the cost of more aggressive treatments and body-altering side effects that affect function and appearance. Much is known about the incidence and variety of these side effects, but less is known about how the women experience and deal with the changes to their bodies from radiotherapy through to the end of all primary treatments. METHOD: Twenty-four women ≤60 years of age diagnosed with primary breast cancer and treated at the radiation department of a Swedish university hospital were followed by means of repeated interviews over a period of 6 years. The first interview was conducted face-to-face when the women were about to end radiotherapy. The follow-up interviews were conducted by telephone at 6 months, 18 months, and 6 years after ending radiotherapy. A process perspective was enabled through the construction of condensed narratives of how each woman talked about her altered body. The 24 narratives were categorized, and three different processes emerged. RESULTS: Initially, all women focused on *survival*. The first process was identified among five women who early on came to terms with their bodies by *normalization*. These women had undergone a minimum of treatments. The second process was identified from 16 women who expressed more complaints, experienced their bodies as unreliable and went to *distancing* from the body. However, as time passed they regained function that enabled to *re-integrate* with their bodies. The third process was identified from the three most affected women. Their distancing progressed into *dissociation* from the body that appeared to be permanently broken and separate from themselves. CONCLUSIONS: The study highlights the impact of side effects over time, not the least of which are from endocrine treatment. Furthermore it highlights that experiences and valuations of body alterations and side effects shift over time. To a majority of the women the body appeared as most troublesome when trying to establish a more ordinary everyday life. They spent a significant amount of time in "biographical disruption," in which the mind was distanced from the body. Some regained function seems to be a prerequisite to decrease the body-mind split while continuous body deterioration may progress into dissociation. RESEARCH IMPLICATIONS: The results indicates the importance of further studies to carefully consider the transition in body experiences and interpret self-assessments of body experience in relation to on-going or completed treatment and to the woman's overall life context. Moreover, we need to learn more about the process of body disassociation, i.e. the women who despite finishing treatment do not come to terms with their bodies, in order to find ways to support them. CLINICAL IMPLICATIONS: Optimal cancer treatment is a fine line between providing treatments with the highest chance of success without unduly burdening the patient with debilitating and life-altering side effects. Treatment must certainly be discussed in terms of hope and prospects for the future but however be discussed and communicated in a way that, in cases of devastating side effects, enables the patients to leave treatment without causing excessive worry. ACKNOWLEDGEMENT OF FUNDING: This study was supported by grants from the Cancer Research Foundation in Northern Sweden and the Cancer Rehab Foundation in Sweden (CTRF).

P3-0259

"Dismantling the Threats of Cancer – Regaining a Sense of Security, Perspective and Normality" – A Substantive Theory of Psychosocial Adjustment in Younger Adult Cancer Survivors

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BACKGROUND: Cancer in younger adulthood disrupts typical developmental milestones, such as parenthood, careers, education and romantic relationships. However, few studies have explored in-depth the processes involved in positive and negative psychosocial adjustment to cancer in this age group. Testicular cancer (TC) and Hodgkin's lymphoma (HL) typically affect younger adults yet have received relatively little research attention. This study aimed to develop a new theory of psychosocial adjustment to cancer in younger adults with these specific cancers. METHOD: Patients who had completed treatment for TC or HL were recruited from 3 hospitals in England through invitation from the clinical team. Qualitative, semi-structured interviews were conducted with 25 patients (18 TC and 7 HL), between 20 and 45 years old (21 male and 4 female). Interviews were conducted within 6 months of treatment completion and again 6–12 months later (n = 17, to date), totalling 42 interviews. Participants were interviewed at home, work or in a public café, and lasted between 40 and 120 minutes. A Grounded Theory methodology was used to analyse the data. RESULTS: A positive psychosocial adjustment transition depended on the ability to "*dismantle and relinquish cancer threats*" and "*regain a sense of security, perspective and normality*." Firstly, the process of "*gaining a sense of perspective*" involved; resolving the discrepancy between assumptions and experience, weighing up the significance of cancer, acceptance, utilising peer support, finding a sense of coherence, holding onto positive illness beliefs and making comparisons. Additionally, "*striving to get on with life and restoring normality*" meant; guarding against psychological threats, accepting a new body normality, accepting the need to "wait and see" over fertility, and constructing an enhanced sense of personhood. CONCLUSIONS: This theory highlights the key processes involved in positive adjustment "transitions" during early survivorship. Importantly, comparisons with the few patients more negatively adjusted who struggled to dismantle the threats of cancer, highlights how vulnerable patients may be supported better to achieve successful positive transitions in different areas. Whilst most expressed few unmet needs, younger adults exhibited preferences to receive and give more "informal" psychosocial support, particularly through peer mentoring, and often rejected the idea of formalised psychological support or online support. Evidently, interventions which enable the preservation of values of independence and autonomy to self-manage are vital for younger adults. RESEARCH IMPLICATIONS: Further studies which test this substantive theory of psychosocial adjustment in larger and diverse samples are needed, particularly regarding the processes associated with negative adjustment. In addition, research could investigate whether targeting concepts associated with positive adjustment identified in the model through psychosocial interventions could promote better adjustment. Importantly, studies which explore the efficacy and feasibility of peer support interventions for younger adults are also warranted. CLINICAL IMPLICATIONS: The study has implications for the development of psychosocial interventions aimed at supporting patients who struggle to positively adjust. The findings suggest ways that nurses could promote adjustment through addressing negative illness beliefs, helping patients to "gain perspective" and preparing patients for post treatment challenges, such as knowing "what is normal." Finally, having opportunities to reflect helped patients to "make sense," so one-to-one peer mentoring may be appropriate as well as less formalised support programs. ACKNOWLEDGEMENT OF FUNDING: This study was funded by Oxford Brookes University.

P3-0028

Cancer Survivorship and Working Life

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BACKGROUND: Advances in the diagnosis and treatment of those with cancer have meant that surviving the disease is now a real possibility. Many with cancer wish to remain engaged with work. This paper reviews current knowledge on such engagement within the framework of the Adaptation – Accommodation Paradigm. It also outlines the SCOT-PAIS project providing the design of an advice and information system on working life for those with urological cancers in NE Scotland. METHOD: The paper is based initially on a systematic-type review of the literature relating to cancer and engagement with work with a particular focus on urological cancers. It then describes the data collected through the SCOT-PAIS project first by semi-structured interview and then though a subsequent Delphi-based research and development study. RESULTS: The literature review highlighted both general issues concerning engagement with work and specific ones related to the nature of the cancer. It revealed short comings in the way in which information on working life is made available by the healthcare system and by employing organisations. The interview data provided two things: confirmation of the findings of the review at the individual level and insight into the information needs of patients, healthcare staff and employing organisations. CONCLUSIONS: The project is ongoing and therefore its final conclusions are not available. Preliminary conclusions focus on the likely design of the new information and advice system. It is likely that there will be recommendations and supporting action plans for improved commu-

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nication between the key stake holder groups, the better education of those groups with regards to work and working life and mechanisms by which they might share their knowledge and perspectives. RESEARCH IMPLICATIONS: Generally, the work develops current research providing greater detail on the complex challenges already identified, seeking greater specificity not only by cancer site but also by contextual factors of a psychosocial and organisational nature, and providing a theoretical framework for intervention at the interface between the healthcare system and employing organisations. The SCOT-PAIS project should lead to a pilot intervention and field evaluation in NE Scotland and, if successful, across the whole of Scotland. CLINICAL IMPLICATIONS: Working life is important for those with cancer. Inability to continue working as a result of cancer diagnosis and treatment may give rise to financial, psychological and social stress. Healthcare staff are trained in particular disciplines and have proscribed roles to play. Their work does not necessarily cover the issues of engagement with work. The SCOT-PAIS project is about supporting healthcare staff in helping their cancer patients with advice and information about working life. ACKNOWLEDGEMENT OF FUNDING: The SCOT-PAIS project is funded by Macmillan Cancer Support in Scotland.

P3-0367

Shyness and Openness – Common Ground for Dialogue Between Health Personnel and Women About Sexual and Intimate Issues After Gynecological Cancer

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BACKGROUND: One side effect after gynecological cancer is the negative impact on women's sexuality. This issue may be difficult to address for both women and health personnel. The purpose of this abstract is to delve deeper into how women describe their efforts to find ways of handling sexual changes and intimacy following gynecological cancer, and to show how dialogue with health personnel about such issues took place. METHOD: The study is phenomenological and based on 32 in-depth interviews with 16 women. Three core themes with subthemes emerged from the first round of analysis, which are published elsewhere. However, in two of the core themes, we became aware of the issue of shyness related to sexuality in the womens' lives and in their encounter with health personnel. A theoretical approach, based on Løgstrup's expressions of life and unifying opposites, was useful in the analysis to search for descriptions of handling changes related to sexuality. A new structure, *Living between shyness and openness related to sexuality and intimacy,* emerged from the process. RESULTS: The findings revealed shyness and vulnerability related to handling sexuality and intimacy. The women found it difficult to express their personal experiences and needs. Even when interacting with health personnel during follow-up, loneliness and shyness permeated lived experiences. The women had a need to communicate about this issue, but had hoped that health personnel would initiate the dialogue. Such initiatives were rare. Findings describe the women as sometimes more or less trapped in shyness or shame and sometimes moving toward openness about sexuality and intimacy. The way the interaction between health personnel and women took place, influenced the tension between shyness and openness. CONCLUSIONS: The findings show that women after gynecological cancer and health personnel share common ground as human beings, as shyness and openness are basic human phenomena. Health care workers' own movement between these phenomena may represent a resource, as it can help women to handle sexual and intimate challenges following gynecological cancer. RESEARCH IMPLICATIONS: Looking at the body of research in this field, the holistic approach to the changed female body and sexuality and the dialogue about intimate issues with health personnel has not been high on the agenda. Exploring the issue of sexuality and intimacy, as well as other vulnerable issues, in relation to life phenomena and empiri, might be one way researchers could contribute to illuminating lived experiences. CLINICAL IMPLICATIONS: If women's movement between untouchability and openness is to come to foreground, health personnel must not remain in their own shyness, but stay in motion between the united opposites, between shyness and openness, and thereby ensure that the women are cared for in a holistic way. Hence, the women might be able to move between shyness and openness in their own lives, and be capable of handling sexual and intimate challenges after cancer. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0363

Quality of Life in Japanese Long-Term Survivors of Non-Small Cell Lung Cancer

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BACKGROUND: For patients with non-small cell lung cancer (NSCLC), surgical resection is the best available treatment to enhance long-term survival and the health-related quality of life (HR-

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QOL) is becoming important endpoint of treatment. The aim of this study are to describe the QOL among long-term survivors of NSCLC and to examine the predictors of QOL. METHOD: Letters of invitation were mailed to 171 survivors who had participated in an earlier survey and now were more than 5 years after curative resection of NSCLC. The 121 respondents interested in participating were then asked to complete a series of questionnaires that assessed medical and demographic factors, the QOL-Survivor, Medical Outcome Study 36-Item Short Form (SF-36), Mental Adjustment of Cancer scale (MAC), and Profile of Mood Scale (POMS). RESULTS: A total of 113 survivors (59% male; average age, 67 years) completed the survey. The majority had received a lobectomy (93.8%) and pathologic disease stage IA (61.1%). Half of survivors reported a symptom: 54.9% dyspnea and 54.9% pain. Mean scores on the QOL-Survivor and SF-36 measures among survivors with NSCLC were close to or higher than those with other type of cancer and those in the general population. In a multiple regression analysis, dyspnea and another cancer significantly associated with poor physical aspects of QOL, and pain and the number of comorbidities significantly associated with poor social aspects of QOL. CONCLUSIONS: These findings provide that long-term NSCLC survivors in Japan are high level of QOL many years after curatively surgery. Risk factors for poorer QOL are strongly linked to distressed mood, which is a potential target for intervention. RESEARCH IMPLICATIONS: Further research is needed to monitor the course of symptoms after thoracotomy and to evaluate strategies for reducing symptom burden to improve HR-QOL among these survivors. CLINICAL IMPLICATIONS: This information may be useful to patients and physicians who are engaging in discussion of the risks and benefits of treatment. Continuing assessment and treatment of symptoms and comorbidity may be an important dimension to improve HR-QOL. ACKNOWLEDGEMENT OF FUNDING: This work was supported by the Japan Society for the Promotion of Society and the Third-Term Comprehensive 10-Year Strategy for Cancer Control and Research, Japanese Ministry of Health, Labor and Welfare.

P3-0584

Interest of a Systematic Psychological Consultation at the End of Treatment

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BACKGROUND: “How to live after the disease?” “How is to live with the threat of a recurrence?”, “how to return to work, ordinary family life and sexual activity?” All these questions occur during psychological consultations whose number is particularly increased at this stage of the therapeutic transit time. This communication report a research whose purpose was to measure, at the end of the treatments, the impact of a systematic psychological follow up on the patients’ experience. METHOD: We established a systematic psychological consultation at the end of treatments for women with breast cancer and for men with prostate cancer, both non-metastatic. The recruitment concerned 100 patients during 1 year. We took in consideration the psychodynamic determiners of this “work of the disease” at time 0 (CS a months after the end of treatment). At Time 1 (6 months later), a new interview will be proposed in order return back to the entirety of his experience, work through and reformulate thoughts and recollections. RESULTS: This study allows highlighting the important work of “psychic digestion” which is necessary to patients at the end of their treatment. Also, to improve the frame of their post treatments follow up, and develop preventive strategies in order to assure a better long term quality of life for patients who have been “cured” of their cancer. Considering the major anxiety and depressive symptoms’ repercussions on the patient’s social and personal life, this study provided recommendations in terms of public health, as a systematic psychological counselling at end of treatment, to include in a multidisciplinary consulting assistance in returning to work. CONCLUSIONS: Considerable progresses in the treatment of adult cancers have been accomplished these last years. The mortality rate from cancer has decreased significantly and a greater number of patients survive with a better long term quality of life. Patients are transformed into actors of care, managing their own health. They testify through out regular follow up their distress and confusion that often occur at the end of their treatment. Some of them feel “lost,” “abandoned,” subject to uncertainty. A systematic psychological follow up on the patients’ subjective experience make the psychic process dynamics of his “psychic recovery” more sucessfull. RESEARCH IMPLICATIONS: We can examine this hypothesis: how important is for patients to be able to symbolize, to make sense and to link the onset of their cancer with their history of life and with their social and cultural representations of illness. CLINICAL IMPLICATIONS: Its aim will be to appreciate how the patient “deals with” the disease in his life and what may be the impact of a “failure” in this necessary “ego –transformation.” ACKNOWLEDGEMENT OF FUNDING: None.

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P3-0180

Getting Back to Life-Support Groups for Women Who Completed Adjuvant Treatment for Breast Cancer: A Case Study

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BACKGROUND: Women who complete treatment for breast cancer often find themselves in a confusing situation. On one hand, they are told that they are cured, and can put their cancer aside. On the other hand, physical and mental scars, remains. Further, they feel pressure from their close circle to recover and return to normal functioning. Research shows that many women in the post-treatment phase experience considerable stress and need psychological support. METHOD: Women who were treated for breast cancer at the Assuta Medical Center in Tel-Aviv were offered to join a support group that deals specifically with the unique stress that is characteristic of the post-treatment and survivorship phase. Meetings took place in the hospital, once in 2 weeks on an open-ended basis, such that new participants could join the group at any time providing that they commit to attending a minimal number of meetings. Two groups were established and facilitated by the psychosocial team of the hospital: One for women with young children, and one for working women with older children. RESULTS: These two groups have been running for over a year, and most of the participants in the group have been active for more than 6 months. The issues discussed in group meetings are generated by group members, not by staff, and include: getting back to work, anxiety over medical examinations and recurrence of the illness, dealing with menopause (artificially caused by the use of Temoxiphen), body image and sexuality, social relations and more. CONCLUSIONS: Support groups for post-treatment patients are telling of the need for a continuity of care once the medical phase of the treatment ends. Emotional stress is prevalent in this population, and may increase, not decrease when the medical treatment ends. Therefore, it is imperative to consider this phase in the cycle of illness as part of the treatment regimen and assume responsibility for the patients' psychological needs when the medical treatment terminates. Patients needs a place where they can stop, reflect, share their feelings and thoughts without hesitation, and gain coping skills for the new phase of coping with cancer. RESEARCH IMPLICATIONS: It is prudent to follow these clinical interventions with empirical research that will help identify the unique needs of patients in this stage of treatment, and allow an examination of the efficacy of interventions. Some of the specific questions research may address are: What is the most effective format for such groups – structured or open-ended? Are there other important topics that are not raised by participants that should be part of the discussion? CLINICAL IMPLICATIONS: More effort should be directed for the survivors of cancer treatment. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0006

Beginning Education on Symptom Management at the Onset of Treatment is Critical

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BACKGROUND: Studies show breast cancer survivors may feel isolated and uninformed after completion of active treatment, when they have less interaction with health professionals. The range of survivorship issues that patients encounter is broad and can include physical, psychological, social/spiritual aspects. Although Institute of Medicine's report on cancer survivorship recommends cancer patients completing treatment be provided with a comprehensive care summary/follow-up plan that is clearly and effectively explained, it is not always practiced in oncology care. METHOD: This study explored experiences and concerns of breast cancer survivors' post-treatment, especially in light of their treatment side effects. A qualitative approach was used to explore impacts of breast cancer on survivors at different life stages and to determine preferred content and format of survivorship care plan. The impacts of breast cancer were broad and varied by age group for the 16 women in the study. RESULTS: Physical, emotional, and social effects were more intense in younger patients with women in the middle age group experiencing more concerns centered on financial and social support issues. Fatigue and fear of recurrence were the most universal effects. Important elements include: treatment summary, information on nutrition/exercise, expected side effects, signs/symptoms of recurrence, follow-up schedule, and updates on changes to recommended care. CONCLUSIONS: Breast cancer survivors are diversely impacted by the breast cancer treatment experiences. Effects vary by life stage, which is important when providing care to populations who are in need of early intervention for symptom management/palliation as disease progresses. RESEARCH IMPLICATIONS: Research on the benefits of survivorship care plans and follow-up care plans would enhance the need for adequate planning of women having a good quality of life after cancer treatment. CLINICAL IMPLICATIONS: Health care providers who provide women with a comprehensive care plan see the empowerment of this tool for women who are being discharged from their oncologists to the family physician who can provide effective care for the patient

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P3-0072

"I Just Have to Move on" Women's Experiences of Coping During the First Year Following Primary Breast Cancer Surgery

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BACKGROUND: Breast cancer is a significant stressor and major challenge. How women appraise diagnosis and treatment affects subsequent somatic and psychosocial adaptation. Although studies have documented that many women adjust well, in-depth understanding of the women's coping strategies and experiences is still needed to achieve enhanced coping. The purpose of this qualitative follow-up study was to describe women's individual experiences of coping during their first year after primary breast cancer surgery. METHOD: Individual interviews were conducted with 10 women (aged 51–67 years) 1 year after primary breast cancer surgery at a Norwegian university hospital. The interviews lasted from 55 to 100 minutes. The informants were asked and probed about their experiences of and coping with cancer throughout the first year following their breast cancer surgery. The transcripts were analysed using Kvale's method of qualitative meaning condensation analysis. RESULTS: Existential perspectives, finding benefits, attitudes towards the disease, taking action, and returning to normal were themes identified. The women experienced appreciation of life, and felt more confident in themselves, enhanced compassion for others, and increased appreciation of their life priorities. Close relationships became more important. The women accepted their situation and made the best of it. Physical activities, focus on self-care, and work helped. Generally, they had a positive attitude despite fear of cancer recurrence and uncertainty about the future. They wanted to return to a "normal" and healthy life by distancing themselves from both the cancer environment and information. CONCLUSIONS: The findings emphasize the richness in these women's coping strategies, their personal profiles and their differing needs, as well as some general adaptive strategies. The findings also indicate the value of promoting adaptive coping strategies in order to improve psychological adjustment in breast cancer patients. RESEARCH IMPLICATIONS: Further research could focus on the following issues: (1) studying coping in women with breast cancer from different cultures during the first year after breast cancer surgery; (2) using a follow-up, a mixed-methods design, to study coping reactions and behaviors over time among women with breast cancer; (3) studying coping thoughts and behaviors during the first year after breast cancer diagnosis with a large sample of women by use of standardized questionnaires. CLINICAL IMPLICATIONS: Through awareness of the women's individual experiences and coping strategies, healthcare professionals can improve their support and enhance these women's coping. It is essential to include care for these women's various reactions and coping strategies along with the medical treatment in order to give adequate healthcare. The results can be used by healthcare professionals to understand women's coping processes, and in planning and implementing care for women with breast cancer. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0145

Psychological Distress and Quality of Life in Long-Term (5+ Years) Adult Cancer Survivors and Their Caregivers: Implications for Healthcare Providers

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BACKGROUND: Although most cancer survivors receive the necessary information from healthcare providers on treatment options and procedures at diagnosis, they often fail to receive support and guidance after acute treatment has completed in dealing with the possible physical, emotional, social, and psychological effects of cancer with an impact on their quality of life even after 5 or more years. In addition, cancer may impact negatively on caregiver's health long after treatment has ended. METHOD: Participants are completing a series of questionnaires during a follow-up visit after 5 years that achieved a free of disease status. The questionnaires included are the Italian version of the Hospital Anxiety and Depression Scale, the Short Form Health Survey (SF-36), the Impact of Event Scale, the Functional assessment of chronic illness therapy-fatigue, the Mini-Mental Adjustment to Cancer Scale end the Mini-Mental State Examination. In addition, we aim to examine agreement between cancer survivors' self-reported QoL and proxy assessment of patient QoL by their caregiver and physicians. RESULTS: One hundred

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fifty survivors are participating in the study. Accrual is ongoing. Common psychosocial problems experienced by long-term cancer survivors and their caregivers, such as issues related to psychological distress, coping strategies, fatigue, cognitive impairment and quality of life are emerging, confirming psycho-oncology literature regarding long-survivors. CONCLUSIONS: Cancer experiences may foster psychosocial problems among survivors, lasting 5 or more years after completing treatment. The present study evaluates psychological distress and quality of life (QOL) among cancer survivors and potential correlates including cancer type, age at diagnosis, health status, and key socio-demographic variables, with preliminary data confirming the need for maintaining clinical attention to long-survivors of cancer. RESEARCH IMPLICATIONS: Research implications regard the importance of having a series of instruments that may be of help in screeing for possible disorders influencing the quality of life, across the long-survivorship trajectory. CLINICAL IMPLICATIONS: Clinical implications regard the need to monitor psychosocial variables among long-survivors of cancer to improve their quality of life according to a bio-psycho-social approach. ACKNOWLEDGEMENT OF FUNDING: The Istituto Scientifico Romagnolo per lo Studio e la Cura dei Tumori (I.R.S.T.) IRCCS, Meldola, Italy, is acknowledged.

PALLIATIVE CARE

P3-0195

Barriers of Healthcare Providers Against End-of-Life Discussions With Pediatric Cancer Patients

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BACKGROUND: Advances in medical treatment have led to improved survival rates in pediatric cancer. However, cancer is still a leading cause of death in Japan. The end-of-life discussions (EOLd) with patients have been reported as one of the most difficult and stressful tasks for an oncologist. However, little is known about how healthcare providers regard EOLd, to what extent they discuss this information with the patients, and the types of difficulty they encounter during these discussions. METHOD: The participants were 10 specialists in pediatrics, oncology, and ethics who have had considerable experience in each area. We conducted two focus group interviews and two-one-to-one interviews. The interview contained the following predetermined open-ended questions: (1) What do you think is an EOLd in pediatric oncology? (2) What do you/your colleagues actually discuss with the intractable pediatric cancer patient him/herself? (3) If there is something interferes EOLd, what do you think is it? and (4) What are the differences in the pediatric and adult settings? The KJ method was performed to analyze the data. RESULTS: We found 23 barriers against EOLd with pediatric cancer patients. These barriers were classified as follows: healthcare provider factors, patient factors, parent factors, and institutional or cultural factors. In addition to barriers found in previous studies, some unique barriers were uncovered such as, “Lack of experience,” “Lack of confidence to face the patient after the discussion,” “Uncertain responsibility for treatment decision-making,” and “No compelling reason to discuss.” Healthcare providers actively discussed the purpose of treatment and the patients’ wishes and concerns; however, they were reluctant to deal with the patients’ own impending death and their estimated prognosis. CONCLUSIONS: EOLd with pediatric patients differs from that with adult patients. Further studies are required to analyzer pediatric cases associated with EOLd and carefully discuss its adequacy, pros, and cons. RESEARCH IMPLICATIONS: This qualitative study was conducted just to extract the contents of and barriers against EOLd with pediatric cancer patients from the perspective of participants with a variety of backgrounds. To clarify the current situation around pediatric EOLd, further quantitative research based on the result of this survey will be expected. CLINICAL IMPLICATIONS: The EOLd with pediatric cancer patients is still unfamiliar in Japan. The barriers of healthcare providers extracted from this qualitative survey should be taken into account when provide consultation on EOLd matters. ACKNOWLEDGEMENT OF FUNDING: This study was supported in part by Welfare and Grant-in-Aid for Research Activity Startup number 24830126.

P3-0531

Specific Mechanisms of Loss Adjustment: A Narrative Review

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BACKGROUND: Bereavement is a transition process that requires multiple adaptive efforts. These efforts may have the potential to transform the person and to promote personal growth or, contrariwise, may lead to several forms of complicated grief. With this narrative review, we intend to increase knowledge about coping with loss in order to create an integrative framework of the different mechanisms that interfere with bereavement and its effect on grief progress. METHOD: The methodology we used was a narrative review of the literature in order to identify, synthesize and categorize the findings of literature. We searched for relevant empirical studies in electronic databases using the following terms combined: coping, adaptive strategies, grief and bereavement. It was also done a manual search in the major scientific journals in the area. As inclusion criteria of studies, was considered: qualitative and quantitative study design; adult population; non-violent deaths. Opinion articles or studies not published in scientific journals were excluded. RESULTS: There were selected 17 studies that have focused on specific coping mechanisms used to face grief: cognitive-behavioral strategies; religious and spiritual coping; social sharing and looking for support. Cognitive mechanisms like persistent negative thoughts about life and future and a catastrophic perception of grief reactions were related to complicated grief. Negative interpretation of events, as well as self-blame are important components of rumination, that is associated do grief's intensity. Spiritual coping was related to positive emotions and psychological wellbeing. High levels of social behavior, in order to mobilize contacts and find support is not always related to a decrease loneliness. CONCLUSIONS: About the cognitive-behavioral coping strategies, we conclude that they are mostly avoidant mechanisms, with the exception of problems solving and positive reappraisal. Regarding spiritual coping, we noticed that had multiple functions: a cognitive function of meaning making of the loss experience; a spiritual component of connection to the deceased; and an extrinsic religiosity as a way of filiation. The adaptive value of social sharing and support seem to be more related to the emotional stability of bereaved people than with their needs. RESEARCH IMPLICATIONS: Psychological functions of coping mechanisms are central in understanding individual differences in bereavement. Besides, the adaptive value of specific coping mechanisms of bereaved subjects differ over the grief process. In order to access and understand this differences there is a need for more prospective studies. There's also a need to minimize the possible bias of the self-report scales, especially related to the avoidant strategies, using a triangulation of qualitative and quantitative methods. CLINICAL IMPLICATIONS: The knowledge of differences in coping strategies used by bereaved individuals over the bereavement process is central in grief therapy. With this theoretical framework, clinicians will be able to make an early detection of the coping mechanisms that would be long term less adaptive and to develop interventions that will promote personal and interpersonal resources adjusted to patients' characteristics and needs. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0076

Nature and Prevalence of Grief Reactions and of Post-Traumatic Growth in Bereaved Spouses of Cancer Patients

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BACKGROUND: When the outcome of cancer is fatal, among the patient's relatives, the spouse appears to encounter the greatest difficulties to cope with her/his grief: the risk of complicated grief is more considerable among this population. On the other hand the majority of quantitative studies investigate detrimental outcomes, neglecting any personal growth during bereavement. Our study aims at filling this gap of knowledge to specify both the pathological aspects of grief, and its positive outcomes, in the cancer field. METHOD: In a consecutive cohort of spouses of palliative cancer patients ($N = 60$; 40 men, mean age = 63.4), we study at T1 (from 1 to 6 months before death) specific predictors of emotional adjustment at T2 (6–9 months after death). We assess in particular: intensity of grief reactions and potential existence of Prolonged Grief Disorder (PGD: *Inventory of Traumatic Grief)*; and Post-Traumatic Growth (PTG: *Post Traumatic Growth Inventory*). In order to study the prevalence of PGD and PTG, we dichotomized each items of the scales, using the methodology of Shroevers and Téo (2008). RESULTS: We found a significant minority of participants experiencing Prolonged Grief Disorder (14%). The most frequently reported reactions are linked with longing/pining for the deceased, to loneliness and painful remembrance of memories. Regarding the post-traumatic growth, our results show that the majority of the participants do not experience any growth, except regarding relationships with others ($M = 15.1$, SD = 8.6). The most experienced changes reported by the participants concern the spirituality and relations with others. There is no significant difference in post-traumatic growth with regard to the existence of Prolonged Grief Disorder. There is no association between PGD and gender or age. CONCLUSIONS: Our results show that a significant minority of bereaved spouses meet 6 months after the death the criteria for Prolonged Grief Disorder. It implies that they experience a critical dysfunction that hinders their daily life experience. Strikingly the participants don't report any post-traumatic growth, except regarding relations with others. After the death of the cancer patients the bereaved spouses describe changes involving closer relationships with family and/or friends, appreciation of how precious these ones are, and deepening of their relationships with others. RESEARCH IMPLICATIONS: Our data highlighted the important prevalence of PGD in bereaved spouses of cancer patients. This prevalence matched with the data of the existent literature. We provided a refined insight of this phenomenon by exploring the very nature of the grief reactions. Nonetheless quantitative studies may miss the subjective evaluation of the bereaved persons. More studies, with mixed methodologies, are needed to explore this aspect. It is also crucial to better understand the emergence of post-traumatic growth. CLINICAL IMPLICATIONS: As the very nature of Prolonged Grief Disorder remains ambiguous, our study provides indications of painful reactions which hinder the recovery from grief. These painful feelings could become therapeutic targets of individual or group support programs based on the Dual Process Model of Coping with Bereavement (Stroebe & Schut, 1999). This model integrates the attachment theory, which is particularly relevant to understand and to care of bereaved spouses. ACKNOWLEDGEMENT OF FUNDING: Support for this research came from the French National Cancer Institute SHS 2011 (INCa).

P3-0644

Comparing Characteristics of Home Versus Hospital Deaths – Findings From a Small Study That Can Improve Clinical Practice

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BACKGROUND: This quantitative study investigated what family members or caregivers of deceased patients from a private oncology unit in Cape Town, experienced during the last week of that patient's life, and compared home deaths with death in an acute-care hospital. Private health care in South Africa provides many benefits to patients but palliative home care is not an established norm in this country. METHOD: A postal questionnaire was mailed to next of kin of patients who died at home or under their oncologist's care in an acute hospital ward, during a limited time period. Fifty eight respondents anonymously provided information about preparation for the patient's death, as well as aspects of support and care that were present or absent. Basic demographic data was collected using tick boxes followed by Likert-scales for a set of given statements. Information was summarised using descriptive statistics. RESULTS: 34 people who experienced a Home Death and 24 who experienced a Hospital Death participated in this study. 61.25% of the respondents were the partner of the deceased. More than 75% of all respondents described themselves as being the main carer with half of the Home Death carers having employed additional help at home, compared with 79.20% of the Hospital Death carers having no paid help in place at home. 75% of the Hospital Death respondents did not report access to domiciliary Hospice assistance compared with 90.8% of the Home Death respondents who had accessed Hospice assistance. CONCLUSIONS: Patients who had both Hospice support and paid carers in place were more readily cared for at home until death in contrast to the patients dying in hospital. In order to better support the dying patient and family members, and to encourage dying at home for those patients who prefer a Home Death, better access to information and resources for carers is required. Discussing individual preferences ensures that patient autonomy is upheld and enables appropriate planning and preparation by family. It is suggested that such planning would facilitate a less complicated grieving process for the next of kin. RESEARCH IMPLICATIONS: A qualitative study of this topic would provide richer accounts of experiences of Informal Carers, their concerns and challenges. Formal examination of Place of Death discussions conducted by oncology team members could lead to shorter stays for hospitalised patients and better support for Informal Caregivers. Further studies into the needs and awareness of rights of patients in the health care system would provide a foundation for advocacy for improved Palliative Cares services in South African communities. CLINICAL IMPLICATIONS: Following the findings, improved care for hospitalised patients would include:

- More consistent ward staff education
- Introduction of an Integrated Care Pathway
- The deployment of specialised Palliative Care practitioners

Support for informal caregivers could be enhanced by:

- Practical assistance and psycho-education for informal caregivers
- Clearer communication about access to and the role of resources in the community
- Improved access to bereavement counselling for informal caregivers

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P3-0091

A Journey of Grief: Using Portraiture to Enhance Human Connection and Healing in Grief

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BACKGROUND: This is an experiential presentation where the participant explores dimensions of grief through portraiture. This allows the participant to obtain a deeper understanding of the self, and the therapeutic self. METHOD: Portraiture is a combination of science and aesthetics. In a world where clinical practice is totally reliant on empirics, the aesthetic aspects of human connection, and healing are underaddressed. The method of portraiture with examples allows the participant to explore depictions of grief and meaning, relating the human experience to all who grieve. RESULTS: The results of this experiential presentation is a meaningful connection among the participants, and a deeper comprehension of grief personally, professionally, and universally. Clarity through grief expression as a human condition impacts all who have experienced loss, or work with persons who experience loss. CONCLUSIONS: Grief is a human condition that connects us to all in the past, present, and future. Through portraiture, variant types of grief are considered and explored, resulting in human connection and healing. RESEARCH IMPLICATIONS: Portraiture as a method is new and has not been fully explored in grief and grieving. Presentation of the method allows exploration for more meaning of the method through understanding the steps and rigour of the method. CLINICAL IMPLICATIONS: Clinicians explore their personal views and values of grief. Identifying personal and professional values allows the professional to approach the grief of others with a different and more full perspective. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0047

When It Can't Been Healed: A Longitudinal Qualitative Study of Relationship Changes in Couples Facing Advanced Melanoma

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BACKGROUND: This prospective qualitative investigation examined perceived relationship changes in a sample of advanced melanoma patients and their partners. The purpose of this study was to gain a deeper understanding of the type of perceived relationship changes and the natural course within 6 months after diagnosis of advanced cancer was made. METHOD: Eligibility criteria for inclusion in the study were the diagnosis of stage III or IV melanoma according to the UICC 1987 classification and living in a committed relationship established in a minimum of 2 years before the diagnosis. In a semi-structured interview eight patients and their partners were separately asked about their relationship quality and possible changes in the course of the disease. Six months later the same questions were asked, focusing on relationship changes during the last 6 months. The audio taped interviews were analyzed using qualitative content analysis. Inter rater agreement was obtained by computing Cohen's Kappa. RESULTS: At T 1 four patients and three partners affirmed relationship changes after having received the diagnosis of a stage III or IV melanoma disease. Perceived relationship changes were mostly reported in terms of caregiving, distance/closeness-regulation, and in changes in communication patterns. At T 2 six patients and two partners affirmed relationship changes. While changes in care giving, distance/closeness-regulation remained main issues, greater appreciation for the relationship and forecast reliability for recreation and vacations were mainly reported. CONCLUSIONS: Relationship changes are a common phenomenon in the course of advanced melanoma. Most couples reported coming closer dealing with the cancer disease and to appreciate their relationship much higher. These changes might be helpful for couples to deal with this highly distressing situation of living with advanced melanoma. RESEARCH IMPLICATIONS: Future studies should examine relationship changes within a prospective, quantitative design to investigate whether or not relationship changes might have an impact on patients' and partners' psychological health and quality of life. From a former cross-sectional study of our own group there is some evidence that negative relationship changes are associated with increased psychological distress and worse quality of life. Female partners were at greatest risk for these negative perceptions. CLINICAL IMPLICATIONS: Most couples reported growing closer within 6 months after diagnosis of advanced cancer. Those couples whose relationships seem to be adversely affected should be offered a couple's therapy in order to improve their communication patterns and, consequently, increase their intimacy. Screening both patients and their partners with a simple question – Did the diagnosis of cancer change your relationship? – might lead to early detection of potential couples at risk and timely psychosocial referrals. ACKNOWLEDGEMENT OF FUNDING: None.

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P3-0343

Management of Spiritual Pain in Cancer Patients Using Dignity Therapy and Counseling

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BACKGROUND: Our department is in charge of both psycho-oncology and palliative medicine fields for cancer patients. Total pain of cancer patients consists of four aspects; physical, psychological, social and spiritual pain. Despite having a lot of experiences dealing with both physical and psychosocial problems, it is difficult to manage spiritual pain in cancer patients. The aim of this study is to discuss the problems and our trials to ease the spiritual pain in cancer patients. METHOD: The study period was from May 2010 to April 2014. The data of cancer patients who had distress related to spiritual pain and visited our specific outpatient service were collected. Two methods were mainly used with patients. Dignity therapy was a life review method carried out by the patients themselves. Counseling was another approach used by doctors and clinical psychologists. After these therapies were completed, patient satisfaction was inquired. Individual cases were scrutinized in detail and some cases are presented as examples in this abstract. RESULTS: Case report (1); 84 years old, female, lung cancer recurrence. She had a psychological conflict with her daughter and feeling of regret regarding her life course. After receiving dignity therapy, she became satisfied with her life course and her relationships with family members. Dignity therapy was considered effective to alleviate her spiritual pain. Case report (2); 37 years old, male, lung cancer. He was a devout Buddhist and always contemplating the meaning of life. Through the counseling process, he found self-efficacy by telling his experience to other cancer patients. The intervention of a medical social worker was also effective. CONCLUSIONS: It is difficult to manage spiritual pain in cancer patients since it is related to human existential distress, and there is no significant common regimen for all patients. Cancer patients can express themselves through dignity therapy and/or the counseling process, and these methods might be effective to increase their self-efficacy, which may then alleviate their spiritual pain. There are several points that should be discussed in the future, for example, when these methods should be introduced, the selection of suitable patients, and the running costs. More intensive intervention is needed by a multidisciplinary team including persons of religion. RESEARCH IMPLICATIONS: This study showed how to manage spiritual pain in cancer patients who came to our specific outpatient service. The study demonstrated the advantages of an intervention by psychosomatic medical doctors and clinical psychologists from the viewpoint of psycho-oncology. From the results of this study, further examination of these methods is needed since there is no significant common regimen for all patients. In addition, other methods and more cases should be examined. CLINICAL IMPLICATIONS: This study showed several trials of methods, such as dignity therapy and counseling were effective to alleviate the spiritual pain in cancer patients. When these methods are introduced, the selection of suitable patients, and the running costs should be considered. Depending on these results, we can give more efficient support, including a multidisciplinary team approach, to cancer patients in the future. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0533

Dynamic Process of Loss Adjustment: A Narrative Review

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BACKGROUND: The most recent conceptual models of grief describe this phenomenon as a dynamic and flexible process, resulting from the combination of several personal and interpersonal resources. Included here are the perspective of emotion regulation and the dual model of coping with bereavement. The aim of this literature review is to increase knowledge about the relationship between the various ways of coping in adjustment to bereavement process studies. METHOD: We used a narrative review, which involves the identification and categorization of the prominent themes in the literature. This analysis results in a theoretical framework that contributes to a better understanding of the literature results. The research in electronic databases was made using a combination of the following search terms: coping, emotional regulation, adaptive strategies, grief, bereavement. As inclusion criteria of studies, the following was considered: qualitative and quantitative study design; focus on the dynamic process of grief adjustment; adult population; non-violent deaths. Opinion articles or studies not published in scientific journals were excluded. RESULTS: Fourteen studies were selected. There was evidence that, regardless of the cultural context, the mourners share the same coping strategies, albeit with different long-term outcomes, depending on the ability to integrate the new reality not only on the functional level, but also

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emotionally. The increasing oscillation between the mechanisms focused in loss and restoration is a sign of greater flexibility of resources. Those who have greater flexibility adapt themselves better to the loss. The group of individuals with complicated grief is characterized by greater fixation in trauma, avoidance of changes and yearning for the deceased. CONCLUSIONS: Studies suggest that the adaptive value of the strategy is mainly dependent on its psychological function, as well as the moment of bereavement when it is used. The psychological function of coping mechanism presents qualitative differences over time. The normal evolution of bereavement requires increasing oscillation and flexibility in coping resources. Fixation in trauma, avoidance of changes and yearning for the deceased are associated with worse outcomes. RESEARCH IMPLICATIONS: Psychological functions of coping mechanisms are central in understanding the individual differences of the bereavement process. Qualitative changes over time should be assessed by in-depth interviews, in a prospective design study. Resulting categories should be used to create valid criteria for distinguishing the adaptive capacity of individuals. CLINICAL IMPLICATIONS: Acknowledging the individual differences in coping mechanisms is useful to design a more comprehensive and client-centered approach. In general, the grief protocol intervention should include therapeutic techniques that promote increasing flexibility of resources, as well as emotional integration of loss meanings. Special attention should be paid to aspects of trauma and negative consequences of continuing bonds. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0190

Family Support in Palliative Care: The Relationship Between the Perceptions of Caregivers Burden, Distress and Benefits of Caring

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BACKGROUND: The informal caregiver plays a central role in palliative care. The recognition of the significance/importance of their role, and the multiple demands they face, resulted in a growing interest in palliative care's investigation in the last decades. Recently, research started to focus, not only in the negative impact of caring, but also, on the study of positive outcomes resulting from caring of a cancer patient. METHOD: This study aims: evaluate the perception of caregiver's burden; characterize anxiety and depression levels; study the relationships between perception of burden and distress and perception of caring benefits; understand the influence of this positive variable in distress. Participants were 52 caregivers of patients from a Palliative Care unit. The majority were female (84.6%), spouses (48.1%) or sons (44.2%) of the patients, married (73.1%) and working at present (46.2%). Participants were assessed with these instruments: a sociodemographic questionnaire, Hospital Anxiety and Depression Scale (HADS), Informal Caregivers Burden Questionnaire (QUASCI), Life-Events Checklist (LAV). Perception of positive gains was evaluated with QUASCI. RESULTS: The results obtained in this study indicate: significant clinical levels of burden on the informal caregiver; a high prevalence of anxious and depressive symptoms. A positive association was found between perceived caregivers' burden and distress ($p < 0.01$). Emotional burden, life implications, financial burden ($p < 0.01$), and control mechanisms ($p < 0.05$) were found as positively associated with distress. No correlations were found between, life-events; burden, anxiety and depression and respective subscales. About benefit perceptions, we identified no relation with distress and a correlation with caregiver's burden ($p < 0.05$). These benefits were positively associated with caregiver's role satisfaction ($p < 0.01$). CONCLUSIONS: This study revealed that caregivers experience high levels of distress, high levels of physical, emotional and social burden as well as exposure to traumatic life events. The association found between distress and perceived burden indicates the importance of socio-economic, emotional factors and perceptions of control in adjustment to disease. The absence of association with LAV can reveal the primacy of the impact of current experience. Related to positive outcomes, although no associations were found with the levels of distress, they appear to be an important factor as a buffer in burden, probably justified by feelings of self-worth and gratification. RESEARCH IMPLICATIONS: This research constitutes a contribution for future investigations and serves as stimulus for the development of more studies that evidence the importance of psychosocial interventions for informal careers in palliative care. This research also serves as basis for the development of new and complex longitudinal studies with larger and representative samples that may include other variables such as social support, which evidence shows to act as a protective factor of psychological disturbance. CLINICAL IMPLICATIONS: This work reveals the importance of implementing interventions in palliative care that promote positive variables, reduce distress and the perception of burden associated with caregiving. Also, is necessary to implement intervention programs for caregivers of cancer patients in palliative care, with components that address positive variables such us benefit finding perceptions, growth, meaning of life and, simultaneously, the expression and emotion regulation and the acquisition of communication and coping skills. ACKNOWLEDGEMENT OF FUND-

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P3-0120

Psychiatric Disorders and Background Characteristics of the Bereaved Seeking Medical Counseling at a Cancer Center: Descriptive Analysis of 155 Psychiatric Consultations

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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 psychiatric disorders, background characteristics among the bereaved who lost a loved one with cancer, and seeking medical counseling at a cancer center. METHOD: In this retrospective study, all patients who consulted the outpatient service for bereaved families in our hospital between April 2007 and April 2014 were reviewed. This study was approved by Institutional Review Board of Saitama International Medical Center, Saitama Medical University. RESULTS: During the study period, 155 patients consulted the outpatient service for bereaved families. The ages ranged from 17 to 84 years (mean: 52 ± 15). The most common psychiatric disorder among the bereaved was uncomplicated bereavement (n = 62, 40%), followed by major depression (n = 36, 23%). Females (n = 124, 80%), and the bereaved who lost their spouse (n = 87, 56%), were the most common users of the service. The mean time between the death and the first consultation (period) ranged from 0 to 7644 days (mean ± SD: 460 ± 959, median: 147). CONCLUSIONS: This retrospective study demonstrated the characteristics of the bereaved seeking medical counseling at a cancer center. 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. Therefore, we should avoid viewing symptoms of psychiatric disorders as only reactions to bereavement. Psychiatric interventions including psychotherapy and medications are required for these families. RESEARCH IMPLICATIONS: None. CLINICAL IMPLICATIONS: We should avoid viewing symptoms of psychiatric disorders as only reactions to bereavement. Psychiatric interventions including psychotherapy and medications are required for these families. ACKNOWLEDGEMENT OF FUNDING: This study was supported by the Grant-in-Aid for Scientific Reaearch (C) of the Japan Society for the Promotion of Science (JSPS).

P3-0675

Psychiatric Disorders and Psychotropics in 200 Terminal Cancer Patients

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BACKGROUND: Psychiatric disorders are frequent and have a major impact on quality of life of terminal cancer patients. Few studies have described detailed diagnoses and psychotropics prescribed in this setting, which represent important data in order to better plan services as well as to train health care professional appropriately. Objective: To describe psychiatric disorders and psychotropics use in terminal cancer patients admitted to a hospice. METHOD: The data of a cohort of 200 patients (average age = 69.8 years; average stay = 14 days) consecutively admitted to a 15-bed terminal cancer hospice during a 12-month period were reviewed. Socio-demographics data, past psychiatric history, and psychotropic drugs administered during the stay were collected. Antipsychotics and benzodiazepines were converted to haloperidol and lorazepam equivalents. The Nursing Delirium Screening Scale was used to screen and monitor delirium symptoms. The analysis was performed using the SPSS software (19.0). RESULTS: The prevalence of diagnostic conditions at admission were delirium symptoms in 40% of patients and other disorders in 30.5%, the most prevalent ones being anxiety disorders (20%) and sleep disorders (7%). The incidences of new psychiatric conditions were also delirium symptoms (72%), formal delirium diagnosis (36.5%), and anxiety disorders (5%). Ninety three percent of patients received an antipsychotic, 85% a benzodiazepine and 16.5% an antidepressant during their stay. Fifty two percent of all antipsychotic medication was administered for delirium. Forty four percent (44%) of benzodiazepine medication was for anxiety disorders, 34% for sleep disorders, and 12% for convulsions. CONCLUSIONS: Psychotropic drugs were widely used in this cohort of terminal cancer patients where nearly 100% of patients received antipsychotics or benzodiazepines. The frequent use of antipsychotics was related to delirium and nausea and vomiting. Delirium was the most frequent psychiatric disorder diagnosed during the sojourn of 36.5%

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of patients. Apart from delirium, 30.5% ($n = 61$) of patients are admitted with a formal psychiatric diagnosis and 7.5% will develop a new psychiatric diagnosis. RESEARCH IMPLICATIONS: After this presentation, researchers will possess more objective data on psychiatric disorders and psychoactive medications prescribed in terminal cancer in order to better take these factors into account in intervention studies to improve the quality of life of these patients. CLINICAL IMPLICATIONS: After this presentation, clinicians will possess more objective data on psychiatric disorders and psychoactive medications prescribed in terminal cancer in order to better take these factors into account in intervention studies to improve the quality of life of these patients. ACKNOWLEDGEMENT OF FUNDING: None.

SPIRITUALITY, HOPE AND MEANING

P3-0594

What Role Plays the "Faith Factor" in Dealing With Cancer?

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BACKGROUND: Patients diagnosed with cancer disease are suddenly thrown into a struggle facing new life situations and challenges. In such life crises people need to connect to their coping mechanisms and old resources for finding strength. As doctors we need to ask if religiosity and spirituality might contribute to peoples coping mechanisms. METHOD: In order to evaluate the role of the "Faith Factor" we interviewed 689 patients (52.3% women and 47.7% men), with cancer at the Clinic for Haematology/Haemaostaseology and Oncology of the Medical University of Vienna. Based on the bio-psycho-social-spiritual model we used standardized questionnaires like the anxiety and depression scale (HADS), spirituality and religiosity benefit (Büssing) as well as social demographic characteristics. Further data on pain, fatigue as well as laboratory findings such as the haemoglobin levels were obtained. RESULTS: From the 689 patients 51.1% regard themselves as religious and/or spiritual (religious 24.1%, spiritual 9.0%, religious/spiritual 18.1%). There was a trend towards higher levels of religiosity/spirituality in women (58.7%) than in men (41.3%) but not to a significant level. Looking at anxiety levels the non-religious group scored significantly higher than the religious and/or spiritual. ($p = 0.01$). Depression levels were also significantly higher in that group ($p = 0.00$). About 69.9% of the patients with a religious and/or spiritual background confirmed that spirituality and/or religion help them to deal with their illness. Patients mentioned that the most important support came from their family and friends. CONCLUSIONS: We conclude that patients with a spiritual and/or religious conviction might benefit from their belief as it helps them to deal with cancer as a life challenge and a potential life threatening disease. RESEARCH IMPLICATIONS: As we found out that more than 50% of our patients are religious or spiritual it would be interesting to define their spiritual needs and to evaluate the treating doctors role in supporting these patients. CLINICAL IMPLICATIONS: Knowing about religiosity and spirituality as a major resource for some of our patients we are challenged to adapt our daily routine according to the patients needs. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0048

Effectiveness of Spiritual Life Review on Spirituality and Resilience Among Cancer Survivors: Preliminary Results

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BACKGROUND: A cancer diagnosis often provokes existential questioning concerning identity, meaning and spirituality. Clinical practice at the department of Spiritual Care at VU University Medical Center, Amsterdam, indicates that spiritual life review (methodically writing about one's existential and spiritual development) eases this questioning, and seems to strengthen spirituality and resilience. The aim of this study is to investigate the effectiveness of a structured spiritual life review protocol among cancer survivors. METHOD: Cancer patients (all cancer types) treated >0.5 year prior to the study (all treatment modalities), participated in the study. The intervention consisted of spiritual life review during 8 group sessions in a 4 months period. Patients learn to re-activate autobiographic memories, reflect on the development of existential and spiritual themes in their life, map their personal growth in light of these themes, and write the story of their life accordingly. Patient reported outcomes (SAIL, NEIS, RYFF scales of psychological wellbeing, HADS, MAC and EORTC QLQ-C30) were completed at baseline, post treatment, and 3 months follow-up. RESULTS: Preliminary results on 50 cancer survivors who participated in the first phase of the study are forthcoming this summer. Results will focus on the effects of spiritual life review on spirituality (ones connectedness to oneself, to others, and to a larger meaning or presence), and resilience (attunement of the self and its context, impacting the ability to rec-

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onfigure cognitions, convictions and behavior to adjust to life events). Furthermore the correlation between (subscales of) spirituality and resilience will be studied. CONCLUSIONS: Results are forthcoming, but it is hypothesized that gaining insight in the relationship between spiritual life review, spirituality and resilience allows for new insight and novel approaches in dealing with existential questioning, -restlessness and -discomfort. This is relevant and important to the field of psycho-oncology, as it allows for different approaches to understand and improve the (spiritual) quality of life and wellbeing of cancer patients. RESEARCH IMPLICATIONS: An increased understanding of the relationship between spiritual life review, spirituality and resilience will further our understanding of the impact and potentiality of reflection on, and writing about existential and spiritual development for cancer patients faced with existential questioning, -restlessness and -discomfort. CLINICAL IMPLICATIONS: An increased understanding of the relationship between spiritual life review, spirituality and resilience might eventually lead to the development of a variety of new clinical tools, instruments and interventions affecting the (spiritual) quality of life and wellbeing of cancer patients. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0350

Convergent Validity of the Newly Proposed Four-Component Structure of the Functional Assessment of Chronic Illness – Spiritual Well-Being, Expanded

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BACKGROUND: Three factors (Peace, Meaning, Faith) underlying the 12-item Functional Assessment of Chronic Illness Therapy – Spiritual Well-Being scale appear to contribute unique variance to the assessment of quality of life (QOL), and in some instances, have evidenced clinical utility. Investigation of the expanded 23-item version of the scale is therefore warranted. A recent principal components analysis (PCA) found four clear, reliable domains (Peace, Meaning, Faith, Positive Interaction); the current study examined their convergent validity. METHOD: As part of an Australian longitudinal, online community-wide survey about existential wellbeing, 1045 cancer survivors (49.4% of a larger sample including other groups like cancer caregivers, controls, etc.) completed the 23-item FACIT-Sp-Ex at baseline to investigate Peace, Meaning, Faith, and Positive Interaction components. Concurrent assessments utilized to determine validity included the Functional Assessment of Cancer Therapy – General (FACT-G), a measure of QOL; the Systems of Belief Inventory (SBI-15R) assessing religious/spiritual beliefs/practices/support; the Purpose in Life Test (PIL-Form A); the Brief Serenity Scale (BSS); Integrative Hope Scale (IHS); the Self-Compassion Scale (SCS); and the Gratitude Questionnaire-Six Item Form (GQ-6). RESULTS: "Peace" evidenced most associations above an arbitrary cut-off (r = 0.60) with total scale scores on hope (r = 0.71), QOL (r = 0.69), serenity (r = 0.68), purpose-in-life (r = 0.65), self-compassion (r = 0.62), and five correlations $r \geq 0.60$ with related subscales. "Positive Interaction" showed strong correlations with serenity (r = 0.69), hope (r = 0.67), purpose-in-life (r = 0.64), gratitude (r = 0.60), and three subscales. "Meaning" showed high associations with hope (r = 0.72) specifically the Social Relations & Personal Value subscale (r = 0.69), purpose-in-life (r = 0.69), and the QOL subscale Social/Family Wellbeing (r = 0.68). "Faith" evidenced two high associations with subscales Religious & Spiritual Beliefs & Practices of the SBI (r = 0.86) and Trust of the BSS (r = 0.72; belief in positive fate). CONCLUSIONS: It was anticipated Peace would link to assessments of serenity and emotional wellbeing (QOL) given its affective nature and Meaning would link to purpose-in-life and social-based measures, given the initial subscale was strengthened through PCA by item-loadings of love/connectedness. Faith, thought to assess elements of organised religion, linked with measures of religious beliefs and practices, and belief in positive fate. Positive Interaction, gratitude, and hope links were also expected, as this subscale includes thankfulness/hope items. Additional associations highlight the strong intercorrelations between Meaning-Positive Interaction, Peace-Positive Interaction, and Peace-Meaning. The FACIT-Sp-Ex subscales thus appear reliable, valid, positive measures of existential richness. RESEARCH IMPLICATIONS: The 12-item FACIT-Sp is a mainstream measure of spiritual wellbeing independent of religiosity, accounting for religiously diverse populations, and the spiritual but non-religious. Mounting research utilizing the 23-item expanded version highlights our need to understand its psychometric properties. A recent PCA, extending the original factor structure, keeping "Peace," adding items to "Meaning" and "Faith," and creating the "Positive Interaction" subscale, is now better understood following convergent validity assessments using an extensive range of positive/existential measures. CLINICAL IMPLICATIONS: According to replicated FACIT-Sp-12 research, enhanced peace and meaning appear linked to high life enjoyment despite chronic symptoms. The most clinically relevant subscale of the FACIT-Sp-Ex, "Peace," has retained its original structure, but psychometric improvements to "Meaning" and "Faith," and creation of the "Positive Interaction" subscale, may extend this work.

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By revealing the underlying complexities of these existential constructs through validity assessment, other clinically important constructs will likely be uncovered to develop this important area. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0332

Meaning-Centered Group Psychotherapy for Elderly Women Who Completed Adjuvant Treatment for Breast Cancer: Study in Progress

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BACKGROUND: Elderly women who complete treatment for breast cancer often find themselves in an isolated and confused situation. On one hand, they are told that they are cured, and can put their cancer aside. On the other hand, most of them already retired from job, some lacking a support system in place, and sometimes there are physical limitations. Dealing with spiritual and meaning concerns, in a safe environment, may influence and support the recovery process. METHOD: Elderly women (age 65+) who were treated for breast cancer at the Assuta Medical Center in Tel-Aviv. We offered meaning-centered groups that aimed at sustaining meaning and improving spiritual well-being in the post-treatment and survivorship phase, after we made an adaptation of the protocol of W. Breitbart. Participants were invited through Day Care radiotherapy and chemotherapy. Each group has eight sessions. Until now we had three groups. Meetings took place in the hospital, once in 2 weeks. RESULTS: Because the exploratory nature of the protocol (from English to the Hebrew language), at this point we did not randomized or having a control group. During the presentation we will describe and categorized the most relevant categories that women discussed, and the subject that becomes more difficult or problematic, perhaps for cultural bias. CONCLUSIONS: Meaning-centered groups for post-treatment elderly patients are telling of the need for a continuity of care once the medical phase of the treatment ends. Emotional stress is prevalent in this population, and may increase, not decrease when the medical treatment ends. Therefore, it is imperative to consider this phase in the cycle of illness as part of the treatment regimen and assume responsibility for the patients' psychological needs when the medical treatment terminates. The Meaning-centered intervention gives the patients the opportunity to explore spiritual and existential themes. RESEARCH IMPLICATIONS: Will be relevant to follow new groups, with evidence-based research that will help identify the unique needs of patients in this age, and allow an examination of the efficacy of interventions. Some of the questions research may address are: What is the most effective protocol for such groups? Are there other important topics that should be part of the discussion? Are there cultural differentiations with similar protocols in other countries, beside homogeneous Western countries? CLINICAL IMPLICATIONS: More effort should be directed for the survivors of cancer treatment. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0601

Spiritual Well-Being & Resilience in Cancer Patients

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BACKGROUND: Resilience in Cancer is defined as the ability to overcome and give a positive meaning to adverse situations, manipulating the disease and treatment over time. The spiritual health is enhanced by developing positive relationships that a person sets himself, with others, with nature and/or God. The purpose of this poster is to present the results of a crossectional study that explored the relationship between spiritual well-being and resilience in cancer patients. METHOD: This correlational-study aims to understand the relationship between spiritual well-being and resilience in cancer patients. Thus, the measured variables are the spiritual well-being and resilience. Two hundred Portuguese adult cancer patients volunteer to respond to a set of online. RESULTS: The results confirmed the relationship between spiritual well-being and resilience. A higher level of resilience is associated with a higher level of spiritual well-being. With regard to the field of spirituality, there was a significant and strong correlation between Global Spiritual Well Being. CONCLUSIONS: This study showed that spiritual well-being is one of the psychological factors related to resilience in cancer patients. Health professionals have a very important role when it comes to providing tools for these patients. Cancer patients may benefit from psychosocial support and counseling in order to minimize the negative effects of the disease. Our results suggest that health professionals intervention and counseling should recognize the role of spirituality and spiritual well-being in patients resilience and psychological adaptation to the infirmity. RESEARCH IMPLICATIONS: Cancer is a disease that is increasing in Western populations, with a diverse but often fatal prognosis. The identification of psychological factors, that may be associated with more favorable prognosis, is therefore essential. Spiritual Well-Being may be one of the factors favoring patients resilience. CLINICAL IMPLICATIONS: Oncological diseases due to its high mortality led to individuals draw up a series of thoughts that most often affect the way they deal with the disease and treatment. Expanding the knowledge about the causes and progression of cancer is crucial. Our role should mainly focus on how to help patients with cancer to face the disease with which to excel and give positive meaning to adverse situations, reforcing coping with disease and treatment. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0568

Examining the PCBS Properties With Colombian Samples

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BACKGROUND: The objective of this study is to determine whether the Post Critical Belief Scale (PCBS) can be reliably used in contexts different from those of Western Europe. In particular, this study seeks to examine the properties of the PCBS with a sample of the general population and with an oncology sample from Colombia. It is tested whether the PCBS notion of religiosity, understood as two dimensions and four approaches, can be generalizable. METHOD: Participants: Two samples of 350 and 84 people. The participants of the first sample were members of the general population contacted online (190 women-160 men, mean age = 39 (SD = 10)). The second sample were breast cancer patients, mean age 55 (SD = 11) who took part in a larger study. Procedure and instruments: All participants completed the 18-item short version of the PCBS, online or in one-to-one interview. Additionally, the larger sample completed seven questions regarding their religious practices (e.g. church attendance, baptism, religious marriage, and others) while the oncology sample completed the System of Belief Inventory (SBI). RESULTS: Results of each sample were submitted to multidimensional scaling (MDS) and principal component (PC) analyses. The MDS revealed a two dimensional solution for both samples, but the PC did not offer the expected two component solution. In particular, participants in either sample only discriminated between "religious" and "non-religious" items. However, further analysis revealed the expected two dimension/four approaches structure when religious practice was controlled for. Samples were split into two groups using a religious practice index, or the SBI score. The low religiosity subsample in each sample showed a structure significantly closer to the one hypothesized by the PCBS. CONCLUSIONS: This is the first study to examine the PCBS properties outside a secularized society and in an oncology setting. The results presented show that the research on approaches to religion is sensitive to the socio economic context where they are investigated. The dimensions underlying the PCBS (Inclusion vs. Exclusion of Transcendence and Literal vs. Symbolic) could only be identified when an independent measure of religious practice was introduced. This emphasizes the need to use convergent measures of religiosity and highlights the difficulties of using measures whose context sensitivity have not been tested. RESEARCH IMPLICATIONS: The PCBS cannot be used to characterize religious belief unless there is either information to validate the scale, or an independent mean to determine how secular a society is. Wulff's theory of religiosity assumes people are sensitive to the difference between ritualistic/conventional and individual means of expression of belief. However, these differences can only be reliably detected in a secular society. That is, the construct is relative to individual differences due to the social context. CLINICAL IMPLICATIONS: The promotion of religious inclusion and beliefs as a coping strategy is limited. While it is generally agreed that religious beliefs are useful for patients who are more orthodox in their beliefs, the PCBS could help to discriminate patients that would benefit from other type of interventions to increase their coping (e.g. more spiritual interventions, more adherence to evidence based medical interventions). Nonetheless this research shows that this strategy requires a nuanced use. ACKNOWLEDGEMENT OF FUNDING: Carolyn Finck and William Jiménez-Leal were both funded by the Fondo para Profesores Asistentes (FAPA) at Universidad de los Andes.

P3-0094

Spiritual Well-Being and Life Events: A Comparison Between Women With and Without Cancer History

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BACKGROUND: Spirituality might be a useful characteristic in coping with the cancer; however, the research in this field is not conclusive (Visser et al., 2009). A larger study with Portuguese middle-aged women was undertaken and a small sample of women with a cancer diagnosis was studied in the present research. Therefore, this research aims at exploring the differences between spiritual well-being and recent life events' evaluation, comparing women with and without cancer history. METHOD: This cross-sectional study encompasses a community sample of 34 Portuguese women, aged between 42 and 60 ($M = 52.5$; SD = 5.005). Spirituality was assessed with the Spiritual Well-being Questionnaire, measuring personal, communal, transcendental and environmental spiritual well-being (Gouveia et al., 2012); the Life Events Survey was also used to assess both positive and negative recent events (Silva et al.,

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2003). This study compares 17 women with history of cancer (13 women are breast cancer survivors, 2 women with the diagnosis of ovarian cancer and 2 women with diagnosis of cervical cancer) with 17 women without a clinical history of oncologic disease. RESULTS: There were no significant differences between the two groups in spiritual well-being, specifically, communal ($t(32) = 1.247$; $p = 0.221$), personal ($t(32) = 0.631$; $p = 0.533$), environmental ($t(32) = -0.126$; $p = 0.900$), transcendental ($t(32) = -0.606$; $p = 0.549$) and overall spiritual well-being ($t(32) = 0.163$; $p = 0.872$). Similarly, there were no significant differences in positive life events' assessment ($t(24) = 1.041$; $p = 0.308$). However, marginally significant differences were observed regarding negative events ($t(27) = -2.053$; $p = 0.050$): women who have had an oncologic disease assessed their negative life events less negatively ($M = -6.813$; SD = 5.671), than women with no cancer history ($M = -11.846$; SD = 7.537). CONCLUSIONS: Although spirituality has been referred as helpful in managing the disease, in this small sample of middle-aged women, participants with a diagnosis of cancer did not differ from their counterparts with no cancer history in terms of spirituality and positive life events' assessment. It is known that cancer and related treatments might lead women to re-examine themselves and their relationships, allowing opportunities for positive psychological changes. This might be associated with the fact that women who have had cancer have assessed their recent life events less negatively than women who haven't had an oncologic disease. RESEARCH IMPLICATIONS: There were no significant differences in spirituality scores among women with and without a cancer history. This might be due to limitations in the research (e.g. design and sample size). Moreover, women who have had an oncologic disease assessed their negative life events less negatively than women without a cancer experience. These results need to be confirmed in larger samples and multifactor analysis should be undertaken to assert the contribution of other factors. CLINICAL IMPLICATIONS: Spirituality might not be higher in women who have gone through an oncologic disease. However, this sample is too small to discard the usefulness of this variable in the adjustment to cancer. Moreover, it might be clinically relevant to acknowledge positive factors which allow cancer patients to assess their negative events less negatively than counterparts with no cancer history. Resilience factors may accountable for this nonetheless further research is needed to confirm these results. ACKNOWLEDGEMENT OF FUNDING: This research was funded by the PhD grant SFRH/BD/32359/2006, of the Portuguese Foundation for Science and Technology (FCT – Fundação para a Ciência e Tecnologia).

P3-0143

An Overview of the Associations Between Positive and Negative Variables in Cancer Patient's Adjustment to Disease

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BACKGROUND: Psycho-Oncology primary goals are to understand the adaptation process to cancer. Traditionally, research focused mainly on the negative variables and their impact in adjustment. However, in the last decades an increasing interest in the role of positive variables in the process of disease emerged. This study aims to analyse the positive role of Meaning of Life and the expression of distress, anxiety and depression in cancer patients contributing to the integration of different experiences felt. METHOD: Our data was collected at an Oncology hospital in Portugal. The sample includes 151 cancer patients, 60 male (39.7%), 91 female (60.3%), with different diagnoses: breast (43%), gastrointestinal (20.5%), head-neck, endocrine (12.6%), lung (7.9%), haematology (7.9%), genitourinary (6.6%) and Sarcoma (1.3%). Mean age was 58.28 years and mean time since diagnoses was 33.02 months. Most participants were married (71.5%), with non-qualified jobs (60.9%) and inactive (73.5%). All participants were evaluated with a social and clinical questionnaire, Hospital Anxiety and Depression Scale (HADS), Meaning of Life subscale (ML) of the Self-Actualization questionnaire, Brief Cope, and the Distress Thermometer (DT). RESULTS: Mean results: HADS 12.48, anxiety 6.72, depression 5.76; ML 26.83; DT 6.02; Coping – Denial 3.34, Substance Use 2.13, Instrumental Support 4.91, Humour 3.78, Religion 5.36 and Self-blame 2.96. We found significant differences between male and female in HADS, anxiety and depression results. No differences in ML. Regarding the correlations between ML and other variables, we observed a negative ($p < 0.01$) association with HADS, anxiety, depression and with distress ($p < 0.05$). In what concerns to coping styles, we identified a positive ($p < 0.01$) correlation with instrumental support, a negative correlation ($p < 0.01$) with denial and self-blame; no correlations with substance use, humour and religion. CONCLUSIONS: Results indicate higher levels of anxiety and depression, comparing with general population, regarding suffering associated to cancer. Accordingly to previous investigations, women present higher scores of anxiety and depression than men. Concerning the relation between

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positive and negative variables, we conclude that ML plays an important role of adjustment, which is explained by the negative correlations with HADS, anxiety, depression and distress. Instrumental support and the absence of self-blame and denial are related with ML sustaining a better adjustment. RESEARCH IMPLICATIONS: Taking in consideration that the study of positive variables is a promising field, we believe that further studies on Psycho-Oncology should address the importance of positive dimensions to balance the impact of negative implications and promote a positive adjustment. It seems important to design longitudinal studies, with representative and homogeneous (diagnose and time since diagnose) samples to understand the complexity of meaning attribution processes that can improve the adjustment to cancer. CLINICAL IMPLICATIONS: The most important implication for clinical practice is that interventions, individual and group interventions, should be designed to integrate simultaneously, the minimization of negative disease sequels and the promotion of ML dimension. A positive dimension such as ML will relieve emotional suffering and, at the same time will promote positive adjustment and other positive experiences emerging from cancer. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0362

Anthropology of Cancer-Initiation Elements in Cancer as "Disease-Initiation"

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BACKGROUND: Cancer is not only medicine issue, it hits emotional, social and ontological level too. The influence of death change patients' life approach. The main topic of this work is to establish the existence of the structural elements of initiation in cancer patient, to compare it with the traditional initiations and identify how much the experience of symbolic death and a new way of living may indicate that it was a "disease-initiation." METHOD: Approaching to cancer as a sudden existential breakpoint, it is tried to discover individual approach among medical treatment, specific faith and framing the whole treatment as a amalgam of biomedicine and their unconventional methods as complimentary. Trying to find a personal meaning in chemo period, body mutilation or passing through side effects of chemotherapy and valuable symbolical dreams, creates a period of isolation, what causes mind changing and radical start of a new life direction. In order to see if all these can hide possible initiate elements it is used qualitative methodology on 25 patients who come to psychooncology. RESULTS: 12 patients showed that for them cancer causes a radical changing in their life. That before they lived for others, and now they tried to live what they feel. They accept what cancer did to them, accepted as a chance for inner transformation and sow that this situation is not only a medicine issue, but a their lifes situation for changing behavior in qualitative way. This can show that cancer could be a "disease initiation complex" who have influence not only on body as a disease, but also on mind as a initiation moment. CONCLUSIONS: The thesis examines what it could mean for the contemporary culture once such a profoundly existential situation would be recognized as initiatory moment, thus opening a new perception of the disease, since it does not represent a mere biological ("negative") context, but in itself has a renewing ("positive") value. RESEARCH IMPLICATIONS: This implication can be interesting more in anthropological view to see how can some disease be treated as a initiatory moment, like shamanistic illness, in the society who doesn't have regular initiate rites like other traditional or primitive societies. CLINICAL IMPLICATIONS: This shows a new perception toward cancer, if we treat a cancer as a initiate moment. It doesn't conquer only a biological, social and emotional level, for it poses a truly new qualitative discourse for life change. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0464

Role of Religion in Chinese Breast Cancer Patient

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BACKGROUND: Breast cancer patients faced a lot of physical and psychological challenges during their treatment. Lots of psychosocial intervention groups had been provided to cater their physical needs (fatigue, poor eating appetite), treatment side-effects (fatigue, poor sleeping quality) and emotional turmoil (anxious, fear and depressive mood). However, less is being address on religious aspect. In this study, the importance of religiosity would be studied among the Chinese breast cancer patients. METHOD: Subjects were 140 cancer patients receiving radiotherapy treatment for their breast cancer. Participants were recruited from two local hospitals and community cancer support organization in Hong Kong. All of them were asked to fill in a set of self-reported questionnaires including a self-rated religiosity question and quality of life scale before their commencement of radiotherapy treatment. RESULTS: Overall, 78 participants had no religious background and 62

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participants had different religious backgrounds (Catholic, Christian, Buddhism and Traditional Chinese Beliefs). Among religious participants, higher levels of religiosity were positively related with quality of life scale and associated with lower levels of distress. Positive rating on their relationship with religion was related to better social well-being ($p < 0.05$), emotional well-being ($p < 0.01$), functional well-being ($p < 0.05$) and better overall quality of life ($p < 0.01$). The relationship with religion was also influenced the self-perceived stress level ($p < 0.5$). CONCLUSIONS: Our research found out that the beliefs in religious had positively effect on the social, emotional, functional and overall quality of life of Chinese breast cancer patients. Moreover, it had influence on the perceived distress level. RESEARCH IMPLICATIONS: Limited research had been done on studying the importance on the role of spirituality or religiosity on cancer patients. This study may reveal the role of religious on Chinese breast cancer patients. And how did their religious beliefs affected their psychosocial well-being and holistic health. CLINICAL IMPLICATIONS: Different religion had different religious beliefs and values which are affecting how people live their lives. In our study, it proved that religious beliefs were influencing cancer patients. Although they were having different religious backgrounds, they were also being affected by their spiritual beliefs. Religion was not only affecting their spiritual health, but also their physical and psychological health. Clinician and practitioner should address on the importance and values of religiosity in different psychosocial interventions. ACKNOWLEDGEMENT OF FUNDING: This study is supported by the Research Grants Council General Research Fund (HKU745110H), Hong Kong Cancer Fund, Queen Mary Hospital and Pamela Youde Nethersole Eastern Hospital.

P3-0066

Keeping Pace With an Elder Cancer Patient With Suicide Ideation to Feel How Life Is – A 1-Year Follow-Up Case Report

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BACKGROUND: Logotherapy points out that human being's search for meaning is the primary motivation, and suffering can have a meaning. (Frankl, 1959, 1969). According to logotherapy and existential psychotherapy, the relationship between patient and therapist is always an important therapeutic factor (Frankl, 1969; Yalom, 1980, 2008). Meaning-Centered psychotherapy (Breitbart, 2003, 2011) just provides a working framework when death anxiety is all around. This case report will present how patient and therapist faced death anxiety and kept going through. METHOD: The patient, Mr. A, is a 70-year-old man. He was diagnosed with prostate cancer, stage IV, with spinal metastasis in January 2013. At first, his suicide ideation resulted from his dysfunctional left leg and the diagnosis. Till March 2014, Mr. A talked about life and dreams, instead of suicide ideation. The whole sessions, since January 2013 to March 2014, are analyzed based on the concepts of meaning-centered psychotherapy. The psychotherapist's self reflection is based on the logotherapy and existential psychotherapy. RESULTS: Mr. A experienced four events about death: ex-wife's suicide, his cancer, his younger brother's death and one young nephew's death. Now, Mr. A sometimes thought about what good death is with energy and what meaning of life is with distress. He also wanted to know why he often dreamt of his ex-wife's smile. The long and good therapeutic alliance made it possible to face death anxiety. Or, it's human encounter made Mr. A and therapist got energy to accept unknown. The process shows the context of self-transcendence and self-actualized. CONCLUSIONS: MCP is developed to deal with advanced cancer patients' psychological and spiritual needs. Although Mr. A's physical condition is not this kind, MCP still provides therapist a feasible construction when being aware of the ambivalence-choosing death or life. Both patient and therapist will be the beneficiaries when understanding suffering having a meaning. RESEARCH IMPLICATIONS: Life seems chaos sometimes and we have a primary motivation to search a meaning in life. Logotherapy and existential psychotherapy give a point of view in front of death, and MCP seems a map to guide a feasible direction. It will be valuable to keep exploring the similar and different operations if utilizing MCP on cancer patients without advanced cancer, or who with psychiatric histories. CLINICAL IMPLICATIONS: Thinking based on Logotherapy and Existential Psychotherapy and practicing according to the flow of MCP could be a human and feasible work style to be with cancer patients under distress. Therapist will get benefits to prevent burnout and realize the value of death anxiety. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0102

The Creation of Hope in Patients With Lung Cancer

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BACKGROUND: Lung cancer is associated with biomedical and psychological symptoms as well as a poor prognosis. When health care staff communicate with lung cancer patients it is essential that they consider the patients' own view of the situation to avoid putting unnecessary strain upon the patients' shoulders. The purpose of the present study is to better understand how a group of patients with lung cancer reflects upon their new life situation after diagnosis and primary treatment. METHOD: Fifteen patients with non-small cell lung cancer were consecutively included and, where possible, repeatedly interviewed during the course of the disease process. The 29 interviews were conducted in a thematically structured narrative form that facilitated a dialog between the interviewer and the patient. The interviews covered experiences with health care, living an everyday life, and thoughts about the future. RESULTS: By focusing on how the patients more or less preconsciously elaborated mentally on their vulnerable situation, it was possible to detect different mental manoeuvres that they used as a way of creating hope. The patients distanced themselves from their disease; relied on a feeling of a sound body; idealised treatment possibilities; relied on healthy behaviour; focused on a concrete project; found that they were better off than others and took solance in the fact that there were patients who had successfully managed the disease. CONCLUSIONS: The patients were not passive victims in the face of their diagnosis, but were actively trying to find ways of looking at their despairing situation in a positive light. A creative process for psychological survival had thus been initiated by the patients. RESEARCH IMPLICATIONS: It is common that research on how patients deal with strain focuses on more rational aspects of mind. Including more preconscious elaborations may give complementary knowledge. CLINICAL IMPLICATIONS: We suggest that acknowledging the patients' creative process should be the starting point from which the physicians can engage in hope work with their patients. ACKNOWLEDGEMENT OF FUNDING: This study was supported by grants from Roche Sweden.

P3-0285

An Observational Study to Evaluate Healing Effect of Mantra Chanting on Terminally Ill Cancer Subject

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BACKGROUND: Jain Mantra Chanting Bhaktamar Sutra believed to have healing effects on various diseases specially cancer patient. To evaluate the hypothesis an observational study is ongoing with 40 terminally ill cancer patients at various sites. METHOD: Subject are assesed for entry into the study based on Inclusion and Exclusion criteria. Approximately 40 subjects will be enrolled in 1:1 randomisation. Subjects are receiving Mantra Chanting + Palliative treatment in experimental group while Palliative treatment in control group. ASSESMENT: Enrolled subject are assesed on baseline visit, Day 21, Day 42 and Day 63 for following outcome parameter

(1). Pain on visual analogus scale
(2). Mental Scoring System
(3). Activity of daily living (ADL)
(4). Physical Examination

Statistical analysis will be performed on data obtained from assesment. RESULTS: Research is still going on and result will be submitted after 3 months. CONCLUSIONS: Conclusion will be made on the basis of obtained data. RESEARCH IMPLICATIONS: As per World Health Organisation Spiritual aspect of health should also be taken care since the scientific validity of the Mantra chanting in improving the disease condition has not been assesed in past thus the result obtained from the study could provide scientific rational and background for future studies with same objectives on large scale. CLINICAL IMPLICATIONS: It is a Drugless Therapy, Mantra chanting has no side effect. Spiritual healing by mantra chanting can give clinician a new tool to helps to improve the subjects medical condition, emotional stability and spiritual upliftments. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0441

Spiritual Needs in Oncology Palliative Patients

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BACKGROUND: Holloway defines spirituality as a dimension of attitudes, beliefs, feelings and behaviours beyond the human rationality or material world. Recent research supports that spirituality affects the quality of life of palliative patients as well as their anxiety and depression levels. The purpose of this work is to increase the knowledge about spiritual needs, quality of life, anxiety, and depression, as well as the relations between these aspects in a sample of oncology palliative patients. METHOD: In a previous work we assessed spiritual needs, quality of life, anxiety and depression levels and explored the relations between these factors. The sample of our previous work – increased for the current study – was: 30 patients over 18 years-old and advanced cancer diagnosis, who attend in Hospital Torrecárdenas' Oncology Service, Hospital de Poniente's Internal Medicine Service and Asociación Española Contra el Cáncer's Palliative Psychological Unit (Almeria-Spain). Instruments employed: Hospital Anxiety and Depression Scale (HADS). The Functional Assessment of Chronic Illness Therapy–Spiritual Well-being Scale (FACIT-Sp). RESULTS: Our sample size was small and only 30 participants completed the study. The participants reported high levels of anxiety and depression. Overall HAD subscale anxiety: 7′3. Overall HAD subscale depression: 7′2. By correlating a negative view of the FACT-G and the age ($r = -0.332$; $p < 0.01$). By correlating a negative view of the FACT-G and the HAD [anxiety levels ($r = -0.519$; $p < 0.01$), depression levels ($r = -0.434$; $p < 0.059$). High scores of variable spirituality and quality of life show a significant positive correlation ($r = 0.506$; $p < 0.01$). Low scores of variable spirituality results significant with high levels of depression ($r = -0.461$; $p < 0.01$). CONCLUSIONS: Oncology palliative patients reported high level of anxiety and depression levels. Anxiety and depression affects the quality of life. Scores of depression levels and spiritual needs show a significant relation. RESEARCH IMPLICATIONS: Departing from the above data, it is our intention to enlarge the sample of our previous study in order to obtain more solid and conclusive results, which will be exposed in this work. The expected hypothesis is that spirituality affects the general wellbeing and the quality of life of palliative patients as well as their anxiety and depression levels. CLINICAL IMPLICATIONS: We anticipate expanding the development of this topic and improve the desing of therapeutical intervention. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0625

Posttraumatic Growth in Oncology

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BACKGROUND: Traumatic events inherent to cancer usually have a negative psychological impact on the patient. However, long-term changes associated to a succeeded adaptation process allow the majority of long term survivals to achieve prior mental health status (Resilience). Moreover, a minority of this population may go even further, achieving higher levels of quality of life and psychological wellbeing after cancer experience than ever (Post Traumatic Growth). METHOD: Our objective was to characterize the phenomena of PTG in cancer throughout a case report of a non-Hodgkin's B cells lymphoma (NHBL) survival who presents significant PTG outcome. We made an analysis of patient's clinical report and a review of the literature related to PTG in Oncology using Pubmed database. RESULTS: Case report: 37 years old woman, diagnosed with a NHBL in late pregnancy (34 weeks) and treated in IPO Lisboa for 10 years. She underwent elective caesarean followed by a long hospitalization and inherent separation from her baby boy besides other close family (3 years old daughter and husband). In the hospital the patient presented a Post Traumatic Stress Disorder that persisted for 18 months but progressively remitted with combined psychological and pharmacological intervention. One year after diagnosis, NHBL was considered in remission. Five years after haematological diagnosis the patient acquired psychosocial skills and global wellbeing compatible with PTG. CONCLUSIONS: PTG was first defined and characterized by Tedeschi and Calhoun 1996. The concept refers to a difficult but succeeded adaptation process in response to an event severe enough to disrupt individual previous cognitive schemes and translating itself into several individual life domains changes. Determinants of PTG are multidimensional and include: specific features related to traumatic event; prior individual characteristics (socio-demographic variables, personality type, coping strategies and cognitive processing, co-morbidities) and social support issues. Significant evolutions mainly occur in three life domains: self-perception (self-esteem, internal control), interpersonal relationships (empathy, affective resonance) and lifestyles (spirituality, prioritization, life enjoyment). RESEARCH IMPLICATIONS: Understanding the psychological and relational mechanisms subjacent to PTG outcome may be determinant to a enhance accuracy, quality and efficacy in psycho-oncological interventions. CLINICAL IMPLICATIONS: Regarding the limited information about PTG and cancer survivorship in literature, we highlight the importance of further research focused on prevalence and clinical and psychological characterization of PTG among Portuguese cancer survivors. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0007

The Use of Faith as a Source of Complimentary Medicine by South Asian Breast Cancer Survivors

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BACKGROUND: Most women from all the differing age groups and sub-groups described how their faith gave them an inner strength that helped them to face cancer diagnosis and its related treatments and to continue after being discharged. The

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purpose of the study was to explore experiences and concerns of South Asian women breast cancer survivors post-treatment to determine their understanding of follow-up care. METHOD: A qualitative design utilizing focus group and individual interviews was conducted with twenty-four participants who were South Asian women breast cancer patients; were 3–60 months post breast cancer treatment; and were discharged from the British Columbia Cancer Agency. Interviews were done in the participant's preferred language of Punjabi, Hindi or English in order to capture rich stories. Themes were identified through constant comparison and analysis of incoming data. RESULTS: Women used a variety of word to describe their relationship with faith and in talking of God. For SA BCSs these various words described God who instilled faith into them, and gave them inner strength thereby helping them through the suffering and struggles of living, of which the cancer diagnosis and its treatment was a part of. Some women were vivid in their descriptions of their destiny in this life and were accepting because of their faith through which they could lessen their suffering in this present life and outcome of the cancer diagnosis. CONCLUSIONS: The results reported in this study highlight the importance of understanding the needs of all different ethnic groups of breast cancer survivors including the mainstream when discussing alternative or complementary treatments, especially in light of the social and cultural lens that will influence the patients' quality of life post-treatment. It is important to understand how different ethnic groups cope with the cancer diagnosis in light of their values and beliefs and understanding of disease. RESEARCH IMPLICATIONS: Research on the diversity of women going through cancer would be an asset for health care professionals, especially in light of the diversity among beliefs in regards to religious, cultural, and social beliefs. CLINICAL IMPLICATIONS: Clinical Implications: Health professionals conducting a cultural and social assessment of patient's beliefs on treatments, palliative care and disease would be beneficial for patients ACKNOWLEDGEMENT OF FUNDING: None.

P3-0175

The Attitude, Behavior Intention and Implementation About Spiritual Care of Medical Staffs in 31 Hospice Units in China

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BACKGROUND: To understand the spiritual care situation of 31 Hospice units and the needs of hospice staff about spiritual care. METHOD: 103 staffs was selected to give structure interview questionair in order to obtain the result. Data was analyzed by using SPSS 17.0 computer program. RESULTS: This result showed that medical staffs had positive attitude towards spiritual care. The affecting factors for the attitude of spiritual care were "evaluation of spiritual care," "the belief of provide spiritual care," and "the need for spiritual care of patients." The most important factor was "evaluation of spiritual care." CONCLUSIONS: The educational need for spiritual care, there were 66.7% medical staffs expressed that spiritual care related courses were needed. And the most demanded course was "the assessment of spiritual care needs of the patient" (87.4%). These research results bring some suggestions for the reference in the educational training program of spiritual care. RESEARCH IMPLICATIONS: Li Ka Shing Foundation Charity Program is leading the Hospice Program which is including 31 Hospice Units, so, it is necessary to know the result and situation of spiritual care that we provided and which direction we need to go and improve. CLINICAL IMPLICATIONS: According the result of this research, the needs of staffs of 31 Hospice Units, including Physicians\Nurses\Social workers, will be discovered. The future development will be established. ACKNOWLEDGEMENT OF FUNDING: Li ka Shing Foundation.

P3-0250

Death and the Dying Process in Cancer Patients: Meanings for Nursing

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BACKGROUND: Death before seen as natural fact, currently occupies another West position. Death represents trouble and hurts the human omnipotence, which attempts to dissociate this phenomenon of life banished her to the hospital. Nursing for being in constant contact with patient record and on the verge of death, as the oncological patient, resents the conviviality of loss and pain. Without listening space legitimized the nursing doesn't express feelings and emotions. METHOD: Study of analytical approach, through bibliographical revision of articles in Portuguese, with emphasis on nursing articles from 2000 to 2013 period. After analysis, the data found were organized by themes: death and the killings; Nursing: training assistance and teaching practice; feelings and meanings. RESULTS: Evidenced technical preparation and the inability of nursing in dealing with their

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own feelings, both on the part of academics and professionals, in addition to the use of defense mechanisms. Inadequate pipes were used in the preparation of the body after death, how to use pejorative language and make a joke. Established understanding of death as a process of passage, finitude and transcendence; and the presence of mixed feelings as relief, rest, suffering and pain. CONCLUSIONS: It is considered difficult for nursing experience of finitude situations, since it feels have little internal resource and space for expression of feelings evoked by the death. The unpreparedness has consequences for professionals: feeling of failure and withdrawal of the patient. Expand the knowledge tanatological will not allow the individual to understand the whole complexity of death, but allows better attitude and preparation to face her in a not so unrelated to him. RESEARCH IMPLICATIONS: The oncological patient care seriously sick, death and the dying process are key parts and components in Psycho-Oncology, being frequent experience of nursing various feelings and emotions. This information can subsidize the questioning of whether there is a better way of coping for these professionals. CLINICAL IMPLICATIONS: This information details psychological issues often ignored by doctors who treat diseases and not people, whether they are patients, family members, or health professionals. Emphasizes the importance of taking care of the pain suffered by nurses in the process of getting sick and dying from cancer patient. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0503

A Little Compassion May Go a Long Way: The Protective Role of Self-Compassion Among Individuals Facing Cancer

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BACKGROUND: Research is beginning to explore the role of self-compassion in the psychological adjustment of cancer patients. The current study investigated oncology and psycho-oncology patients in terms of psychological distress and the possible protective qualities of self-compassion. METHOD: Oncology (n = 113) and psycho-oncology (n = 35) patients attending the outpatient oncology clinic in a large Irish university hospital completed validated self-report measures of anxiety, depression, and self-compassion. RESULTS: As per previous research, the psycho-oncology sample tended to be younger and have greater disease severity, in terms of stage of cancer, when compared with the oncology sample. Of note depression and anxiety were significantly negatively correlated with self-compassion among participants from both groups. Additionally, participants within the clinical range of anxiety reported significantly lower levels of self-compassion than individuals with normal levels of anxiety. CONCLUSIONS: Building on recent research these findings suggest that there may be a potential role for self-compassion in the psychological wellbeing of individuals facing cancer. RESEARCH IMPLICATIONS: The potential for self-compassion to act as a buffer against distress, particularly with regard to anxiety, warrants further exploration. Similarly the potential of self-compassion interventions as a therapeutic approach for those referred to psycho-oncology would also warrant further investigation. CLINICAL IMPLICATIONS: The role for self-compassion as a potential buffer against psychological distress has implications for how we understand and support psychological well-being in oncology patients. As such the findings may indicate a role for self-compassion based interventions to all oncology patients with a view to building psychological resilience. ACKNOWLEDGEMENT OF FUNDING: None.

CULTURAL ISSUES

P3-0161

The Impact of Active Treatment Versus Watch and Wait on Psychological Wellbeing in Haematological Cancer Patients

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BACKGROUND: Haematological cancers are notable for their often intensive treatment that can have a significant impact on role functioning and psychological wellbeing. Less is known about the psychosocial needs and wellbeing of patients who are not actively treated but rather monitored via watch and wait. The time after diagnosis can be particularly challenging yet the process of adjustment to diagnosis has yet to be fully explored in haematological cancer patients across treatment modalities. METHOD: Haematological cancer patients were recruited from four major NHS hospitals in the UK. Participants were asked to complete a questionnaire regarding their unmet needs (SCNS SF-34, needs assessment tool) and psychological wellbeing (HADS, EORTC QLQ-C30, MiniMAC, BriefCOPE, Benefit Finding). Participants were all over the age of 18 and had received a diagnosis of haematological cancer within the last 3 months. 68 participants consented to take part in the study with 52% returning the questionnaire. 31% of participants were being monitored via

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watch and wait. RESULTS: Preliminary results indicate that there are a range of unmet needs that are relevant to haematological cancer patients with both psychological and physical needs emerging as unmet. Clinically significant levels of anxiety and depression are low in the sample yet there is a significant sub-set of patients who display sub-clinical levels of distress. In our next stage of data analysis, we are exploring the association between unmet needs and psychosocial outcomes in this patient group, and whether differences exist between the two treatment conditions. CONCLUSIONS: Findings are expected to highlight the differences in type of unmet need experienced by haematological cancer patients on watch and wait compared to those receiving active treatment in the period immediately after diagnosis. This work will further our understanding of the relationship between unmet need and psychological outcomes in newly diagnosed cancer patients and how patients in different treatment sub-groups adjust to their diagnosis over time. RESEARCH IMPLICATIONS: Little is known about the differences in the unmet needs of haematological cancer patients receiving different treatment regimes. This research aims to build a profile of needs in these two groups and to highlight the relationship between unmet needs and psychological adjustment. Further research will be required to explore these findings in wider cancer groups and to explore the most appropriate sources of support, and appropriate needs-informed interventions for these patients. CLINICAL IMPLICATIONS: This work aims to highlight the differences in psychological adjustment in patients who are monitored via watch and wait compared to those receiving active treatment. This has the potential to impact on the type and timing of support required by this patient group and may mean that different support services are more appropriate in meeting the needs of these patients. ACKNOWLEDGEMENT OF FUNDING: This study was part of a PhD project that was co-funded by the University of Chester and the Countess of Chester Hospital NHS Foundation Trust.

P3-0469

Cancer Illness Representations in an Indian Population

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BACKGROUND: Knowledge is limited regarding differences in causal attributions of cancer across cultures, especially in countries with lower literacy levels and significant differences in gender roles like India. The aim of this study was to assess the causal attribution of cancer, experiences with cancer, and cancer screening practices among resident Indians. Relationships between variables and sociodemographic differences were also explored. METHOD: The sample included 106 participants; resident Indians by birth in Kolkata, India. The majority were Hindu, middle-class, with at least 12 years of formal education and full-time employment. Female participants (n = 58) were significantly older than males (n = 43), average ages of 35 years and 29 years respectively. Participants provided demographics and completed the Illness Perception Questionnaire-Revised (IPQ-R), which included questions asking participants how strongly they agreed with 23 possible causes of cancer on a 5-point Likert scale (strongly disagree to strongly agree). Data was collected from participants at diverse locations to reduce biases. RESULTS: 76% of participants knew a cancer survivor; only 5% reported cancer screening. The most frequently endorsed symptoms of cancer included strength loss, pain, and weight loss. The most "important to me" cancer causes were smoking, pollution and heredity. There were no associations between education and IPQ subscales. Younger age was associated with higher Illness Coherence ($p < 0.001$). Males reported more Personal Control ($p = 0.03$), Illness Coherence ($p = 0.01$) and cancer caused by "overwork" ($p = 0.03$) than females. Knowing cancer survivors led to less attribution of cancer as a punishment by God ($p < 0.001$). CONCLUSIONS: Despite knowing individuals with cancer, relatively few Indians engage in cancer screening. Age and gender impact understanding of cancer with females and older adults feeling more puzzled or perplexed about cancer as opposed to male and younger participants who feel they understand the disease better. Males also feel more self-efficacious in their ability to influence the development of cancer or control cancer than females. The experience of knowing someone with cancer influences causal attributions and leads to fewer supernatural attributions of cancer cause, and perhaps less attribution of blame to the cancer patient for their illness. RESEARCH IMPLICATIONS: Since very few Indians seek cancer screening, despite recognizing possible causes of cancer and knowing individuals with cancer, future research should continue to identify barriers to receiving cancer screening services. The understanding of cancer risk factors and the benefits of screening practices should be assessed among this population and appropriate interventions designed and implemented. CLINICAL IMPLICATIONS: Even though cancer prevalence is rising, many Asian Indians are unsure of the causes and prognoses of the disease. Healthcare interventionists can help organize cancer awareness campaigns and dispel some of the misconceptions

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people have by tailoring them appropriately for non-American populations. ACKNOWLEDGEMENT OF FUNDING: Not applicable.

P3-0230

Empowering Latina Breast Cancer Survivors Through an English and Spanish Survivorship Education Intervention: Nueva Luz

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BACKGROUND: Latinos currently are the largest ethnic minority in the United States population. As the number of Latinos and breast cancer survivors continues to grow, the need to develop education programs that are culturally congruent and linguistically appropriate for non-English speaking and limited English proficient ethnic minorities is increasingly vital for this population. The purpose is to evaluate the effectiveness of an English/Spanish psychosocial education intervention to assist Latina breast cancer survivors transition into survivorship. METHOD: A two-group, prospective longitudinal randomized controlled trial was used for this pilot study. A qualitative approach was used to evaluate the educational intervention. Eight English and Spanish speaking Latina breast cancer survivors with stage I, II, or III breast cancer participated in a digitally-recorded interview to elicit information about the Nueva Luz program. The program evaluation focused on the content, format, cultural congruency and linguistic appropriateness. Also, which aspects of the program were most beneficial and which were least beneficial from the participant's perspective. RESULTS: Findings indicate that the Nueva Luz program was helpful in determining content modifications; participants had specific suggestions on information that maybe revised, added or omitted. Participants evaluated the delivery methods and the bilingual notebook with the printed education materials. Participants preferred the customized tailored approach, the combination of the face-to-face sessions along with the bilingual notebook and the opportunity to ask question. The printed materials helped reinforce verbal communication and to practice what was taught. The education format and content suited their needs and prompted them to make changes and change their outlook. CONCLUSIONS: Our pilot findings suggest that it is feasible and acceptable to conduct a psychosocial intervention with this underserved population. The participants reported feeling empowered by the knowledge gained, and to share what they learned with others (patients, sisters, daughters). The combination of written bilingual information with one-on-one customized tailored approach provided by a bilingual health care provider can be effective in helping Latina breast cancer survivor's transition successfully into survivorship. RESEARCH IMPLICATIONS: This study provides valuable findings into the educational needs of Latina breast cancer survivors and addresses some significant gaps in the literature. These pilot results provide beginning evidence of the value of a culturally congruent English/Spanish intervention. Future studies should focus on larger randomized ethnic populations. CLINICAL IMPLICATIONS: Findings inform the understanding of the cultural context in patient education, content and delivery of psychosocial interventions and the impact of a tailored English and Spanish education on the QOL of Latinas following primary breast cancer treatment. However, more intervention research is needed with Latina breast cancer survivors that consider contextual factors affecting survivorship outcomes and QOL. The findings may also have relevance for other ethnic minority cancer survivors. ACKNOWLEDGEMENT OF FUNDING: Supported by a research grant #K07CA106551-01A2 from the National Cancer Institute.

P3-0251

Patient and Clinician Perceptions of the Feasibility and Utility of Routine Unmet Needs Screening for Indigenous Australians With Cancer

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BACKGROUND: Indigenous Australians have poorer cancer outcomes than other Australians. Unmet needs assessment can help clinicians identify and manage patient concerns and are particularly useful for underserved populations. Despite this, few studies have evaluated the feasibility and acceptability of needs screening in routine care settings. The Supportive Care Needs Assessment Tool for Indigenous People (SCNAT-IP) assesses the unmet supportive care needs of Indigenous cancer patients. This study evaluates the clinical implementation of SCNAT-IP in routine care. METHOD: Four metropolitan/regional oncology clinics in three Australian States and territories participated. Participants included 10 clinical staff and 36 adult Indigenous cancer patients (M_{age} 54 years) with heterogeneous tumours. Patients and clini-

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cians completed brief purpose-designed questionnaires and interviews. RESULTS: Patients reported high ratings (means >8/10) for acceptability, helpfulness and timing items. Higher education, awaiting surgery and comorbidity were significantly associated with higher patient acceptability ($p < 0.05$). The majority (≥80%) of staff agreed that the SCNAT-IP was useful to clinical practice, should be used in routine care, and was acceptable to their patients. Patient and staff qualitative data suggests the SCNAT-IP improves patient-clinician communication, may detect issues not identified by current care protocols, and may be most appropriate early in the treatment trajectory. Qualitative data from staff identified areas for scale improvement. CONCLUSIONS: The results of this study provide empirical support for use of the SCNAT-IP in routine cancer care with Indigenous Australians. Strategies to promote the dissemination and uptake of the SCNAT-IP are currently underway. RESEARCH IMPLICATIONS: A large nationwide study using the SCNAT-IP to explore the unmet needs of Indigenous Australian cancer patients is underway. CLINICAL IMPLICATIONS: Routine use of the SCNAT-IP has the potential to improve cancer outcomes for Indigenous people with cancer. ACKNOWLEDGEMENT OF FUNDING: This study was supported by funding from the Lowitja Institute.

P3-0453

Supportive Care Needs of Women Living With Breast Cancer in Rural and Remote Areas of Scotland: Implications for Statutory and Voluntary Sector Services

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BACKGROUND: Studies investigating the supportive care needs of women with breast cancer have focussed on those living in urban areas. A systematic review concluded that people with breast cancer living in rural areas have distinct experiences and challenges (Bettencourt et al., 2007), although all studies were conducted in the USA. Our study aimed to identify the needs and concerns of women who had completed treatment for primary breast cancer living in remote and rural areas of Scotland. METHOD: A two phased mixed method study was undertaken. First, a self-complete postal survey was distributed to a purposive sample of 180 women living in remote and rural areas of Scotland identified through Breast Cancer Care's client database. Unmet supportive care needs were assessed using the short-form Supportive Care Needs Questionnaire (SCNS-SF34). Second, semi-structured telephone interviews were conducted with 9 women; within 5 years of diagnosis and reported greatest unmet needs. Interviews were conducted by two service users from Breast Cancer Care, who have personal experience of breast cancer. The study was led by academic partners at the University of Stirling. RESULTS: Forty-four (24%) women responded to the questionnaire survey. Participants mean age was 59 years (SD = 10.0) and just under half (47.7%) were within 5 years from cancer diagnosis. Overall, participants reported that the greatest level of unmet need related to the "health systems and information" and "psychological" domains (both 43.2%, $n = 19$) followed by "physical and daily living" (29.5%, $n = 13$), "patient care and support" (25.0%, $n = 11$), and "sexuality" (9.1, $n = 4$). During interviews, women identified a lack of appropriate information about their treatment as well as systemic problems such as long waits for diagnosis and difficulties travelling to appointments due to the distances involved. CONCLUSIONS: Geographical location, and specifically distance to and from their treatment centre, negatively impacted upon the supportive care received by women living in remote and rural areas of Scotland. Our study suggests that a "one-stop service" offered to women living in remote and rural areas may have potential to combine all aspects of treatment and thus minimise women's travelling time and disruption to home life. RESEARCH IMPLICATIONS: This research adds to the limited evidence around the unmet supportive care needs of women diagnosed with breast cancer living in remote and rural areas. Future comparative studies involving individuals living in both rural and urban areas are required to assess geographical differences in the experience of supportive care after cancer among women with breast cancer. CLINICAL IMPLICATIONS: This study suggests that the design of breast cancer services serving remote and rural areas should seize and maximise opportunities to combine treatment and psychosocial support services in order to minimise the impact of geographical distance on women's experience of living with cancer. Specifically, the development of "one-stop" services to provide psychosocial support should be considered. ACKNOWLEDGEMENT OF FUNDING: This project is supported by the Self Management IMPACT Fund for Scotland provided by the Scottish Government, administered by Health and Social Care Alliance Scotland.

P3-0640

Cancer and Pain Management: Debunking Myths in Latino Patients

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BACKGROUND: Pain is a sensitive topic among Latinos, due to fear of disease progression, treat-

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ment delays or pain medication addiction. Limited Spanish educational materials/programs on pain management are available. Culturally-relevant education on managing pain can empower patients to have an active voice in their care and learn how their cancer journey can be pain free. Purpose of this Spanish interactive education program was to educate patients/families on pain management and debunk cultural myths of cancer pain. METHOD: Cultural factors were considered developing the education intervention such as the significance of family or "familismo," the most specific value for Latinos. Ten Spanish pain classes were conducted by Advance Practice Nurse and Health Educator. Five interactive components were embedded to ensure patients understanding and learning. Education was provided on how to interpret/use pain scales, creating a pain diary, medication list, and medication safety, including CAM & non-therapeutic options for pain management. Including education on pain management, pain types, and dispelling myths/perceptions of cancer pain. Patients/Families received a 2 hours educational class, program evaluation and post 30 day follow-up. RESULTS: 81 patients/caregivers participated in the educational program. Program identified a distorted perception of pain amongst Latinos: (1) pain was not manageable (2) it's part of treatment process (3) a way that the body is getting rid of cancer. Some refused medication for fear of addiction. 50% patients did not communicate their pain issues to their providers, for fear of treatment delay. 90% stated that the class provided them with tools and resources to take an active role in their care and managing their pain. In post 30 day follow-up patients reported that their cancer pain was reduced by 50%. CONCLUSIONS: Power of education and knowledge was evident within a 2-hour class, these perceptions were quickly dispelled. Patients learned that they could go through their cancer journey pain free. In addition to the importance of learning the facts about pain, equally critical in our classes has been the role of culture and how to frame information within this context. With our Hispanic patients, they had an added bonus – an incredible support system from their families, who attend the education classes with them. We learned that in most families everyone has a role in taking care of the patient. RESEARCH IMPLICATIONS: Need for more research in the area of pain management amongst latinos and their perceptions on cancer pain. CLINICAL IMPLICATIONS: Both the medical community and patients need to do understand more about pain and pain management strategies in order to attain better health outcomes. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0305

To Know or Not to Know That You Have Cancer: "The Psychiatric Symptom Levels of Turkish Cancer Patients According to Their Knowledge of the Cancer Diagnosis"

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BACKGROUND: Although many important developments have occurred in the area of the treatment of cancer, it remains the most fear provoking illness of this period in history. In Turkey, most of the relatives of patient prefer that the patient remains unaware of his/her diagnosis, and ask that doctor keep the diagnosis a secret. This study was carried out with the aim of analyzing psychiatric symptom levels of cancer patients, according to their knowledge of diagnosis. METHOD: This study took place in the Medical Oncology Unit of, Istanbul Medipol Mega University Hospital, between the 1st of November 2013 and the 1st of April 2014. One hundred eight cancer patients were included in this study. A survey was used to collect data on the socio-demographic details and illness symptoms of the patients, while a Short Symptom Inventory was used to identify their psychiatric symptoms. Data were analyzed in the statistical program SPSS Version 18.0. The Independent *t*-test and ANOVA variance were used for analysis. RESULTS: 42.6% of the patients were aware of their diagnosis, while 24.1% of them were partially aware and 33.3% of them were unaware of their diagnosis. Psychiatric symptom, were specifically higher in those patients who were *unaware of their diagnosis*, with specifically higher scores in depressive and anxiety disorder symptoms. Those who were *partially aware of their diagnosis*, on the other hand, had lower psychiatric symptom scores in comparison to those patients who knew and those who didn't know of their diagnosis. As for those who were *aware of their diagnosis*, they tended to have higher scores in sensitivity, phobic anxiety, hostility symptoms. CONCLUSIONS: Our study concludes that patients who are unaware of their diagnosis show more psychiatric symptoms; that knowledge of the cancer diagnosis is higher among those patients who are diagnosed with lung cancer, who are female, and who are older in age. Furthermore, benefits to cancer patients of knowing or not knowing about their diagnosis can vary from patient to patient. We are of the opinion that once the point of patient wanting to know or not to know about his/her diagnosis is identified, and transmitted in an appropriate fashion, along with offering psychotherapeutic approaches and building psychosocial support systems. RESEARCH IMPLICATIONS: xxxx. ACKNOWLEDGEMENT OF FUNDING: None.

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P3-0439

A Preliminary Survey of Mental Health Users' Readiness and Preferences for Mental Health Treatment in a Cancer Support Service

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BACKGROUND: Prevalence rates for depression and anxiety symptoms in the cancer population are approximately 38% (Mitchell et al., 2011) and 34% (Brintzenhofe-Szoc, Levin, Li et al., 2009) respectively. However, distress levels do not necessarily translate into help-seeking behaviour (Baker-Glenn et al., 2011); and Chinese patients may have less readiness to seek help due to certain cultural beliefs (Fielding & Chan, 2000). This study sought to examine patients' readiness for mental health treatment and their treatment preferences. METHOD: Thirty-four participants were recruited from 2 psychosocial cancer support centres in Hong Kong. These participants had enrolled in a mental health education talk and were invited to complete a survey after the talk. Information regarding age, gender, service user type and treatment status were obtained. The survey included questions regarding why they enrolled for the talk, who they would most like to receive counselling from, previous counselling and medication histories, any current counselling, whether they wanted further counselling after hearing the talk, and their preferences on the service format. RESULTS: Respondents were predominantly female (85%), patients (74%), those in recovery phase (53%) and aged 51–60% (38%). Reasons for enrolling in the talk included gaining knowledge about mental health (77%), wanting to know whether their symptoms were normal (58%); and 32% thought they required counselling. Treatment preferences included seeing a clinical psychologist (65%), social worker (45%), receiving support from a cancer survivor (42%) and joining a support group (32%). 74% of respondents indicated that they "probably" or "definitely" needed counselling after receiving the talk. A slight majority preferred individual counselling format and most did not have current or past counselling. CONCLUSIONS: Most respondents enrolled for the talk to gain knowledge about mental health and to assess whether their situation was normal. This may suggest a need for more psycho-educational talks for cancer patients, with the added function of serving as a non-confronting, first point of engagement for further intervention; as most respondents did not have previous or concurrent professional help and wished to seek further professional assistance after attending the talk. There was a similar preference for both individual and group formats and the majority of respondents wished to seek support from a clinical psychologist. RESEARCH IMPLICATIONS: The small and self-selected sample was a limitation of the study. The observed large proportion preferring a clinical psychologist suggests that respondents tended towards high distress, and further research is suggested to explore service preferences in the general cancer population. Given past research suggesting a similar prevalence of depression in both genders, further studies could examine service preferences in male patients. Service needs and preferences of carers could also be further explored. CLINICAL IMPLICATIONS: Providing educational opportunities for patients to be oriented to mental health issues in cancer is important, particularly for Chinese patients who may not otherwise have the inclination to seek help. Efforts can be taken to further make these opportunities easily accessible, non-confronting, and as a standard part of the screening and triaging process, so that those who require further treatment can be identified and receive professional intervention in a timely manner. ACKNOWLEDGEMENT OF FUNDING: Hong Kong Cancer Fund.

P3-0472

"I Thought it Was the End, but it isn't": Patients' Experiences of Cancer in India

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BACKGROUND: Beliefs and attitudes towards an illness are closely related to how one seeks care, responds to the illness, coping styles and levels of psychological distress. The current study, the first of its kind in India, explores the beliefs and experiences of cancer among Indian patients. METHOD: Indian patients (n = 11) were recruited into the study. The time since diagnosis varied from 3 months (n = 3), 6 months (n = 3), 1 year (n = 2) and more than 1 year (n = 3). Patients participated in semi-structured interviews exploring their reactions to a cancer diagnosis, what their beliefs and attitudes were towards cancer, their experiences of cancer, and how they were coping with the illness. The interviews were transcribed and analyzed using Interpretative Phenomenological Analysis. RESULTS: Seven themes emerged from the analyses, (1) delay in seeking diagnosis (fear, lack of awareness, regret), (2) reactions to the cancer diagnosis (disbelief, fear, confusion, anger and regret), (3) conceptualization of cancer (through disease descriptions, experienced symptoms, attributing a religious cause but also believing the cancer to be a random disease which confused them), (4) worries (family responsibilities, side-effects affect quality of life, unfinished business), (5) coping (positive rein-

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terpretation, acceptance, social support, information-seeking, resilience, religious coping, physician support), and (6) attitudes towards cancer (maintaining a fighting spirit, being happy, prognosis gives strength, perceptions of finality are dispelled). CONCLUSIONS: Indian patients' delay in seeking diagnosis due to fear and lack of awareness that subsequently led to feelings of regret is an important finding. Further, the findings indicate that patients, once diagnosed, continued to rely on their direct experiences of cancer as a primary source of information/conceptualization about the illness. Although all the patients in this study reported having negative reactions to their diagnosis and worries, they used a range of coping styles and kept a positive attitude towards cancer. This suggests that in spite of their negative perceptions of cancer, patients were able to reframe the disease positively. RESEARCH IMPLICATIONS: Key findings in this study were that patients reported lack of awareness of cancer and conceptualized the illness after being diagnosed, highlighting a gap in current cancer awareness programmes in India. It might be useful to explore the effectiveness of including patient accounts of cancer in these programmes. Further, longitudinal studies are needed to understand the underlying mechanisms of the shift from having negative reactions to the diagnosis to maintaining a positive attitude towards cancer. CLINICAL IMPLICATIONS: A key implication is that patients require additional psychological support to deal with their regret in delaying seeking diagnosis and with their cancer-related worries. In light of patients describing cancer as a disease that confused them and that they continued to comprehend cancer mainly through their personal experiences of the illness, it may be useful to provide patients with readily accessible cancer-related information at the hospital (e.g., pamphlets, kiosks). ACKNOWLEDGEMENT OF FUNDING: None.

P3-0478

Teaching Communication Skills for Community Nurses. How to Motivate the Roma Population to Get Involved in Cancer Prevention and Early Detection?

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BACKGROUND: Some studies targeting the health conditions of the segregated population groups (most of them are Roma) show that they have a 4.3 times higher rate of cancer incidence, and illness occurs in this group at a younger age than in the general population. Life expectancy of this group on the average is 10 years shorter than that of the general population. The goal of the project was to involve underserve, poor Roma people in a screening program. METHOD: Special 20 hours communication training programs also targeting cultural, psychosocial and economical problems of Roma population, were organized for 64 community nurses who usually deal with members of the Roma population as part of their everyday routine. 3 districts of Budapest and in 6 counties of Hungary were selected, with 382,100 inhabitants; and an estimated 5% of Roma population. They were given specialized written and verbal information on screening programs, and a personalized help. The task of the nurses was double-fold: organizing screenings and persuading Romas to take part. RESULTS: 1368 persons were face-to-face involved in the program, 632 of them were screened (83% female, 17% male, 84% of them completed maximum their primary school, and 42% do not have even a bathroom or piped water in their houses). 46% of them were screened first time in their lives. The program has helped the segregated Romas to change their fatalistic attitude toward life threatening illnesses. The nurses learned new communication methods and skills through better understanding of the complex problems of Roma people. CONCLUSIONS: Helping Roma people is not a popular task in Hungary. It can't be effective without understanding their special situation and their culture. Community nurses need special help in their everyday work with Roma people. RESEARCH IMPLICATIONS: There are only few research on the attitude of the Roma population on their health status in Hungary. These data are helpful for the further research targeting the understanding of the causes behind the poor health status of Roma population. CLINICAL IMPLICATIONS: The improvement of the communication of the health care providers helps the poorest population to value their health and to understand the importance of early detection of cancer and other chronic diseases. ACKNOWLEDGEMENT OF FUNDING: The project was funded by the Brsitol-Myers Squibb Foundation.

P3-0059

Accessibility of Culturally Sensitive Social Work for Bedouin Cancer Patients in the Negev, Israel

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BACKGROUND: The Soroka Medical Center is a university hospital providing medical services to the entire south of Israel. This population includes approximately 200,000 Bedouins. Each year, Bedouins make up approximately 6% of new patients in Soroka's Oncology Clinic (about 70 new patients annually). The Bedouin population in the Negev has its own unique characteristics which affect the ways in which Bedouin cancer patients deal with their illness. METHOD: In order to improve the quality of the service as well as cultural and linguistic accessibility for patients and their families. The purpose of this paper is to demonstrate a culturally sensitive social work approach when working with Bedouin cancer patients, as well as to show the effects of this approach on the patients, on the professional staff and on the social worker herself. Furthermore, this paper will describe the service offered to Bedouin patients in the Oncology Clinic: a relationship with a social worker, who is a member of the Bedouin community has made social services more accessible. RESULTS: The results of this paper show that the patients and their families are satisfied with the services and trust the social worker to provide emotional support. “Since the beginning of this crazy journey with the disease, this is the first time I’ve smiled.”; “You understand the place where I’m coming from.”Furthermore the results of this paper show that a social worker from the Bedouin community can help other members of the professional staff with culturally and emotionally sensitive dilemmas that arise during their work with Bedouin patients, thereby improving the services provided to these patients. CONCLUSIONS: The new service offered to the Bedouin community during the past two and a half years helped facilitate understanding of the unique characteristics of working with cancer patients in this community. These characteristics include recognition of social stigma, contact with sources of support within the family and community, collaboration with unique medical services, and overcoming technical difficulties that arise from physical distance and different living arrangements. In order to improve the quality of service in accordance with these characteristics, the Oncology Clinic is undertaking a process of planning services especially tailored to the Bedouin community. RESEARCH IMPLICATIONS: From the perspective of the social worker herself, her work results in insights that combine, on the one hand, a view of the cancer patient who is experiencing a life-threatening illness and his reactions to that illness as an individual, and on the other, an observation of the patient’s unique cultural characteristics as a member of the Bedouin community, as well as the interaction between these two facets. CLINICAL IMPLICATIONS: The new service that has been offered to Bedouin patients over the past two and a half years has improved understanding of the unique characteristics of Bedouin cancer patients. These characteristics include relationships in the family and the community, religious faith, unique complimentary medicine, and technical difficulties including physical distance and alternative types of living arrangements. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0309

Influence of Age and Socioeconomic Characteristics on Depressive Symptoms of Latino Cancer Patients

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BACKGROUND: Ethnic minorities constitute the fastest growing segment of the elderly population. Elderly persons are the highest users of health care. Lifetime rates of major depression are higher for older Latinos than other ethnic and racial groups. The purpose of this study is to characterize differences in the socioeconomic profiles, and their effect on the depression levels, of older Latino cancer patients compared to younger Latinos. METHOD: This is a descriptive cross-sectional nested cohort study with 1085 low-income Latino cancer patients from the Portal Cancer Project. Patients were recruited at 10 cancer clinics in underserved areas of New York City. The sample was comprised of 294 older Latino cancer patients and 791 younger Latino cancer patients. Older age was defined as being 65 years old or older. Participants completed a sociodemographic questionnaire and standardized scales, such as the PHQ-9, in their preferred language (English, Spanish). The PHQ-9 was used to measure depressive symptoms. RESULTS: Older Latinos had lower education, unemployment, English fluency, and uninsurance levels, and higher income, than younger Latinos. In univariate analysis, older patients had lower depression symptoms. When employment status and income were entered into the regression model, the relationship between age and depression was no longer significant. Employment status (Retired vs. Other) and income mediated the effect between age and depression ($F(2, 410) = 4.31$, $p < 0.01$; $F(2, 408) = 5.54$, $p < 0.01$). CONCLUSIONS: This study revealed that older patients had lower rates of depression, consistent with other studies. However, this study documents a possible explanatory variable for this difference. In this study, older Latinos were more likely to be insured, retired and to have higher incomes; and to have lower levels of depression than younger Latinos. Higher income and being retired partially mediated the relationship between age and depression. RESEARCH IMPLICATIONS: There is a need to clarify and address the relationship between poverty, financial stability (having enough economic resources to meet daily demands), and depression and other mental health outcomes in low-income populations. It is also important to understand the influence of insurance status and economic instability on well-known determinants of poor adjustment in elderly populations, such as frailty and social isolation. CLINICAL IMPLICATIONS: Given the growing

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proportion of older Latinos diagnosed with cancer and the need to screen for emotional distress in cancer patients, it is clinically important to take into consideration specific characteristics of low-income minority populations, such as, economic, language and cultural factors, which can have a risk or protective effect on the adjustment of older Latino cancer patients. ACKNOWLEDGEMENT OF FUNDING: Funding Sources: New York Community Trust; NCI Support: U54-13778804-S2 & T32CA00946.

P3-0310

Spirituality in Latino Cancer Patients: A Systematic Review of Spirituality, Religiosity and Existential Factors in Latino Cancer Patients

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BACKGROUND: Spirituality and religious beliefs play a significant role in Latinos' cancer experience because they are central to most Latinos' health beliefs and play a vital role in their ability to cope with cancer. To inform future practice, a comprehensive systematic literature review was conducted to examine spirituality, religiosity, and existential factors among Hispanics/Latinos coping with cancer, as well as to identify gaps in knowledge. METHOD: A structured search of three broad concept categories- Latino or Hispanic ethnicity, cancer and spiritual/religious/existential- was conducted in PubMed, PsycINFO, Cochrane, EMBASE, CINAHL, Web of Knowledge, Redalyc, PEPSIC, Latin Index, and grey literature sources to identify quantitative and qualitative studies with Latino samples. The inclusion criteria included cancer patient sample, original data, Latino/Hispanic group, spirituality, religious or existential concepts, in Spanish or English, available in full text and analysis for the Latino group. RESULTS: 1961 articles were retrieved. A final sample of 46 studies met the inclusion criteria. Six were mixed, 25 were quantitative and 15 qualitative. The majority of the quantitative studies were cross-sectional correlational (23) and most frequently included breast cancer samples (14). Quantitative articles focused more frequently on religious themes (16), and spiritual themes (13), than on existential themes (3). The scale most frequently used in the quantitative studies was the FACIT-Sp (6). Qualitative studies used interview (8) and focus group (7) methodology; and the most frequent themes or outcomes included in the studies were spiritual (9), followed by religious (5). CONCLUSIONS: More articles focused on spiritual themes (9), than on religious themes (5), six on coping (either religious or spiritual); and only one qualitative study focused on existential themes (existential-based social support). Little attention has been focused on this area, despite the significant role of spirituality and religiously in the lives of Latinos facing cancer. The results of the present review suggest that spirituality and religiosity play an important role in Latinos' coping whereas existential themes were less prevalent among this patient population. RESEARCH IMPLICATIONS: Results indicate that there are many descriptive and a few correlational studies examining the importance of religiosity and spirituality. Future studies need to examine the role of spiritually and religiously-based interventions to improve cancer care and coping among this population. CLINICAL IMPLICATIONS: Given religion and spirituality's central role in many Latinos' adjustment to cancer, it is important for providers to consider this in Latino patients' overall care. More studies should examine existential themes and coping in this population and developing and implementing clinical interventions that are religiously and spirituality -based. ACKNOWLEDGEMENT OF FUNDING: Funding Source: NCI Support: T32CA00946.

P3-0600

Psychooncology Development in European Countries (Theoretical Background – Critical Analysis)

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BACKGROUND: The Psychooncology which the precursor is J.C. Holland developed unequally in different countries. In the countries of Western Europe psychooncology development is similar to the American. In Poland which is located in the center of Europe psychooncology which was founded in 1994 is constantly developing field of medicine. Quite a different situation exists in some countries of the former Eastern bloc the psychooncology in our sense of the term is still under construction. METHOD: Critical analysis of the current situation with regards to psychooncology development in West and Central Europe and selected countries of the former Eastern Bloc: Belarus, Kazakhstan, Lithuania and Ukraine. The analysis was selected research from data base of Medline. The analysis includes data collected based on survey forms filled in by medical staff representing the selected countries of the former Eastern Bloc and data on psycho-oncology development provided by medical employees from the specific countries. 120 medical employees were asked to participate in the survey. RESULTS: A profession most frequently declared by the respondents was a doctor (from 34.8% in Belarus, up to 63.6% in Ukraine) or a psychologist (from 4% in Kazakhstan to 56.5% in Belarus). The age of the respondents was between 21 and 65 (the average being 40.37). For

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comparisons of variables of a discontinuous (categorical) was used χ^2 test, and a continuous variables (age), One-way analysis of variance (ANOVA) with Tukey *post hoc* tests. CONCLUSIONS: According to the data provided by the medical staff psycho-oncology in Belarus Ukraine and Kazakhstan is not a separate branch of medicine. There is no undergraduate and post-graduate education in this field. Until now, there has not arisen scientific societies and research are conducted. The main objectives, tasks and principles of psycho-oncology in the selected countries of the former Eastern Bloc are similar to those identified in Poland. Currently, we can see a huge disparity between the level of development of psychoonology. Dominating the country among minorities is Lithuania. RESEARCH IMPLICATIONS: For researchers addressing these extremely important issues. Such analysis should be an inspiration for researchers to conduct detailed research on the development of psycho-oncology in different countries, in order to reduce the disparities of access to knowledge and taking care of terminally ill people in all corners of the globe. CLINICAL IMPLICATIONS: Important for clinicians are the main assumptions of conduct psychoonclogy in individual countries, practical forms of the implementation the psychooncology, plans for the near future for the development of this field of medicine, research, and difficulties in the -range development of psychooncology. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0166

Chinese American Cancer Patients: Use of Traditional Herbal Chinese Medicine and Communication With Providers About Such Use

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BACKGROUND: Chinese cancer patients represent an understudied, underserved group with a high rate of varied cancers. Chinese cancer patients are likely to use Traditional Chinese Medicine (TCM) herbal remedies along with chemotherapy, and are at high risk for herb-drug interactions. Only one-third of U.S. adults who use herbs report such use to their physicians, indicating a dangerous lack of communication. This study explores herb use and communication with providers about such use among Chinese cancer patients. METHOD: Patients at a community oncology practice, and patients attending cancer support groups held by a Chinese community-based organization, were approached for participation. Patients of Chinese descent, ages 18–84, and who were currently/recently treated for any type of cancer, were eligible. Multilingual (English, Mandarin, and Cantonese-speaking) research assistants verbally consented patients. A survey, with items including demographic information, use of Chinese herbs, whether herbs were used concurrently with conventional anticancer drugs, and whether herb use was discussed with providers, was administered. Descriptive statistics were used to describe concurrent use of herbs/anticancer drugs and communication with providers about such use. RESULTS: 41 patients participated. 61% were female, 54% had resided in the U.S. for >20 years, 39% had a high school education or beyond, and 93% spoke a Chinese dialect as their preferred language. 32 (78%) reported using herbs since being diagnosed with cancer. Among herb users, 15 (47%) reported concurrently using herbs/anticancer drugs. Among these concurrent users, only 3 ever discussed herbs with a provider, 1 of whom was advised to discontinue use, but did not listen to this advice. Reported herbs included several with potential negative interactions with anticancer drugs, including Asian ginseng, *Dong quai*, and cordyceps. CONCLUSIONS: This study highlights the common practice of taking Chinese herbs while undergoing conventional cancer treatment, the potential for dangerous herb-drug interactions, and the poor patient-provider communication around this topic. The existing literature has described the desire among Chinese immigrant patients for their providers to know more about TCM and viewed providers' questions, knowledge, and non-judgment of traditional practices as key to effective communication. Future studies should develop culturally tailored interventions to address both patient and provider factors to improve communication related to this topic. Such work will have the potential to change the paradigm of care for this understudied population. RESEARCH IMPLICATIONS: The current study has implications for further research exploring the concurrent use of Chinese herbs/anticancer drugs, and patient-provider communication surrounding such use, in a larger sample. Future intervention research targeting patient-provider communication may also include intervention dissemination, follow-up studies to examine long-term impact of the intervention, studies of the intervention targeting Chinese patients with specific cancer types, and adaptation of the intervention for use among other minority populations. CLINICAL IMPLICATIONS: Previous authors have described 3 patient communication barriers on this topic: physicians' opposition/indifference to use of non-physician prescribed therapies, physicians' focus on scientific evidence, and patients' expectation of a negative physician response. The current study, should it lead to successful intervention studies to improve patient-provider communication, will have the potential to effect practice changes in the way providers discuss Chinese herbs with their patients and

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in patient behavior, leading to improved cancer outcomes. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0156

Body Representations of Mexican Women, When They Performing Screening, Treatment, and Rehabilitation for Breast Cancer. Qualitative Study

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BACKGROUND: Destigmatizing cancer should imply some women's analysis of experience and know how they represent their body, both subjectivity and social imaginary, since the representation of breast cancer affects women's quality of life. The objective on this research was to analyze the representation of the body with cancer in women when performing screen studies, those who are being treated for breast cancer and those seeking breast reconstructions. METHOD: A quality study was designed through a free listing techniques (Bogartty & Halguin, 2010), to analyze the social representation of "body with cancer." A convenience sample was of 30 thirty women diagnosed with breast cancer, 28 under treatment and 21 in breast reconstruction process, underserved in public health institutions of Tepic, Nayarit and Guadalajara, Jalisco, México. The frequency and percentage of commonality "body with cancer," in the elicited terms will be presented. RESULTS: On the screening group was found as the central core of representation: death, pain and sadness; as close elements are fear, suffering, despair and compassion, also concern for their families and treatments derived from the disease. At peripheral level it is understood as a curable disease. In women in treatment at the core are pain and death. Body experiences fatigue and wear; it appears uncertainty, but full compelled to have strength they fight for recovery but, inside them there are courage and desperate for economic problems. During breast reconstruction, continues its centrally imaginary as death, sadness, pain, mutilation and fear. CONCLUSIONS: It prevailed representing in social imaginary, corporeality as death, sadness and pain when cancer is suffered. When untreated what was distant, like fear, becomes the center. Cancer is understood as a curable disease that needs courage and resignation as the will of fighting for life. Fear persists even in rehabilitation phase. The terms involving bodily changes and symptoms resulting from aversive treatments, appeared when women went under treatment. The feelings of mutilation at the body and be incomplete, only appear at the rehabilitation phase, when recognized be depressed with anguish of dying. RESEARCH IMPLICATIONS: These results support associations of stigma about breast cancer in Mexican women; they would avoid studies of early screening because diagnoses could be associated to death, sorrow and pain; concepts considered in our culture as negative representations. Health education should look for new way to deconstruct these negative representations in order to acquire new habits. CLINICAL IMPLICATIONS: It should work even more, considering these prevailing negative body representations. Despite interventions with fighting attitude, emotional distress persists because the symbolism of cancer. Psycho-oncology interventions should consider social representations of death fear, sadness and pain in treatment of breast cancer in women, keeping in mind the body image derived of cultural interaction and affecting psychosocial aspects of women having or not having breast cancer. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0395

Meanings and Beliefs About Cancer: A Study of University Health Care Students

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BACKGROUND: Within the cultural perspective cancer is one of the diseases that, throughout its history, has been associated with penalty or penalty, which makes people experience this disease process. In the routine of health care we realize that this symbolic dimension, what they think and how they feel about the disease will determine how they will treat patients and their families and especially how they will act professionally in cases of prevention and early detection of cancer. METHOD: This study is part of the student's practice in Psychology Graduation at Universidade Nove de Julho, São Paulo Brazil. The aim of this study was to understand what think the students in the area of health, future caregivers of patients with cancer, about the disease and the diagnosis of cancer. Students of medicine, dentistry, nursing, psychology and nutrition were were invited to complete a questionnaire with 12 questions about the social representation of cancer, include "What color is cancer? RESULTS: The results are troubling because even though we are in the XXI century and despite all efforts to demystify cancer and its treatments future caregivers still have concepts with common guiding their thoughts and actions. The results showed that the most part of students, as defense mechanism, use technical concepts to describe cancer, but others answers revealed that the concept of death and suf-

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fering is present. When assign a color to cancer dominated by dark colors demonstrating that for them cancer is still considered a painful negative and obscure disease. CONCLUSIONS: This study conclude that it is very important to include in the curriculum of graduate courses in health science courses and programs that may help future professionals to change their erroneous representations about cancer because only then we will contribute to improve the prevention and comunication between professional, patient and family. RESEARCH IMPLICATIONS: The study is important to make it possible to promote awareness actions and re-signification of representations of students. Beliefs and meanings that professionals about the cancer will determine the professional attitude towards preventive actions and early detection of disease. CLINICAL IMPLICATIONS: The study is simple but showed the importance of deploying the intervention of Oncology and information of all courses for health professionals in Universities programs. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0561

The Views on Euthanasia of Polish and English Speaking Medical Students

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BACKGROUND: Euthanasia is often discussed during undergraduate palliative care teaching. METHOD: A questionnaire survey was distributed to all medical students who completed 1 week palliative care classes at Poznan University of Medical Sciences. A total of 665 respondents: 482 (72.5%) Polish and 183 English speaking (27.5%) students completed the questionnaire. This anonymous survey comprised demographic data (age, gender, religion, size of the permanent place of living), knowledge of definitions of palliative care, euthanasia and physician assisted suicide (PAS). Several questions concerned attitudes toward euthanasia legalization, hypothetical euthanasia practice by students and the choice of euthanasia, PAS or natural death in case of students' incurable disease. RESULTS: Majority of respondents in both groups new palliative care and euthanasia definitions with no difference between Polish and English speaking students. No differences were found between students' groups regarding the positive impact of a wide access to palliative care on decreasing patients' euthanasia requests. However, differences were found regarding euthanasia legalization, hypothetical euthanasia practice on patients and students themselves in case of incurable disease as more English speaking students were euthanasia proponents. CONCLUSIONS: Differences between Polish and foreign students regarding attitudes toward euthanasia exist as the former were in majority of catholic faith. Cultural differences may play a role in the observed differences between respondents' answers. RESEARCH IMPLICATIONS: This study is a first report on the different attitude of Polish and English speaking medical students from different parts of the world. It adds new information on possible reasons for different answers regarding attitudes toward euthanasia between medical students from different cultural background. CLINICAL IMPLICATIONS: This study may be utilized by further research exploring differences in atitudes toward euthanasia between medical students from Poland, Europe, North America and Asia. ACKNOWLEDGEMENT OF FUNDING: The study has no funding.

P3-0623

Understanding the Unmet Needs of Minority Francophone Cancer Survivors in Canada

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BACKGROUND: As a bilingual country, Canada has to serve its official language population regardless of residence. The purpose of the study was to validate in French, two English instruments, the Survivors' Unmet Needs Survey (SUNS) and the Support Persons' Unmet Needs Survey (SPUNS), already developed, validated and tested in Canada in English and to understand the unmet needs of Francophone cancer survivors and their support persons who live in primarily English speaking provinces in Canada. METHOD: Following the surveys' translation, an ethnographic study using telephone interviews with Francophone cancer survivors and support persons living outside of Quebec was designed to determine whether the newly translated French version of the SUNS and SPUNS captured the unmet needs of this population and what gaps were found for minority Francophone cancer survivors and support persons. In addition in person interviews took place in order to understand the context and culture of survivorship and the unmet needs of minority Francophone cancer survivors and their support persons. Five telephone surveys and twelve in person interviews took place in two provinces. RESULTS: Questions raised over the French translation contributed to clarify the English version. One item was felt missing. Most of

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the needs were met as cancer care was always seen as more important than the language in which it was delivered. Access to information in French at diagnostic was found critical as people feel vulnerable and do not know where to turn. One unmet need that participants highlighted related to the inability to genuinely communicate and to feel heard in French when in crisis, pain, or stress. The absence of support group in French was also identified as an obstacle. CONCLUSIONS: Based on the ethnographic study results, some gaps were identified and suggestions for improvement received. The SUNS and SPUNS were adapted to capture language preference for care. This study led to the validation in French of the Survivors' Unmet Needs Survey (SUNS) and the Support Persons' Unmet Needs Survey (SPUNS). RESEARCH IMPLICATIONS: This study emphasizes the impact of language and culture in assessing unmet needs. The Survivors' Unmet Needs Survey (SUNS) and the Support Persons' Unmet Needs Survey (SPUNS), already developed, validated and tested in the Canadian setting in English were also validated in French in Canada. CLINICAL IMPLICATIONS: Language congruence in cancer care is an integral part of cancer care quality and satisfaction. The Survivors' Unmet Needs Survey (SUNS) and the Support Persons' Unmet Needs Survey (SPUNS), can now be used in English and French. ACKNOWLEDGEMENT OF FUNDING: This study was funded by the Canadian Institutes for Heath Research.

P3-0297

The Peculiarities of Perception of Cancer Among Oncology Patients, People Related to Them and Among People Unrelated to Oncology

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BACKGROUND: Cancer patients' life quality largely depends on their attitude towards their disease. The patients' perception, in its turn, is significantly affected by the attitude formed during the premorbidal period, and the attitude of the patients' primary environment towards cancer and the patient himself, which, in Armenia, is mainly based on myths and fear rather than scientific facts. Therefore, this research examines the peculiarities of attitude towards cancer among groups with various relations to the disease. METHOD: Research methods: Survey, Associations and Testing. Methodologies: Survey developed specifically for this research and aimed at revelation of attitudes towards cancer and the method of continual free associations was used with all research groups. The group of cancer patients was additionally tested with SF-36 Health Survey and Behterev Institute Personality Test aimed at revealing the types of attitudes towards diseases. The survey sample is divided into 5 groups: cancer patients, cancer patients' relatives, oncologists, junior medical staff and the general public: individuals with no relation with cancer. The first 4 groups include 20 participants and the fifth group includes 60. RESULTS: Cancer patients' attitude is due to the uncertain nature of the disease and the fact that patients are provided with vague and incomplete information about their condition.

The attitude of cancer patients' relatives is explained by their concern about the patient's life.

The intensive, close interaction with cancer patients among junior medical staff is based on compassion and emotional support.

The attitude of oncologists is based on "scientific" knowledge of cancer and the need to conceptualize their work.

The attitude towards cancer among individuals unrelated to cancer is based on fatalistic conceptions of the disease.

CONCLUSIONS: Summing up the research in 5 groups and combining the results, we find that peculiarities of attitude towards cancer significantly depend on the type of individual's relation with cancer.

- Cancer patients' attitude towards cancer is ambiguous and contradictory.
- Cancer patients' relatives consider the presence of the disease as unfair and horrific.
- The attitude of junior medical staff bears negative emotional burden.
- Oncologists demonstrate rational, realistic approach towards cancer. Therewith, their attitude is devoid of emotional elements.
- The attitude towards cancer among individuals unrelated to cancer has 2 important features: fear and avoidance.

RESEARCH IMPLICATIONS: This research creates an opportunity to reveal the real attitude of Armenians towards cancer and the reasoning behind this attitude. It also provides an insight into the ways attitude towards cancer is impacted by the type of one's relation with the disease. Psycho-oncology specialists can refer to this research for information on the peculiarities of patients' attitude towards cancer in cases of concealment of the disease from the patient and lack of relevant psychological assistance. CLINICAL IMPLICATIONS: This research can be useful for cancer patients, their relatives, as well as the medical staff for organization of complex psychotherapeutic work, which will take into account the peculiarities of perception of cancer among above mentioned groups as well as their reciprocity. This work can also have an educational role among cancer patients, their relatives and medical staff, thus contributing to mutual recognition and creation of environment of comfort. ACKNOWLEDGEMENT OF FUNDING: None.

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QUALITY OF LIFE

P3-0578

Loneliness Experienced During Hospital Isolation Due to a Bone Marrow Transplant: Immunological and QOL Outcomes

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BACKGROUND: Research indicates that loneliness is adversely associated with health and quality of life (QOL) in oncology populations. An interesting link exists between the immunological effects of loneliness and bone marrow transplant (BMT) recovery. Loneliness distress amplifies cortisol production, which increases circulating neutrophils and decreases lymphocyte counts (Cole, 2008). Since higher neutrophil to lymphocyte ratios (N/L) are associated with mortality in oncology patients (Chua et al., 2011), hospital loneliness may have adverse effects on BMT recovery. METHOD: Oncology/Hematology patients were identified through Mayo Clinic of Jacksonville Transplant Log and mailed a survey ±30 days of the participants' 6-month post-transplant. Forty-one participants ($M_{\text{age}} = 60$, SD = 10.86; 55.3% female; 84.2% Caucasian), of which 87% completed an autologous transplant, returned a finished survey. The Functional Assessment of Cancer Therapies-BMT (Cronbach's $\alpha = 0.86$–0.89) was used to measure QOL and the UCLA Loneliness Scale Version 3 (Cronbach's $\alpha = 93$) was used to assess general loneliness and loneliness experienced during hospitalization. Neutrophil and lymphocyte counts and other medical information were obtained through records using PowerChart. RESULTS: Loneliness experienced during the hospital stay was independently associated with difficulty managing disease symptoms ($\beta = 0.501$, $p < 0.01$) and poorer overall QOL ($\beta = -0.452$, $p < 0.01$) 6 months after a BMT. Specifically, hospital loneliness was associated with poorer social ($\beta = -0.424$, $p < 0.01$), emotional ($\beta = -0.341$, $p < 0.05$), and functional well-being ($\beta = -0.422$, $p = 0.01$) 6 months post-transplant. Patients reporting greater hospital loneliness had higher N/L ratios at Day 30 when compared to those reporting less loneliness, after controlling for general loneliness and Day 0 N/L ratios ($p < 0.01$). Within-subjects effects indicated that loneliness associations with elevated Day 30 N/L ratios diminished by Day 100, $F(1, 37) = 5.28$, $p < 0.03$. CONCLUSIONS: Experiencing loneliness during BMT hospitalization is independently predictive of continued problems managing symptoms and poorer QOL 6 months after the transplant. Notably, loneliness from hospital isolation also is associated with poorer immunological functioning at 30 days post-transplant, even when controlling for baseline N/L ratios and trait loneliness. Findings support empirical and theoretical predictions that the stress from loneliness impacts the immune system through the upregulation of pro-inflammatory neutrophil cells and reduction of lymphocytes (Glaser & Kiecolt-Glaser, 2005). Immune dysregulation was most evident in 30 days post-transplant, but diminished by day 100. RESEARCH IMPLICATIONS: This is the first known study to investigate loneliness in BMT populations, with implications for loneliness theory. Theoretical predictions (Hawkley & Cacioppo, 2010) that the unsafe feelings of loneliness cause stress, with immune system consequences, are supported by N/L ratios in patients who experienced higher loneliness during BMT hospitalization. Current study revealed that acute loneliness experienced during hospital-isolation is associated with immune system dysregulation 1-month following, and degraded QOL and symptom control at 6-month post-transplant. CLINICAL IMPLICATIONS: Loneliness perceptions during BMT hospitalization may be an important factor in improving immunological recovery. Isolation is necessary for the BMT procedure, but may have unintended consequences. Although causal connections cannot be determined in the current study, results indicate that healthcare providers may have an opportunity to improve BMT recovery by attending to patients' loneliness perceptions. Loneliness interventions may reduce the distressing experience of social isolation, enhancing QOL, and recovery 6-month post-transplant (Masi et al., 2011). ACKNOWLEDGEMENT OF FUNDING: None.

P3-0192

Radiotherapy and Cognitive Function in Breast Cancer Patients Treated With Conservation Therapy

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BACKGROUND: Although protracted cognitive impairment has been reported to occur after radiotherapy even when such therapy is not directed to brain areas, the mechanism remains unclear. This study investigated whether breast cancer patients exposed to local radiotherapy showed lower cognitive function mediated by higher plasma interleukin (IL)-6 levels than those unexposed. METHOD: We performed the Wechsler Memory Scale-Revised (WMS-R) and measured plasma IL-6 levels for 105 breast cancer surgical patients within 1 year after the initial therapy. The group differences in each of the indices of WMS-R were investigated between cancer patients exposed to adjuvant regional radiotherapy ($n = 51$) and those unexposed ($n = 54$) using analysis of covariance. We further investigated a mediation effect by plasma IL-6 levels on the relationship between radiotherapy and the indices of WMS-R using the bootstrapping method. RESULTS: The radiotherapy group showed significantly lower Immediate Verbal Memory Index and Delayed Recall Index ($p = 0.001$, $p = 0.008$, respectively). Radiotherapy exerted an indirect effect on the lower Delayed Recall Index of WMS-R through elevation of plasma IL-6 levels (bootstrap 95% confidence interval = -2.6626 to -0.0402). CONCLUSIONS: This study showed that breast cancer patients exposed to adjuvant regional radiotherapy in conservation therapy might have cognitive impairment even several months after their treatment. The relationship between the therapy and the cognitive impairment could be partially mediated by elevation of plasma IL-6 levels. RESEARCH IMPLICATIONS: This study suggested that even irradiation not directed to brain areas can cause prolongation of cognitive impairment for at least some months, and that some of proinflammatory cytokines may be involved in the impairment in part. Well-designed prospective studies are needed to confirm this hypothesis. CLINICAL IMPLICATIONS: This study can lead to development of new interventions and preventions for cognitive impairment suffered by cancer patients or survivors having undergone anti-cancer treatments. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0298

Factors Predicting Health-Related Quality of Life of Patients With Colorectal Cancer One Year After Surgery

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BACKGROUND: Colorectal cancer has emerged as the most common cancer in Singapore. The quality of life (QoL) has become increasing important in measuring the outcomes of colorectal cancer patients and it can have an impact on a person's psychological well-being. The aim of this study was to examine the factors influencing the quality of life of patients with colorectal cancer. METHOD: This was a descriptive correlational study. In total 304 patients who had undergone more than 1 year of colorectal cancer surgery in Singapore General Hospital were recruited. Data were collected using the European Organization for Research and Treatment of Cancer quality of life questionnaire (EORTC QLQ-C30), European Organization for Research and Treatment of Cancer Colorectal Cancer Specific Quality of Life Questionnaire (EORTC QLQ-CR29) and Hospital Anxiety and Depression Scale (HADS). Descriptive statistics, independent t-tests, analysis of variance, Pearson product-moment correlation coefficient and multiple linear regression were used to analyse the data. RESULTS: The response rate was 98.7% with 300 patients completed the survey. Younger patients reported a significant higher level of anxiety than older patients. Patients with religion have better QoL than those with no religion. Patients who were employed, had rectal cancer and stoma had significantly more symptoms than those in other respective subgroups. Anxiety and depression were found to be significantly correlated with global health status/QoL, functional and symptom scales of both EORTC-C30 and EORTC-CR29 scales. Multiple regression analyses identified anxiety, depression, age, religion, employment status, site of tumour and stoma were the significant predictors of quality of life. CONCLUSIONS: Anxiety and depression are the most important predictors of quality of life among patients with colorectal cancer 1 year after surgery. RESEARCH IMPLICATIONS: Our findings imply a need to further explore patients' experiences of patients with colorectal cancer, especially those who are more anxious, depressed, younger, have no religion, employed and had rectal

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cancer and stoma. There is a need to develop psychoeducation interventions for this group of patients in order to improve their quality of life. CLINICAL IMPLICATIONS: Our findings indicate a need to assess patients' anxiety and depression. Psychological support is needed to be provided to patients with colorectal cancer in order to improve their quality of life. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0065

Nutrition and Quality of Life in Advanced Cancer Patients

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BACKGROUND: Proper nutrition is an important factor in helping cancer patients withstand the difficulties of the disease and the treatments. However, the ability to eat well is hampered by side effects of the disease and treatments. Over 50% of cancer patients suffer from nutritional difficulties which exacerbate their physical and psychological state. The objectives were to examine nutritional difficulties in advanced cancer patients, determine their relation to demographic and medical factors and examine their impact on quality of life. METHOD: The participants were 61 cancer patients, with advanced disease, of both genders, living at home, getting palliative treatment but not parentheral nutrition. Their mean age was 63.78 years (SD = 10.24). They were administered a questionnaire about demographic and medical background, a questionnaire about nutritional habits and difficulties, and the Multidimensional Quality of Life Inventory-Version 1. The questionnaires were administered at home by a social worker. Medical information was extracted from the patients' files. RESULTS: Most patients were eating less than before, due to difficulties in eating, nausea and sensations such as bizarre taste. The drinking situation was somewhat better. Regression analyses showed that demographic and medical variables predicted the indices of nutritional difficulties and changes in nutrition, with mobility and gender (being male) as the major predictors. Regression analyses also showed that the index of nutritional difficulties and demographic and medical factors, mainly mobility, gastrointestinal cancer and gender, predicted the patients' quality of life. CONCLUSIONS: Nutritional difficulties are very common. They depend on demographic and medical factors, such as the patient's gender and disease. The nutritional difficulties are lower when the patient has higher mobility. Nutritional difficulties affect negatively the patient's quality of life. RESEARCH IMPLICATIONS: The study has led to the development of an index for nutritional difficulties and an index of nutritional changes that may be valuable tools for further research. Further, the study provided evidence about the impact of nutritional difficulties on the patients' quality of life in various domains. CLINICAL IMPLICATIONS: The major clinical implications are that that it is advisable to consider the patient's nutritional difficulties and nutritional changes in order to be able to contribute appreciably to their quality of life. Another clinically important finding concerns the role of mobility in regard to the patient's quality of life. This finding indicates that it is of great importance to maintain and if possible to increase the patient's mobility in the interests of improving the patients' quality of life. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0401

The Risk Factors of Poor Post Traumatic Growth (PTG) in Lung Cancer Patients and the Association of Post Traumatic Growth (PTG) With Health Related Quality of Life (HRQOL)

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BACKGROUND: Lung cancer is one of the most prevalent types of cancer in the world and is associated with high mortality and poor HRQOL (Ferlay et al., 2010). However, the risks often lead to their growth such as PTG (Calhoun & Tedeschi, 2006; Tomich and Helgeson, 2012). We explored sociodemographic and clinical risk factors of poor PTG and the relation of PTG with HRQOL to find the way to promote PTG in lung cancer patients. METHOD: We identified independent predictors of poor PTG by using multiple linear regression analysis. We also examined data from 830 lung cancer patients recruited from National Cancer Canter in Korea. Least-Squares mean values of PTG and HRQOL according to European Organization for Research and Treatment of Cancer Quality of Life Questionnaire Core 30 (EORTC QLQ-C30) and Quality of Life Questionnaire Lung Cancer (EORTC QLQ-LC13) showed the correlation of PTG and HRQOL. RESULTS: Multivariate models for relations of PTG and socio-demographic and, clinical variables showed the risk factors of poor PTG were low education (aOR = 1.66, CI, 1.21–2.26) smoking experience (aOR = 1.42, CI, 1.02–1.99), poor regular exercise (aOR = 1.46, CI, 1.07–2.00) and poor balanced diet (aOR = 3.830, CI, 2.39–6.14). The correlates of HRQOL were associated with PTG in Lung cancer patients. Physical func-

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tion, cognitive function, global quality of life, appetite loss, dyspnoea in EORTC QLQ-C30 and EORTC QLQ-LC13 was significantly different between those who are good and poor PTG. CONCLUSIONS: Consistent with the past outcomes, the better PTG, the higher HRQOL among lung cancer patients. Especially, physical and cognitive HRQOL were related with PTG. Also, the results showed socio-demographic and clinical correlates of PTG to find the risk factors of poor PTG. The results suggest that low socio-economic status and bad health habits negatively influence lung cancer patients' PTG. RESEARCH IMPLICATIONS: The results implicated that low socio-economic status and poor health habits negatively influence lung cancer patients' PTG which is correlated with HRQOL. CLINICAL IMPLICATIONS: Clinical intervention is needed for lung cancer patients who are educationally underprivileged and have poor health habits to improve their posttraumatic growth and HRQOL. ACKNOWLEDGEMENT OF FUNDING: This study was supported by grants from the the National Cancer Center in Republic of Korea.

P3-0053

Trajectories of Anxiety as a Proxy for Psychological Adjustment in Breast Cancer: From Acute to Transitional Survivorship

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BACKGROUND: Consistent with the conceptualization of anxiety as a future oriented mood-state reflecting uncertainty and anticipation of negative outcomes, we approach a gradual decrease in anxiety as a proxy of overall adjustment to breast cancer. The aim of the study was to examine the feasibility of such approach and identify diverging patterns of adjustment from acute to transitional survivorship. METHOD: Data on sociodemographic variables, disease- and treatment-related variables, functional and health outcomes and Hospital Anxiety and Depression Scale form a longitudinal prospective cohort study of women with breast cancer (n = 750) were subjected to Mixture Growth Modeling, logistic regression and analysis of variance. RESULTS: 94% of the group divided into 3 classes displayed varying initial levels, but significant decrease within a year, followed by a non-significant slope from a year to 2 years. A 4th class (6%), however, displayed the highest intercept and non-significant slopes throughout the 2 years. Financial strains and not having children predicted membership in the high anxiety class. The high anxiety class also showed the lowest functional and health outcomes. CONCLUSIONS: The results suggest that the main adjustment occurs within the first year following the surgery for most of the women. However, a subgroup displays abiding levels of high anxiety. This subgroup is sociodemographically characterized and reveal the lowest indicators of overall adjustment. RESEARCH IMPLICATIONS: The study utilizes state of the art analytical approches to longitudinal data. The results suggest that examining the trajectory of anxiety may be a potential proxy for multifacted adjustment process. CLINICAL IMPLICATIONS: The findings indicate aneed for continous post-treatment clinical support for a group of patients in the transitional period ensuing from the end of the active treatment. ACKNOWLEDGEMENT OF FUNDING: The study was funded by the Swedish Research Council, the Swedish Cancer Society, Health Care Science Post-Graduate School at Karolinska Institutet, and the Swedish Council for Working Life and Social Research (2006-0920 and 2009-1758).

P3-0063

Impact of Dermatological Toxicities Associated With Targeted Anticancer Agents on Quality of Life. Quantitative and Qualitative Results of a Prospective Study

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BACKGROUND: Targeted anticancer agents cause a wide range of dermatologic side effects. A literature review about their impact on patients' quality of life shows contradictions. More prospective and qualitative data are needed to better understand the discrepancies. This psychological part of a prospective biomedical research (SKINTARGET) led by the dermatology team in Gustave Roussy aimed to describe the psychosocial changes occurring with cutaneous toxicities and to explore the implication of treatment representations in the patient's adjustment. METHOD: Inclusion was proposed from September 2011 to June 2013 by oncologists to patients who met the following criteria: being adult, informed of one's advanced cancer diagnosis, about to start a targeted therapy, fluency in French, having no cognitive or psychiatric disorders, having signed the informed consent. The psychological study included 4 phases of evaluation (treatment initiation, 1, 2 and 3 months after) and

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used simultaneously 2 methods: questionnaires (IPQ-R, DLQI, POMS, BDI-II) and semi-structured interviews. The statistical analyzes were conducted with SPSS 14.0 software and the qualitative ones were based on a thematic approach. RESULTS: Nearly 90% of the 62 included patients developed dermatologic toxicities. *Quantitative* – 40% reported a moderate to an important impact on quality of life at the first and third month (DLQI). The more patients believed the anticancer drug was controlling the disease (IPQ-R) the lower was the impact of skin problems ($p < 0.05$). No significant change was observed in the emotional and social domains (POMS, BDI-II). *Qualitative* – Changes were mainly characterized by a physical discomfort and difficulties in daily living, and qualified as "boring," sometimes "disturbing" when associated with pain/mobility difficulties/sleeping troubles, but remained "manageable." CONCLUSIONS: Dermatologic side effects were predominantly associated with sensorial and functional difficulties. These results are consistent with the literature data. Very positive treatment representations, reassessment of values, good physical state and optimism were factors which probably explained not only the absence of disturbance in emotional and social domains, but also the very low levels of anxiety, sadness and fatigue generally reported. The importance of the caregiving provided by health professionals was also highlighted: anticipating difficulties, giving information about side effects and effectively managing problems secured patients. RESEARCH IMPLICATIONS: Previous findings brought out social disturbance associated with cutaneous side effects. We found that difficulties in this domain preexisted for about 25% of patients and that they were not compounded by dermatological toxicities, neither responsible of a lower quality of life. That is why social interactions should be evaluated differently in the future, by more systematically controlling the pre-treatment social functioning and using qualitative method. CLINICAL IMPLICATIONS: Even if skin toxicities do not cause major emotional and social troubles, the frequency of physical discomfort and impairments in the daily life associated with these side effects justify systemizing the integration of supportive care in preventive and curative practices. Training needs have already been reported in literature to help health professionals to evaluate and manage skin toxicities; much attention should also be paid to the difference between the subjective experience and the medical observable. ACKNOWLEDGEMENT OF FUNDING: We thank L'Oréal and Fondation de France for their financial support in this study.

P3-0563

Optimism and Health Related Quality of Life in Colombian Breast Cancer Patients

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BACKGROUND: In breast cancer patients, the relationship between mental health in particular, and Health Related Quality of Life in a broader perspective may be mediated by personality variables as those refer to central aspects in the way women give meaning to their health status. Positive psychology focuses on personality variables, such as dispositional optimism, as resources to increase HRQoL. Optimism reportedly relates to better coping, more resilience and lower mental disorders in cancer patients. METHOD: This was a cross sectional survey study with 84 breast cancer patients ($M_{\text{age}} = 55.6$, SD = 11.2) selected by convenience in a hospital in Bogotá, Colombia. Respondents were mostly married, had a high school degree and were housewives or retired. Patients filled out the study questionnaire after obtaining their informed consent. Patients did not receive a financial compensation and the study was approved by two ethics committees. Instruments used were the EORTC QLQ-C30 (with five functioning scales: physical, role, cognitive, emotional, and social functioning) to assess HRQoL and the LOT-R for optimism (with three subscales: optimism, pessimism and total score). RESULTS: Patients reported higher levels of optimism and pessimism when compared to the general population in Colombia. Interestingly, although patients reported lower functioning in the EORTC subscales, their global evaluation of their HRQoL was comparable to the general population. As to the relation between optimism, pessimism and HRQoL, only optimism was correlated low to moderately but statistically significant to all but one EORTC subscales and the global evaluation: optimism-physical = 0.287**; optimism-role = 0.288**; optimism-social = 0.227*; optimism-emotional = 0.248* and optimism-global HRQoL = 0.320**. Pessimism on the other hand was not statistically relevant, and the total score of optimism-pessimism was only relevant for emotional functioning (0.269*). CONCLUSIONS: Patients reported higher levels of both optimism and pessimism than the general population, which is interesting and should be further studied, since it can potentially be related to response and self-report measure bias. Nonetheless, patients who report to view the future in a more optimistic way also tend to report higher levels of functioning (with the exception of cognitive functioning) and higher levels of HRQoL. In our sample, the total score was only related to emotional functioning, which can be easily explained. In sum, dispositional optimism is

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related to higher levels of HRQoL in breast cancer patients in Colombia. RESEARCH IMPLICATIONS: The comparison between patients and general population should be further assessed with a mixed methods approach to discern issues related to response or self report biases. Further variables should be taken into account in future studies, since constructs as QOL and optimism are highly dependent on external factors. Data suggest the need for normative scores of the LOT for clinical samples, since this seems a suitable instrument in these settings. CLINICAL IMPLICATIONS: Positive as well as negative beliefs about the future could be a part of the primary psychosocial assessment of the breast cancer patient. In interventions, the promotion of positive beliefs through cognitive flexibility and positive reevaluation seems crucial in order to promote HRQoL. These results confirm the importance of information which is realistic regarding prognosis but still takes into account the impact of positive affect. ACKNOWLEDGEMENT OF FUNDING: Carolyn Finck and Diana Agudelo were both funded by the Fondo para Profesores Asistentes (FAPA) at Universidad de los Andes.

P3-0226

Illness Perceptions Within 6 Months of Cancer Diagnosis Are an Independent Prospective Predictor of Future Health-Related Quality of Life (HRQoL) 15 Months Post-Diagnosis

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BACKGROUND: Illness perceptions (a patient's beliefs and feelings about their illness) are one potentially modifiable predictor of HRQoL among cancer survivors. Studies have found illness perceptions to explain a significant proportion of the variance in psychosocial outcomes in numerous diseases. However, most of the research is cross-sectional and non-oncological. We examine, for the first time in breast, colorectal and prostate cancer patients, if illness perceptions near diagnosis, are prospectively predictive of multidimensional HRQoL 15 months post-diagnosis. METHOD: This paper uses data (N = 334) from the electronic Patient-reported Outcomes from Cancer Survivors (ePOCS) study. UK patients with potentially curable breast, colorectal or prostate cancer completed the Illness Perception Questionnaire-Revised (IPQ-R) within 6 months post-diagnosis and the Quality of Life in Adult Cancer Survivors (QLACS) scale 15 months post-diagnosis. Sociodemographic and clinical data (gender, age, socioeconomic status, diagnosis, treatment) were obtained from registry records. Hierarchical regression analyses were conducted to determine the amount of variance in the 12 QLACS HRQoL-domains accounted for by sociodemographic and clinical factors and the additional variance, over and above these factors, explained by illness perceptions. RESULTS: The sociodemographic and clinical factors collectively significantly predicted 10/12 HRQoL-domains (all $p \leq 0.048$) and explained 2.8%-27.5% of the variance (average = 9.0%). The model including illness perceptions significantly predicted 12/12 HRQoL-domains (all $p \leq 0.001$) and the additional variance (ΔR^2) explained ranged from 5.6 to 27.9% (average = 14.7%). The Consequences illness perception dimension was a significant predictor of 9/12 HRQoL-domains ($\beta = |0.170–0.278|$; all $p \leq 0.023$); patients who thought <6 months post-diagnosis that their cancer would have a more serious negative impact on their life reported lower HRQoL at 15 months. The Emotional Representations, Identity and Treatment Control illness perception dimensions also predicted multiple HRQoL-domains ($\beta = |0.128–0.451|$; all $p \leq 0.035$). CONCLUSIONS: Illness perceptions early in the cancer trajectory are an independent, prospective predictor of HRQoL in breast, colorectal and prostate patients 15 months after cancer diagnosis. For 10/12 HRQoL-domains, the proportion of additional variance explained by illness perceptions collectively was greater than the proportion of variance accounted for by the sociodemographic and clinical factors collectively, and for 9/12 domains an illness perception dimension was the single most powerful predictor of 15-month HRQoL. Cancer patients' beliefs around the IPQ-R Consequences dimension of their illness are a particularly important individual predictor of future HRQoL and thus a potentially important target for interventions. RESEARCH IMPLICATIONS: Research seeking to prospectively understand cancer survivorship health outcomes should continue to acknowledge and assess the role of illness perceptions. Future research should focus on realising the potential of illness perceptions as a target for and mediating mechanism of interventions to improve cancer patients' HRQoL. Further research might also usefully elucidate the relationships between illness perceptions and theoretically-related individual differences variables known to be associated with health status such as optimism and type-D personality. CLINICAL IMPLICATIONS: Illness perceptions have potential for both screening and interventions to improve cancer patients' HRQoL. Patients' illness perceptions early in the cancer trajectory, as assessed by the IPQ-R, can potentially identify those patients more likely to experience lower HRQoL during survivorship. Emerging preliminary evidence in several diseases suggests that various psychosocial interventions can be effective in modifying maladaptive illness perceptions and improving patients' illness-related behaviours and outcomes. ACKNOWLEDGEMENT OF FUND-

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P3-0282

Prognostic Information (PI), Psychological Well-Being, and Quality of Life for Advanced Cancer Patients (ACP) in Phase I Trials and Their Spousal Caregivers (SC)

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BACKGROUND: The impact of the physician's (MD) disclosure of PI on the psychological well-being and quality of life (QoL) of clinical trial subjects with terminal disease on Phase I trials and their SC has not been formally evaluated. METHOD: A prospective cohort of ACP enrolling in phase I trials and their SC was assessed at baseline (T1) and 1 month (T2) utilizing various measures including: state-trait anxiety (STAI-S/T), depression (CES-D), quality of life/QoL (FACIT-Pal), and global health (SF-36). Semi-structured interviews of ACPs also evaluated MD-Pt communication re prognosis and worry about ACP death. RESULTS: 52 Phase I ACP-SC dyads interviewed at T1-T2: median age 63 (28–78 years); 52% male; 100% married; 88% Ca; 67% > HS; 58% GI. At T1, 45% of ACP recalled MD discussion of life expectancy; 35% stated MD gave timeframe. For SC, 62% recalled prognosis discussion with MD; 60% reported timeframe given. Over time, rates remained consistent. At T2, ACP who denied PI had higher STAI-S (35 ± 10 vs. 29 ± 9, $p = 0.03$) and CES-D (16 ± 12 vs. 7 ± 4, $p = 0.01$); and lower FACIT-QOL (128 ± 18 vs. 153 ± 24, $p = 0.01$). SC who acknowledged PI had higher STAI-S (39 ± 16 vs. 36 ± 16, $p = 0.04$). Regressions indicated ACP who acknowledged PI had poorer QOL. CONCLUSIONS: Physician disclosure of a prognostic timeframe is negatively associated with QoL among clinical trial subjects and SC in phase I trials. RESEARCH IMPLICATIONS: Further research is needed to explore what additional factors may influence ACP & SC understanding of PI during trial enrollment over time utilizing longitudinal studies. Once identified, educational interventions designed to aid in enhancing oncology provider communication and ACP-SC decision-making should be considered. CLINICAL IMPLICATIONS: ACPs decisions about participating in a Phase I clinical trial may be influenced by physician disclosure of prognosis and psychological distress. Thus, the central focus of the oncology community should concentrate on adequate physician communication regarding PI as well as ACP and SC preferences for psychological support such as individual, couples or group therapy to aid in overall coping with prognostic information. ACKNOWLEDGEMENT OF FUNDING: Supported by the National Institutes of Health National Cancer Institute (CKD; RO1 CA 087605-01A1).

P3-0527

Evaluating Disease and Patient Characteristics Which Predict (Retrospectively) Changes in Quality of Life After Breast Cancer Diagnosis and Treatment

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BACKGROUND: This original study examined the prognostic significance of disease and patient characteristics with respect to changes in quality of life (QoL) after breast cancer diagnosis and treatment. METHOD: This retrospective study involved 68 breast cancer patients: 41.7% Stage II or III and 27.8% Stage IV, of whom 15.6% had progressed and 30.3% had relapsed. Their median age was 67. QoL was measured using the Functional Assessment of Breast Cancer Therapy (FACT- B), Rand 36-Item Health Survey (SF-36) and Life Satisfaction Questionnaire (LSQ). After undergoing their treatment, patients completed a retrospective self-assessment of their QoL before and after treatment. A linear regression model was adopted to evaluate the power of patient and disease characteristics to predict changes in self-reported QoL. RESULTS: Common co-morbidities (assessed from patients' medical charts) included depression (17.9%) and diabetes mellitus (DM, 35.7%). Self-reported QoL prior to treatment was the most statistically significant predictor of QoL change for all components of SF-36, FACT-B (except for "additional concerns"), and for LSQ

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Health, Financial situation, Leisure time, Friends and Overall score. Age and clinical stage were statistically significant factors affecting QoL changes for some components of SF-36; age predicted some components of FACT-B; and age, recurrence and depression predicted some components of LSQ. CONCLUSIONS: Our findings suggest that disease-related factors (stage of disease, recurrence), patients' characteristics (age), co-morbidities (depression) and prior self-reported QoL all predicted changes in QoL after treatment. Study limitations include the retrospective design and modest sample size; thus, the prognostic importance of our findings require further evaluation. RESEARCH IMPLICATIONS: Results from the multivariate analysis of the significance of QoL prior to treatment suggest that it is critical to include patients' characteristics as covariates in any model predicting changes in QoL after treatment. CLINICAL IMPLICATIONS: These findings about the importance of patients' QoL before treatment suggest that this information should be incorporated in formulating an individualized plan of comprehensive cancer patient care. ACKNOWLEDGEMENT OF FUNDING: The study was supported by GAČR – P407/12/0607.

P3-0355

Significant Determinants in Predicting Health-Related Quality of Life Among Chinese Cancer Patient and Caregiver Dyads in Hong Kong

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BACKGROUND: Cancer is a major disorder that physically and psychologically exerts a considerable impact on health-related quality of life (HRQOL) not only for cancer patients, but also for caregivers. It has been reported that cancer patients and caregivers experience high stress level, sleep disturbance, anxiety, depression, and had impaired HRQOL. However, few studies has investigated HRQOL and determined the impacts of physical, psychological factors, physical activity and social support on HRQOL for cancer patients-caregiver dyads. METHOD: This study aims to investigate HRQOL and determine significant factors in HRQOL for both cancer patients and their caregivers. 231 mixed type cancer patient-caregiver dyads completed an online questionnaire consisting of short form-12 health survey (SF-12), perceived stress scale (PSS), Pittsburg sleep quality index (PSQI), hospital anxiety and depression scale (HADS), international physical activity questionnaire (IPAQ) and multidimensional scale of perceived social support (MSPSS). Multiple linear regressions using HRQOL as dependent variables and PSS, PSQI, HADS anxiety and depression scores, natural log (IPAQ), and MSPSS as the independent variables were conducted for cancer patients and caregivers separately. RESULTS: Mean age was 57.4 (SD = 10.4) and 53.7 (SD = 12.5) for patients and caregivers, respectively. For patients, HADS-depression [standardized coefficient beta = −0.305 (p < 0.001)], natural log (IPAQ) (0.268, p < 0.001) and MSPSS-friend (0.154, p = 0.017) were significant predictors in SF-12 physical composite score (PCS). HADS-depression (−0.366, p < 0.001), HADS-anxiety (−0.435, p < 0.001) and caregiver's MSPSS-family were significant predictors in SF-12 mental composite score (MCS). For caregivers, PSQI (−0.324, p < 0.001), age (−0.294, p < 0.001), HADS-depression (−0.193, p < 0.001), gender of female (−0.141, p = 0.013) and patients' MSPSS-total (0.115, p = 0.047) were found to be significant in predicting SF-12 PCS. While HADS-depression (−0.320, p < 0.001), PSS (−0.302, p < 0.001), HADS-anxiety (−0.236, p = 0.004) and age (0.118, p = 0.009) were significant predictors in SF-12 MCS. CONCLUSIONS: For cancer patients, depression score was a risk factor, physical activity, friends support were protective factors for cancer patients' physical wellbeing; while depression and anxiety scores were risk factors and caregivers' perceived family support was a protective factor in cancer patients' mental wellbeing. For caregivers, except for patients' perceived social support-total score as a protective factor, sleep disturbance, depression and anxiety scores, older age and female were risk factors for caregivers' physical wellbeing. However, for caregivers' mental wellbeing, except for older age as a protective factor, depression and anxiety scores, and high stress were risk factors. RESEARCH IMPLICATIONS: This study showed that depression score was an important determinant in HRQOL for both patients and caregivers. Patients' anxiety and depressive symptoms, physical activity and perceived support from friends, and caregivers' perceived support from family were very important predictors of HRQOL in patients. For caregivers, in addition to caregivers' anxiety and depressive symptoms like patients, caregivers' sleep disturbance, stress level, age and gender, and patients' perceived social support were significant predictors for HRQOL in caregivers. CLINICAL IMPLICATIONS: This study may give some hints to improve HRQOL of patients through alleviating emotional distress, increasing physical activity and support from friends and family. For caregivers, regardless of unchangeable factors (gender and age), alleviation of stress and emotional distress, improvement in sleep quality and social support might improve HRQOL. Overall, it might shed a light on designing an intervention enhancing physical activity and social support for improvements in HRQOL for both patients and caregivers. ACKNOWLEDGEMENT OF FUNDING: This study was supported by the Centre on Behavioral Health Research Fund of the University of Hong Kong.

P3-0390

Indices of Quality of Life in Men Receiving Treatment for Cancer at the Radiotherapy Department of the University College Hospital Ibadan

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BACKGROUND: Quality of life considerations is important in a patient-centred care. In men with a cancer diagnosis, quality of life challenges maybe hidden behind the mask of masculinity and the desire not to be seen as weak. This study investigated the quality of life indices of men diagnosed with mixed types of cancer. METHOD: Ethical approval was obtained for this study. Data was collected from all available and consenting male cancer patients who came for treatment at the radiotherapy clinic. Thirty-eight male cancer patients with mixed types of cancer participated in the study. The 27-item Functional Assessment of Cancer Therapy-General (FACT-G) version 4 developed by Cella (1987) was used to assess the indices of quality of life. The FACT-G has 4 QOL domains of physical well-being, social/family well-being, emotional wellbeing, and functional well-being. RESULTS: A good percentage (71.1%) of the men had poor emotional wellbeing, 44.7% had poor social and family wellbeing, 36.8% had poor physical wellbeing and 31.6% had poor functional wellbeing. An item by item analysis of the emotional wellbeing subscale where majority of the respondents indicated poor wellbeing showed that 39.5% felt very sad, 57.9% indicated feeling very nervous, 76.3% indicated worrying very much about death, 81.6% worry very much about their condition getting worse and 84.2% were losing hope in the fight against the illness. CONCLUSIONS: Majority of men in this study performed poorly on the emotional wellbeing indicator of quality of life. Their major emotional concerns centre on worrying about death, worrying about their conditions getting worse and lossing hope in their fight against cancer. Men need help concerning their emotional wellbeing and this should not be neglected or ignored. RESEARCH IMPLICATIONS: Further research could be carried out in the area of assessing other indicators of quality of life in male cancer patients and in determing the kinds of intervention programs they would like to participate in to help them enhance their quality of life. CLINICAL IMPLICATIONS: Given the current findings, interventions need to be designed to help men deal with the emotional concerns related to nervousness, worrying about death and fearing that their conditions may get worse as well as the losing of hope in the fight against cancer. Though men may deny their emotional need, they should be made to participate in intervention programs as a matter of routine in order to ensure that they enjoy optimal quality of life despite of their diagnosis. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0237

Cancer Diagnosis and Other Risk Factors for Hospitalization in Cognitive Intact Nursing Home Residents: A 5 Years Follow-Up Study

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BACKGROUND: Purpose Older people in residential care are frequently hospitalized. Studies of self-reported mental and physical health, activities of daily living (ADL), anxiety and depression symptoms related to hospital admissions among cognitively intact nursing home (NH) residents diagnosed with cancer are scarce. We investigated whether NH residents diagnosed with cancer have increased risk for hospitalization adjusted for sex, age, education, marital status, comorbidity, ADL, symptoms of anxiety and depression and physical and mental health. METHOD: In a prospective observation study, we obtained baseline data from 227 cognitively intact NH residents (60 with cancer, 167 without) in 30 NHs in Bergen, Norway in 2004–2005 (follow-up until 2010). We collected data by face-to-face interview using the Hospital Anxiety and Depression Scale and the SF-36 Health Survey. We obtained ADL from registered observation and sociodemographic variables and medical diagnoses from the NH records. We identified hospital admissions through NH medical records. We linked personal identification numbers to the hospital record system to find all admissions. We analysed time from inclusion to first hospital admission using Cox regression. RESULTS: The risk of hospital admission was higher for residents with cancer than for those without (hazard ratio: 1.92; 95% confidence interval (CI) 1.18–3.12;

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$p = 0.01$). The residents with the highest education level and those 65–74 years old had more hospital admissions. Further, residents with 95 years and older, higher education and increased mental health sum scores on the SF-36 Health Survey had significantly increased risk of hospital admission. Cancer did not interact with the SF-36 Health Survey mental health sum score ($p = 0.89$) or physical health sum score ($p = 0.09$). CONCLUSIONS: Self-reported mental health, high education and low or very high age predicted hospital admission among NH residents. A diagnosis of cancer increased this risk adjusted for all the other risk factors. RESEARCH IMPLICATIONS: Further studies are needed about the causes of hospital admission and exploring which factors of mental health that contribute to hospital admission. CLINICAL IMPLICATIONS: Clinical personnel need to be aware of residents with a cancer diagnosis and observe them for cancer-related symptoms and their need for hospital admission. It is also important to be aware of residents' mental health. ACKNOWLEDGEMENT OF FUNDING: Jorunn Drageset received a postdoctoral fellowship from the Norwegian Cancer Society.

P3-0535

Assessing Health Related Quality of Life in Prostate Cancer Patients Survivors: Emotional, Social and Cognitive Dimensions

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BACKGROUND: Prostate cancer represents 12% of all cancers in Europe being responsible for 1 in each 10 men's death caused by cancer in developed countries. The survivors face physical, psychological and social impairments that patient reported outcomes can signalize. This study aimed to evaluate the impact of emotional, social and cognitive dimensions when assessing HRQoL prostate cancer patients' survivors (2–4 years after diagnosis). METHOD: Prostate cancer patients admitted at the Urology Unity of Portuguese Institute of Oncology, Porto, Portugal (IPO – Porto) and followed from 2 to 4 years after diagnosis ($n = 121$), completed a questionnaire including the Portuguese validated versions of cancer-specific Health Related Quality of Life (HRQoL) instruments, the generic questionnaire EORTC QLQ-C30 and its specific module for prostate cancer patients QLQ-PR25. Questionnaires were completed immediately before consultation as a part of the routine evaluation. Inclusion criteria were ability to understand written and spoken Portuguese and provision of written consent. Socio-demographic and clinical variables were also collected by interview or consulting the clinical processes. RESULTS: The mean age of studied sample was 71.2 ± 8.9 years and a low literacy was revealed. The overall Quality of Life measured by the EORTC QLQ-C30 was 58.3 ± 8.9. When considering functional scales prostate cancer patients revealed an overall high score. The emotional function presented the worse score (74.9 ± 5.6) when compared to physical and role scores (80.6 ± 6.3 and 81.7 ± 6.6, respectively). Social and cognitive functions revealed the highest scores (82.9 ± 6.0 and 84.6 ± 7.1, respectively). The most adverse general symptoms were insomnia, fatigue and financial difficulties. The specific measure QLQ-PR25 revealed major impact on sexual activity (29.7 ± 3.4) and incontinence aid (23.3 ± 3.2). CONCLUSIONS: All prostate cancer patients are included in HRQOL routine clinical assessment in IPOP. The evaluated cancer patients revealed higher HRQOL scores when compared with the literature suggesting that HRQoL routine evaluation can really optimize healthcare as a function of real time patient's perceptions. Although there is a fringe to optimize some dimensions. To better understand prostate cancer patients' needs, the specific questionnaire (QL-PR 25) must be used. It has the potential to clarify some aspects with particular relevance in cancer experience such as: sexual activity and incontinence. This itens revealed thus a high impact in global HRQOL score. RESEARCH IMPLICATIONS: HRQoL assessment in clinical practice is not common worldwide. In Portuguese Institute for Oncology – Porto we have experience in implementation of routine HRQoL evaluation and use of patient reported outcomes in clinical practice. Health Related Quality of Life is an increasingly prominent health marker in prostate cancer. Nurses and physicians are involved in the process and HRQoL evaluation is crucial for institutions that as IPOP, receives 10,000 oncological patients by year. CLINICAL IMPLICATIONS: All prostate cancer patients can be evaluated since HRQOL assessment implementation. This patient reported outcome may contribute to support clinical decisions, identify unmet needs and can be used in routine care appointments supporting a stepped care model. ACKNOWLEDGEMENT OF FUNDING: We acknowledge Calouste Gulbenkian Foundation for the support. We also acknowledge all people who have voluntarily collaborated in the study, all health professionals from the Portuguese Institute of Oncology, Porto, Portugal (IPO – Porto) involved and Urology Unit for their generous collaboration.

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P3-0582

Living With Breast Cancer: Challenges Related With Quality of Life Assessment

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BACKGROUND: Breast cancer most commonly diagnosed cancer among women. Incidence has increased in most Western countries, is age related, the rate of increase in incidence during the premenopausal years is approximately 8–9% per year worldwide. Women before age 40 have slightly poorer prognoses than older women. Many scientific advances in breast cancer – mainly related to diagnosis and therapeutic methods – have improved overall survival rates emphasizing thus the Health Related Quality of Life evaluation needs. METHOD: In order to evaluate HRQOL in breast cancer patient, consecutive patients (n = 569) admitted at the Portuguese Institute for Oncology – Porto – Breast Unit completed the Portuguese versions of a cancer-specific HRQoL instrument, the EORTC QLQ-C30 and the corresponding breast cancer specific module QLQ-BR23. Questionnaires were completed immediately before consultation as a part of the routine evaluation. Inclusion criteria were ability to understand written and spoken Portuguese and being followed until 5 years after diagnosis. Socio-demographic and clinical variables were also collected by interview or consulting the clinical processes. RESULTS: The mean age was 52.5 ± 10.0 years, 32.5% had a diagnosis prior 1 year and 33.0% have had a diagnosis between 2 and 4 years ago. The functional status dimensions measured by the QLQ-C30 showed high scores, ranged from 65.8 to 80.3 in a 0 to 100 scale. However, the overall HRQoL score 60.5 revealed high levels of symptom burden, especially insomnia, fatigue and financial difficulties. In what concerns breast cancer's specific symptoms, the body image (77.8) and the upset by hair loss (38.3) were the worst symptoms. CONCLUSIONS: A global understanding of HRQoL results highlights a potential for its improvement in these breast cancer patients. Breast cancer patients in 0, I e II stages have a 5-year survival rate higher than 90%. Health related Quality of Life (HRQoL) assessment in routine breast cancer clinical practice has become more common because it provides a unique perspective concerning patient's perceptions during the cancer experience. This knowledge may really optimize healthcare and patient centered strategies. RESEARCH IMPLICATIONS: HRQoL assessment in clinical practice is not common worldwide and represents an increasingly prominent health marker in breast cancer. Researchers have experience in systematic HRQoL assessment implementation. Nurses and physicians involved in this multidisciplinary process use the patient reported outcomes results in clinical practice. HRQoL evaluation is crucial for Portuguese Institute for Oncology – Porto that receives 10,000 cancer patients by year. CLINICAL IMPLICATIONS: Portuguese Institute for Oncology – Porto treats 1000 breast cancer patients per year. It is the major unit in Portugal (number of breast cancer patients admitted) and one of the biggest in Europe. All breast cancer patients can be evaluated since HRQoL assessment implementation. This patient reported outcome may contribute to support clinical decisions, identify unmet needs and can be used in routine care appointments supporting a stepped care model. ACKNOWLEDGEMENT OF FUNDING: We acknowledge Caloust Gulbenkian Foundation for the financial support. We also acknowledge all who have voluntarily collaborated in the study, all health professionals from the Portuguese Institute of Oncology, Porto, Portugal (IPO – Porto) involved and Breast Unit for their generous collaboration.

P3-0596

Quality of Life and Psychological Distress in Patients With Locally Advanced Head and Neck Cancer

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BACKGROUND: Head and neck cancer is treated with aggressive approach and the measurement of QoL is important in this group of patients. The objective was measured the QoL and psychological distress in patients with locally advanced head and neck cancer and its effects from the treatment during the first year follow up. METHOD: 76 patients with locally advanced head and neck cancer and were treated with concomitant chemoradiotherapy. All of them have three assessment of QoL (previous to therapy, in the middle of treatment and 1 year follow up). Median age 59.7 years (SD: 10.6), range 27–84, 90% male, 62% stage IVA, 7% stage IVB. 67% of patients were treated in the initial diagnosis and 33% in the relapse. Psychological distress was evaluated with the Hospital Anxiety and Depression Scale (HADS) and QoL was evaluated with the EORTC-C30 questionnaire version 3 and HN-35 specific module. We present a descriptive analysis with Multivariate Test. RESULTS: 44% of patients presented psychological distress in baseline assessment, 1 year after the percentage

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increased to 50, 43% had a poor QoL (QoL < 50). At the beginning of treatment 52% of patients suffered weight loss, during treatment the percentage increased to 62% and in the follow up it decreased 27%. In the second assessment these differences were significant ($p < 0.001$) with the active concomitant chemoradiotherapy treatment in physical function, oral intake, appetite loss and to avoid social relations. All these parameters worsened after starting concomitant treatment ($p < 0.05$). There were no significant differences between global QoL and pain. CONCLUSIONS: The measurment of QoL in head and neck cancer patients worsened after starting treatment with chemoradiotherapy. The parameters affected were: anxiety, depression, physical status, oral intake and social relations. This worsening probably occurs due to the treatment toxicity. Better survival and better QoL at the end of treatment are necessary to justify aggressive concomitant chemoradiotherapy. RESEARCH IMPLICATIONS: The measurement of quality of life is very important in the clinical practice and assessment the illness course. CLINICAL IMPLICATIONS: It can allow to know the effects of chemoradiotherapy treatment in these patients and in their quality of life, so the professionals can improve them better. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0210

Depression – Negative Prognostic Factor in the Outcome of Onco-Hematological Diseases

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BACKGROUND: Onco-hematological diseases are associated with depressive episodes, rate ranging between 1 and 69%. Major depressive episodes, with a rate of 14.3% in onco-hematologic population, generate additional suffering, decrease compliance to treatment, prolong hospitalization, increase the frequency of postoperative complications, decrease survival rate and quality of life. The research (study) aims to diagnose major depressive disorder in patients with onco-hematological diseases, by detecting its influence on the evolution and prognosis of malignant disease. METHOD: The study includes 100 inpatients hospitalized from January 2013 to January 2014. The patients were evaluated from somatic, psychiatric and psychological point of view. Psychological evaluation was performed at admission and after 3 weeks of treatment with HAM-D and GAF scales. The diagnosis of depressive episode was established according to ICD-10 and DSM IV-TR criteria. The group of patients was divided into two subgroups: Subgroup A-50 patients diagnosed with depressive episode following antidepressive treatment (mirtazapine 30 mg/day); Subgroup B-50 patients without antidepressants. Most patients (60%) were diagnosed with a moderate depressive episode and only 15% had no depressive episode. RESULTS: Depressive disorder, regardless of its clinical forms, is common in onco-hematological diseases (prevalence 85%) The hospitalization period is directly proportional to the intensity of depression, as more severe the depression is, the longer is the hospitalization period. Intensity of depression (according to HAM- D scale) is in direct relation to the number of cycles of chemotherapy. The evolution of HAM-D scores in subgroup A is well above the evolution of subgroup B scores, after 3 weeks of antidepressants (15 vs. 5.19) and GAF score (90–81, 80–71, 70–61) was recorded in a higher percentage for subgroup A (40 vs. 28). CONCLUSIONS: Depressive Disorder is a negative prognostic factor in the evolution of onco-hematological diseases, so early diagnosis and treatment of depressive disorder determines a better evolution of onco-hematological diseases thus improving patient quality of life. RESEARCH IMPLICATIONS: Depressive disorders decrease the quality of life of patients with onco-hematological diseases thus having a negative effect on life expectancy of these. The results of this study are consistent with other researches that have identified a correlation between mood and the quality of life in onco-hematological diseases. Applying accurate nosological criteria (DSM-IV-TR, ICD-10) for depressive disorder diagnosis, may explain, a much higher rate of depressive episodes compared with the existing data in specialized literature (25% vs. 14.5%). CLINICAL IMPLICATIONS: Early diagnosis and appropriate treatment of depressive disorder have great clinical significance through their influence on the outcome and prognosis of malignant diseases. Involving a psychiatrist in assessing patients with onco-hematological diseases allows early and accurate pharmacological treatment improving so the quality of life of these patients. ACKNOWLEDGEMENT OF FUNDING:

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P3-0423

A Study on Holistic Wellbeing of Cancer Patients Participating in Self-Help Group Volunteer Work in Hong Kong

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BACKGROUND: Cancer patients' self-help groups provide mutual support to cancer survivors by sharing common experience, information and coping strategies in the community (Wilson, 1994; Nazira, Adrian & Patience, 2012). Volunteering in self-help group enhances self-image, self-competence and interpersonal skills, which empowers patients to face cancer (Chan et al., 1996; Yip, 2004; Felix-Ortiz et al., 2000). We conducted a study to better understand the holistic wellbeing of cancer survivors who volunteer in patients' self-help groups. METHOD: Thirty self-help group patient volunteers and 30 cancer patients who joined our psycho-social programs or therapeutic groups were recruited by convenience sampling to join the study. They were invited to complete the Body-Mind-Spirit Wellbeing Inventory (BMSWBI; Ng et al., 2005). The inventory is composed of four subscales, namely physical distress, daily functioning, affect and spirituality. In addition, basic demographic characteristics and disease history were collected. Independent samples *t*-test was employed to examine the differences between the 2 groups. RESULTS: All subjects were in the stage of cancer recovery. The findings showed that there was a significant difference in the total wellbeing score between patients who were volunteers in self-help groups ($M = 466.83$, SD = 61.02) and patients who only joined the psycho-social programs or therapeutic groups ($M = 382.60$, SD = 79.51; $p < 0.05$). Regarding the four sub scales, apart from physical distress, there were also significant differences between these two groups in the other three sub scales. CONCLUSIONS: This study explored the holistic wellbeing of cancer patients who were volunteers in self-help groups in Hong Kong. The results indicated that volunteers had better wellbeing in general compared to those patients who only joined our psycho-social programs or therapeutic groups in this study. However, due to the limitation of the research design, a causal relationship could not be identified. RESEARCH IMPLICATIONS: This was a prelimary study showing that cancer patients as volunteers in patients' self-help group had better holistic wellbeing. However, demographic variables were not controlled and baseline levels of wellbeing were not collected. Future studies on these factors are suggested. CLINICAL IMPLICATIONS: Many studies showed positive relationships bewteen volunteering and wellbeing (Leventhal, 2009; Kroll, 2010). This study showed that cancer survivors as volunteers in patient's self-help groups also had a better wellbeing than those who did not engage in any volunteering. Service providers might consider encouraging cancer survivors to participate in volunteer work in patients' self-help group to improve their wellbeing. ACKNOWLEDGEMENT OF FUNDING: Hong Kong Cancer Fund.

P3-0498

Beliefs in a Just World, Coping Strategies and Emotional Intelligence in Subjective Well-Being and Quality of Life of Cancer Patients

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BACKGROUND: Cancer involves very important changes in the life of a person and therefore a physical and mental readjustment that follows a very long evolution times. The main objective of this research was to study the influence of Beliefs in a Just World (BJW), Coping Strategies and Emotional Intelligence in subjective well-being and quality of life of cancer patients. METHOD: Sixty six cancer patients (35 men, 31 women; mean age 53.6 years – range: 20–86) were asked about their personal and general BJWs, Coping Strategies, Emotional Intelligence, Perception of Quality of Life, Anxiety and Depression. Data were collected by structured interview format. Additionally, some clinical data were required from Oncology service. They were individually informed about the study objectives and their written consents were required to voluntarily participate in it. The interviews lasted approximately 40 minutes and were conducted from May 2011 to January 2014. Patients who received their diagnosis in the last month or were in terminal phase were excluded. RESULTS: Different regression analyses showed that patients' personal BJW negatively predicted their anxiety and positively their quality of life. In addition, patients scoring high in the Emotional Reparation subfactor of Emotional Intelligence, showed better emotional well-being and quality of life. And finally, their use of passive coping strategies was negatively related to their levels of anxiety. CONCLUSIONS: The main objective of this study was to extend the knowledge about the factors involved in the psychological adjustment and quality of life of cancer

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patients. The most innovative results have been the relationships found of personal BJW with these variables. Personal BJW had been previously related to psychological adjustment in other diseases, but not studied yet in cancer. Another important result of this study has been the predictive relationship found between the ability of patients to Emotional Reparation and their adjustment to the disease. This result emphasizes once more the relevance of the Emotional Intelligence construct in health problems. RESEARCH IMPLICATIONS: The results found in this study have undoubtedly relevant research implications. For instance, future studies should explore why personal BJW positively predicts psychological adjustment to the disease in cancer patients. Are these beliefs formed before or after the diagnosis? Why general BJW are not also related to quality of life and anxiety? And which is the possible influence in these beliefs of other emotional abilities such as those under the construct of Emotional Intelligence? CLINICAL IMPLICATIONS: Two main clinical implications can be highlighted after this study. First, the relevance of having strong personal BJW, which can help to better emotional adjustment during cancer disease. Second, the role of Emotional Reparation abilities in the process of oncological disease, so that a high skill to regulate emotions appears to be associated with better quality of life and less anxiety and depression. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0502

Quality of Life and Household Composition of Latino and Black Cancer Patients

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BACKGROUND: Household overcrowding, associated with poor physical and psychosocial outcomes, is an important determinant of quality of life (QOL). Overcrowding is higher among ethnic minorities compared with non-Latino whites. Latinos have the highest prevalence of overcrowding. The purpose of this study is to determine whether ethnicity and birthplace (born in the USA and born abroad) are associated with household overcrowding, and how overcrowding may affect QOL and depressive symptomatology of low-income Latino and Black cancer patients. METHOD: This is a cross-sectional nested cohort study with low-income Latino and Black cancer patients from the Portal Cancer Project, recruited at 10 cancer clinics in underserved areas of NYC. The sample was comprised of 459 Latino and 323 Black cancer patients. Participants completed a questionnaire in their preferred language (English, Spanish). Overcrowding was subjectively measured with one question: Do you feel that your living unit is too crowded? Overcrowding was objectively determined according to the Department of Housing definition of a ratio of more that two Persons-Per-Room (PPR). The FACT-G was used to measure QOL and the PHQ-9 for depression. RESULTS: The overcrowding prevalence among Latinos born abroad was 13% (Subjective) and 14% Latinos (Objective) among those born in the USA. For Blacks, the prevalence of overcrowding for those born abroad was 13% (Subjective) and 16% (Objective) for those born in the USA. Neither the subjective nor the objective measures of overcrowding had a significant impact on the Latino cancer patients' QOL. However, Blacks who perceived their households as crowded had higher levels of depression and lower QOL, regardless of birthplace. Nonetheless, the objective measure of overcrowding was not related to QOL and/or depression. CONCLUSIONS: Results suggest that the perception of overcrowding has a more significant impact on the QOL and emotional adjustment of Black cancer patients than the objective measure of overcrowding (more than 2 persons-per-room), regardless of birthplace. There was no impact in Latinos. Overcrowding had a negative effect for Blacks, except Latinos. The lack of a detrimental effect of overcrowding in Latinos might suggest that Latinos benefit more from large and dense social networks in their households. RESEARCH IMPLICATIONS: These results highlight that the impact of overcrowding may be partially determined by culture. Further examination in this area should explore what is responsible for the differences between these two groups. Research should focus on further examining the impact that household composition has on the adjustment of ethnic minority cancer patients, disentangling the effect of race and ethnicity. CLINICAL IMPLICATIONS: These data can help provide clinicians with insight into psychosocial outcomes among Latino and Black cancer patients and the differences among those born in the USA and those born abroad. Furthermore, these data can help provide guidance on areas to be addressed in clinical interventions in order to improve health outcomes. ACKNOWLEDGEMENT OF FUNDING: Funding Sources: New York Community Trust; NCI Support: U54-13778804-S2 & T32CA00946.

P3-0670

Trauma, Resilience and Treatment Choice in Breast Cancer Patients

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BACKGROUND: Breast cancer diagnosis accompanies the shock of fatal potential with the pressure

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of optimal treatment choice. For most women with incipient malignancy, surgery options are radical mastectomy and conservative surgery. While generally the scientific literature tends to recommend the second option for being less invasive and traumatic for patients, results describing psychological outcomes are still controversial in their complexity. Some countries, Romania included, are characterised by a stronger inertia that might affect treatment choice. METHOD: The present study aims to explore the differences in post-treatment psychological reactions between patients who underwent radical versus conservative surgery and to assess the relationship between quality of life and posttraumatic symptoms in patients treated for breast cancer. Positive and negative religious coping is also observed in relation to these variables. Sixty two patients took part in the study. A control group with similar characteristics was also used. RESULTS: Contrary to previous studies, women with radical mastectomy show higher quality of life compared to women with conservative surgery and similar results as the control group. There is no difference between the two oncology groups in intensity of posttraumatic stress symptoms. Positive religious coping is associated to posttraumatic avoidance symptoms while negative religious coping is associated to intrusion and arousal symptoms. They both score higher than the control group. Higher intensity of posttraumatic stress symptoms is associated to lower quality of life. RESEARCH IMPLICATIONS: Quality of information, decision regret and fear of recurrence are some of the factors that could explain the conflicting results. The complex ethical issues involved in an optimal informed consent are discussed. Further research is needed to clarify the impact of different types of surgical treatments on patients' quality of life. CLINICAL IMPLICATIONS: Intervention efforts can benefit from these results by helping patients use spirituality and religious believes to their advantage. Negative religious coping is associated to higher levels of distress, intrusive thoughts and arousal. Optimal information in treatment choice is also a condition for resiliency. Informed consent and personalized guidance could help prevent future decision regret and fear of recurrence. Presence of posttraumatic stress symptoms in breast cancer patients highlights their need for counseling and psychotherapy. ACKNOWLEDGEMENT OF FUNDING: This paper is supported by the Sectoral Operational Programme Human Resources Development (SOP HRD), financed from the European Social Fund and by the Romanian Government under the contract number POSDRU/159/1.5/S/133675.

P3-0614

Quality of Life of Adolescents Survivors of Childhood Cancer

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BACKGROUND: With the emergence of new diagnostic and therapeutic resources, the treatment of children and adolescents with cancer resulted in a significant increase in survival. Secondary effects of the disease impact the health and quality of life of young people recovered from cancer. The objective of this study was to evaluate the health related quality of life of adolescents survivors of childhood cancer. METHOD: An analytical cross-sectional quantitative study was carried out in 208 adolescents survivors of childhood cancer between 13 and 18 years, off therapy for more than 3 years, in After Completion of Therapy Clinic – CATT, of Boldrini Children's Center, in Brazil. The instruments was the Pediatric Quality of Life Inventory PedsQL™ Generic Score Scale Adolescent ages 13–18 years – Self-report by adolescent and Report from parents of adolescents. RESULTS: Differences were observed at aspects, activity, summaries, and total score of the PedsQL™ among adolescents according to gender and type of cancer. There was significant correlation and difference between the assessment of adolescents and their parents. Although they present physical disability and impairment in the functional aspect, the quality of life of adolescents survivors of childhood cancer was considered satisfactory, based on PedsQL™. CONCLUSIONS: Early identification of the psychosocial needs of adolescents survivors of childhood cancer in the After Completion of Therapy Clinic – CATT and the following and assessment of quality of life and the risk factors for onset of late effects, somatic or psychosocial will allow to structure new psychosocial interventions or more effective rehabilitation. RESEARCH IMPLICATIONS: To improve new psychosocial interventions during the treatment to facilitate the resolution of the depression, anxiety, fears and post-traumatic stress that the diagnostic of cancer brings for some patients and families. To know how the experience of cancer has psychologically affected patients and how they are coping with the psychosocial problems and the consequences in their relationship with the family and peers allowed thinking about the needs of new therapeutic instruments that can facilitate the adjustment of adolescent survivors to normal life. CLINICAL IMPLICATIONS: To know the differences of quality of life of survivors according gender and type of cancer can improve the studies about new interventions since the beginning of treatment

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based on individual and subjective experience and to create groups according gender and type of cancer to prevent psychological and social problems in the future. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0153

Confrontation of the Disease Hematooncologic in Anxious and Depressive Patients

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BACKGROUND: The disorders of the state of mind are common enough in the patients of cancer. In addition, it is common that the state of mind influences the experience and confrontation of the disease and this, in turn, determines the quality of life of the patient. The present study tries to establish a correlative association of the strategies of confrontation in relation to the state of mind. METHOD: There informed 78 patients, 36 women and 42 men, with an average of age of 58 ± 16 years with diagnosis of Hodking lymphoma, not Hodgkin lymphoma, myeloma multiple and chronic lymphoblastic leukemia. The average phase of the disease corresponded to the phase 3. The indicative variables of the psychological adjustment were the level of stress and the strategies of confrontation (ISEAC) and the level of anxiety and depression (HADS). The statistical analysis was based on a difference of averages between groups of patients by anxiety and clinical established depression. RESULTS: Significant differences between the patients appear with clinical anxiety and those lacking in this diagnosis with regard to the utilization of strategies as the stoicism (1.76 ± 1.6 vs. 0.7 ± 0.93; $F(1, 77) = 12.12$; $p < 0.0001$), the catharsis (0.41 ± 0.71 vs. 0.14 ± 0.34; $F(1, 77) = 4.76$; $p < 0.05$), easing (0.78 ± 0.93 vs. 0.38 ± 0.68; $F(1, 77) = 4.62$; $p < 0.05$), the direct action (0.22 ± 0.47 vs. 0.49 ± 0.65; $F(1, 77) = 4.34$; $p < 0.05$) and the redefinition of the situation (0.71 ± 1.3 vs. 0.22 ± 0.41; $F(1, 77) = 4.31$; $p < 0.05$). For the depression, also significant differences appear, in relation to the stoicism and the easing, between those patients with and without clinical symptomatology. CONCLUSIONS: The results confirm that the affected patients of clinical anxiety use mainly strategies as the stoicism, the catharsis, the easing and the redefinition of the situation, and less the direct action. As for the depressive patients, these the stoicism and the easing use mainly. In effect, both populations use passive strategies to confront the pathological process, which is very related to a worsening of the mental condition and in turn, of the quality of life, concerning in an indirect way the experience and implication in the treatment of the disease. RESEARCH IMPLICATIONS: Given the results of this study, it would be of great usefulness to establish future investigations that determine the relation between the utilization of these strategies and the quality of life associated with his suffering. Also, it would be interesting to plan studies that determine the clinical efficiency of psychological interventions destined to promote the ideal confrontation of the oncohematologic disease. CLINICAL IMPLICATIONS: In agreement with previous investigations, the results emphasize the relevancy of the emotional component in the oncohematologic disease and his important paper in the quality of life of the patients. It suggests the need of that this facet should be an object of treatment in the patient, so much to improve the levels of anxiety or depression as to increase the quality of life of the same one. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0104

Double Stigmatization Influence in Oncogeriatry

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BACKGROUND: Cancer is a major health problem widespread in elderly, which is inscribed in ageism context. Negative influence of the vision that older people possess on aging on mental and physical health is well established within "normal" aging. Consequently, we can ask ourselves what consequences age stigmas have in the realm of oncogeriatry. Moreover, cancerous patients face pathology-related stigmas because nowadays cancer still conveys a lot of negative representations. METHOD: A group of 120 patients aged of 65 years old and more suffering from cancer (lung, breast or gynecological) will be followed during 1 year (0–3–6–12 months). Different instruments measuring quality of life, depression, symptoms, etc. are used as well as questions about their vision of aging and of cancer. Clinical parameters (weight, biologicals values, comorbidity…) are recorded too. Currently, we have 63 patients (31 breast cancer, 14 gynecological cancer and 18 lung cancer with distinction between smokers and non-smokers). Our analysis is only on the baseline at this moment, without any distinction between kinds of cancers. RESULTS: Double ANOVAS were used to analyze the data. A positive vision of aging is linked to a lower level of depression in comparison to a negative vision of aging ($p = 0.04$). Vision of pathology approach significance: less depression when vision is positive ($p = 0.077$). Concerning daily functioning (physical, emotional, social…), a positive vision of aging is related to a better functioning ($p = 0.03$) whereas vision of pathology has no effect. Eventually, a positive vision of aging and of cancer is related to a better quality of life (respectively $p = 0.02$, $p = 0.002$). Concerning clinical parameters, no results are observed. CONCLUSIONS: These first results suggest that the vision patients have themselves of the age and of cancer is in relation with subjective mental and physical health. As we observe influence on vision of aging as well as pathology, we can talk about "double stigmatization." Needless to say, more studies are needed to analyze the direction of these observation and longitudinal data analysis could bring some answers: is stigmatization provoke a less good mental and physical health or is it because I have health problem that I have a negative vision of aging and of my disease? RESEARCH IMPLICATIONS: Until now, a lot of studies have evaluated vision that elderly have of advanced age in "normal" aging: these first observations highlight the necessity to complete researches in aging complicated by a pathology as cancer. Moreover, it points the need to evaluate impact of double stigmatization for patients, in oncology but also in other realms as dementia, handicap…. The next important point would be to find a way to counter stereotypes. CLINICAL IMPLICATIONS: If vision patients have of aging or of pathology influence their mental and physical health, there are many clinical implications for general population (necessity to change our vision and to settle political measures for a more positive role of elderly) as well as for healthcare professionals (importance of formations specific to aging). Moreover, it can be used as a basis to build therapeutic approaches in the aim to reduce negative influence of stigmatization. ACKNOWLEDGEMENT OF FUNDING: This research has been possible thanks to F.N.R.S (FRESH grant).

P3-0133

Psychosocial Longitudinal Study Profile and Distress of Couples in Relation to the Conduct of Prostate Biopsy

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BACKGROUND: Partners of prostate cancer patients have been reported to suffer from high levels of psychological distress, although there are few reports of the changes in their distress levels observed before and after the diagnosis. This study constructed a longitudinal psychosocial database of prostate cancer biopsy subjects and their partners before and after the diagnosis. The purpose of this study was to elucidate a summary of the database when the study participants registered. METHOD: We distributed self-administered questionnaires to subjects scheduled for a prostate cancer biopsy and their partners on 4 occasions: prior to the biopsy, and 1, 3 and 6 months after being informed whether the diagnosis was cancer or not. The questionnaires included questions pertaining to the psychological distress, cancer-related worry and correlational factors. Registration in the database was conducted when both members of the couple had completed the first and second surveys. We elucidate a summary of them. RESULTS: Of the 240 couples who agreed to participate in the study, 184 couples completed the first and second surveys. Most of the participants of the prostate cancer patients group were in their seventh decade, however, in the other groups, most of the participants were in the sixth decade of life. While no significant differences in the levels of psychological distress were found among the participants before the biopsy, the prostate cancer patients and their partners had significantly higher levels of psychological distress as compared to the non-prostate cancer patients after the diagnosis. CONCLUSIONS: This study constructed a longitudinal psychosocial database of prostate cancer biopsy subjects and their partners. Our findings suggest that partners of prostate cancer patients might experience a similar psychological impact to the prostate cancer patients before and after the diagnosis. RESEARCH IMPLICATIONS: This longitudinal study can clarify change of couple's distress before and after being informed whether the diagnosis was cancer or not. CLINICAL IMPLICATIONS: Just as it is important to monitor the psychological distress level of the patients at their initial visit and at appropriate intervals thereafter as recommended in the guidelines, it may also be important to monitor the distress level of the partners and provide psychological care at the initial visit and at appropriate intervals thereafter. ACKNOWLEDGEMENT OF FUNDING: This work was supported by a Grant-in-Aid for Challenging Exploratory Research, MEXT KAKENHI, and a Health and Labour Science Research Grant from the Ministry of Health, Labour and Welfare.

P3-0499

Using Art Therapy for the Management of Anxiety in High Distress Cancer Patients

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BACKGROUND: Anxiety is a difficult psychological issues among cancer patients. Cancer patients might feel anxious regarding their adjustment, recovery and fear of relapse. Most of these complex feelings are difficult to articulate. Art therapy, as an in-depth psychotherapy proved to be an effective method of expressing feelings in a non-verbal way (Zammit, 2001). The purpose of this experiment was to test whether a brief and structured art therapy programme could be helpful for anxiety management. METHOD: A group of nine cancer patients were recruited for a structured art therapy programme with a total of seven weekly sessions and three follow up monthly sessions, with each session being two and half hours in duration. All cancer patients were diagnosed within the last 2 years. The Chinese version of the Hospital Anxiety and Depression Scale (Zigmond & Snaith, 1983) was used to measure the levels of anxiety and depression in each session. RESULTS: Results showed that anxiety levels were reduced after the art therapy treatment. Anxiety scores of four participants (45%) were reduced from clinical range (above 8) to non-case range (below 8). Two participants (22%) also had decreases in scores. Two cases (22%) remain unchanged. Unfortunately one participant passed away after attending 2 sessions of art therapy due to a critical health issue. Overall, the result showed that the anxiety levels of 6 participants (67%) were reduced. CONCLUSIONS: Anxiety can affect the quality of life of cancer patients significantly. A brief and structured art therapy programme can effectively support the clients to manage their anxious feelings through the creative art making process and the therapeutic relationship with the art therapist. By using nonverbal expression, the unarticulated feelings can be addressed and thus the anxious feelings can be released. RESEARCH IMPLICATIONS: There was a trend of anxiety levels reducing and becoming stabilized among cancer patients while using art therapy. Future studies with a control group would be helpful in clarifying the effectiveness of using art therapy for anxiety management. Moreover, other variables of interest such as depression and quality of life can also be examined in future study. CLINICAL IMPLICATIONS: Although art therapy has its roots in in-depth psychotherapy, this study has shown that using it as a brief therapy can be helpful for anxiety management. The non-verbal expression of feelings during the art making process was unique for clients with difficulty articulating their feelings. Hence, more art therapy services could be provided for cancer patients to facilitate them making sense of their feelings regarding their cancer journey through the creative and therapeutic process. ACKNOWLEDGEMENT OF FUNDING: Hong Kong Cancer Fund.

P3-0511

Therapeutic Qualities of the Environmental Music Therapy During the Administration of Chemotherapy

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BACKGROUND: This research uses environmental music therapy as non-invasive intervention, which involves the intentional use of music and sound to modulate the environment or context in the treatment room. In addition, our research aims to compare whether participation in environmental music therapy sessions, during the administration of chemotherapy, provides significant differences in mood level, side effects and quality of life in cancer patients when compared with a control group. METHOD: Sessions include selected musical pieces based on the pre-intervention observations and during the music therapy, the conditions of the physical space, noise level or the preferences of patients. The musical repertoire will consist of a wide range of musical styles and improvisations that are familiar and recognizable, and repetitive melodies with little change to foster security and predictability. Sessions will be conducted by pairs or groups of three professional musicians who will play guitar, piano, voice, saxophone, violin and oceanic tambourine. RESULTS: 76 patients were included. Among the main effects caused by music, the feelings of comfort and relaxation, positive emotions and distraction were highlighted. After the music therapy session, significant differences in levels of anxiety, sadness and emotional wellbeing are observed. In addition, we observed an inverse relationship between the subjective perception of time and the degree of satisfaction with the healthcare team, which is related positively to the desire that environmental music therapy is included in the next treatment session. It also relates positively satisfaction with the session and the degree of satisfaction with the healthcare team. CONCLUSIONS: Environmental music therapy was able to transform the acoustic environment in which the patient and the medical staff were and the experience that the patient was receiving at the time of chemotherapy treatment. In this sense, the live music was effective in reducing anxiety states, sadness and emotional well-being improvement. On the other hand, the use of environmental music therapy is related to an improvement in satisfaction with the provided care, which directly affects the quality of the service. RESEARCH IMPLICATIONS: Our

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study may be a novelty if we take into account the limited number of investigations in this field. Furthermore, our results could be extended to other studies that include other clinical situations (radiation therapy treatment, patients at the end of life, waiting rooms, etc.) and to include other participants as recipients of healthcare scene (primary caregivers, family and healthcare team) and will help in preventing burnout and improving the working environment. CLINICAL IMPLICATIONS: In general, our study will reveal whether, after environment music therapy intervention, advantages can be obtained in the clinical setting such as improving the quality of life, facilitating adaptation and coping treatment and satisfaction with the health care system. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0129

Quality of Life, Psychosocial Functioning and Sexuality in Breast Cancer Patients at Different Phases of the Disease and Treatment

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BACKGROUND: Similarly to what happens in other industrialized countries, breast cancer is the most common form of cancer among Portuguese women and the second leading cause of female cancer death, exceeded only by lung cancer. The aim of this study was to assess the quality of life, psychosocial functioning and sexuality in breast cancer patients, in different phases of the disease and treatment. METHOD: The study, still ongoing, includes breast cancer patients (roughly 150) followed in the Psycho-oncology (Psychiatry and/or Psychology) consultations of São João Hospital's Breast Centre, in Porto, Portugal, during March 1st and July 31st 2014. Quality of life (QoL), psychosocial functioning and sexuality will be assessed using anonymous questionnaires. Participation in the study is voluntary, and patients will be informed about the proceedings. Standardized EORTC QLQ-C30 questionnaire for quality of life assessment in cancer patients and QLQ-BR23 module for breast cancer patients will be used. Descriptive statistics (SPSS 22.0) will be performed. RESULTS: Data for this study is still being collected and analysed. The EORTC QLQ-C30 has 30 items from which we will evaluate the following subscales: global health status, physical functioning, emotional functioning, cognitive functioning, fatigue, and social functioning. We will also use the EORTC BR23 to measure body image, sexual functioning and systemic therapy side effects. We will compare these items according to age group, socio-demographic status, disease phase and stage, follow-up time after diagnosis, type of surgery and type of adjuvant therapy. CONCLUSIONS: Data for this study is still being collected and analysed. RESEARCH IMPLICATIONS: The results of this study will contribute to a better knowledge of the impact of breast cancer on the QoL of Portuguese woman in different phases of the disease trajectory, help identify factors of risk/protection, as well as give important information about the effect of different treatment modalities on sexuality. CLINICAL IMPLICATIONS: The results will be helpful in developing more effective psychological interventions, tailored to the particular needs and difficulties experienced in the various phases of the disease and treatment. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0523

Education and Training in Psyco-Oncology: A Experience of e-Learning

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BACKGROUND: Report the experience of an e-learning Lato Sensu specialization course in Psycho-oncology, offered since 2008 by the Instituto de Pós-Graduação (IPG) of FELUMA (Fundação Educacional Lucas Machado), with the support of the Sociedade Brasileira de Psico-oncologia (SBPO). The course purpose is to train health professionals on offering a comprehensive and humane care to those affected by cancer in different phases of the disease. METHOD: The workload was distributed in 357 hours of distance activities in the virtual learning environment Moodle and 63 previously scheduled hours of personal meetings. Within the academic activities, three symposiums with various themes were held. In addition to this workload, 120 hours of compulsory professional practice were also provided. The disciplines were Introduction to psycho-oncology, Basics of Oncology, Interventions in psycho-oncology, Pediatric psycho-oncology, Spirituality and cancer, Palliative care, bereavement and terminally, Bioethics, Attention to caregiver, Scientific methodology and supervised professional practice. RESULTS: Currently, the seventh class is in progress, and the sixth class is ending the monographs, and the course has qualified more than 50 professionals in 21 states of the country. Several are already acting professionally in the area. CONCLUSIONS: The e-learning stimulates the process of active learning, as the student builds their learning, seeking what makes sense to him, unlike the passive education, where students do not always interact with the content. Thus, the effectiveness on the formation of psycho-oncologists has been shown, once the IPG/FELUMA graduatesare being distinguished in the labor market. RESEARCH IMPLICATIONS: The offered disciplines foster extensive knowledge on the sub-

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ject and the stakeholders interaction and dialogue has contributed to research interest in the psychological and social relevant variables to the understanding of the moment of incidence, the recovery and the survival after a cancer diagnosis, within ethical precepts. CLINICAL IMPLICATIONS: The mandatory practice under the supervision of a qualified professional, contributes to the formation of an ethical and responsible psycho-oncologist, ready to work in the prevention, during the treatment and rehabilitation or in the terminal phase of the disease, besides to monitored the family after the patient's death. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0504

REVIDA – Psychological and Emotional Support Program for People Diagnosed With Cancer

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BACKGROUND: ReVida is a center for psychological and emotional support to people diagnosed with cancer. OBJECTIVES: To welcome and support patients in recovering their physical, emotional, mental, and spiritual balance, encouraging them to pursuit self-knowledge and explore new paths towards a more meaningful life. ReVida's purpose is fully focused on the recovery of emotional, physical, and psychological vitality. METHOD: All exercises are based on the works of Carl Simonton, Lawrence Leshan, and Michael Lerner: meditation, visualization, active imagination, relaxation, body awareness exercises, art therapy, and group dynamics for self-development and integration.
RESULTS:

- Increased focus. Patients learn to acknowledge, accept, and cope with their emotions and concerns.
- Behavior change. Patients return to their normal activities and find new ones.
- The development of new attitudes in order to achieve more quality of life, reviewing family relationships, committing, and cooperating with treatment.
- The identification and reflection on often unconscious aspects that keep them from achieving their goals and projects directed towards a more authentic and meaningful life.
- People stop being patients of life itself and become active agents of their own health.

CONCLUSIONS: After participating in the program, the patient regains his/her physical, emotional, mental, and spiritual balance, exploring new paths towards a fuller and better quality life. RESEARCH IMPLICATIONS: Assessment Questionnaires show that, after participating in ReVida program, patients exhibit an apparent improvement of their condition to cope with the disease. Patients report their satisfaction and the improvement in their emotional state. CLINICAL IMPLICATIONS: Many of the traditional medical treatments focus on the physical aspects of the disease, forgetting its emotional impact on the patient. This work attempts to complement medical treatment and the work of other health professionals. Patients who participate in psychological treatments reveal better adjustment to the disease, reduction of emotional disorders (such as anxiety and depression), and improvement in their commitment to treatment. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0148

Coping Strategies and Self Efficacy as the Mediator of the Quality of Life in Cancer Patients

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BACKGROUND: Coping strategies have been frequently described in psycho-oncology as playing central role in patient's well being, this is to evaluate the effect of type of coping strategies and understand coping strategies specific to different phases of disease, to investigate the role of self-efficacy in Quality of life of patients, to examine relationships among perceived control self-efficacy, and causal attributions in adjustment and Quality of life for cancer patients. Initial assessment of the validity and reliability the above mentioned scales in different community. METHOD: Mixed method (Qualitative & Quantitative) was used, two hundred of cancer patients, age 17–60, M&F were recruited for Quantitative and 13 for qualitative. Two hundred of cancer patients with various types of cancer. Age 17–60 and both gender will be recruited. TOOLS: Questionnaires using the Ways of Coping Inventory-Cancer Version, Self-Efficacy Scale-cancer version (Schwarzer, 1992) and Quality of life scale-(Cohen et al., 1995) Cancer version will be used. Data were analyzed using SPSS computer software and qrounded theory for Quantitative data. RESULTS: The subgroups of the ways of coping were: Cognitive escape-avoidance distancing on QOL highly significant; $F = 5186$, $p = 0.000$. The role of each parameter was significant for Distancing ($p = 0.003$), Cognitive escape avoidance ($p = 0.005$), Behavorial Escape-avoidance (0.026). The effect of focus on the positive was not significant ($p = 0.107$) and Seek and use social support ($p = 0.967$). The effect of type of disease on QOL was significantly affected by the type of disease (p 0.009). The effect of treatment was significant on QOL (p 0.0001) the effect of gender was (p 0.007)

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and age (0.04). the GSE used 10 scale ranged from 1.9 to 11.4% average 6.5%. GSE showed strongest contribution to explain QOL effect (0.004), WOC and religion showed less (*p* 0.09) and (0.959). CONCLUSIONS: Applying these coping strategies is significantly reducing the psychological distress in most of the cancer patients pairing in mind different type of personality and culture effects. This will in turn have a positive impact on Quality of life. Our study shed light on the significance of applying different type of coping strategies in patients with cancer and the influence of self efficacy on human functioning. RESEARCH IMPLICATIONS: Based on findings a number of areas that warrant future research First replication of the study using a larger sample would provide adequate predictors, use longitudinal designs will provide more accurate picture of how mediators predict and evolve QOL over time, there is a need to study populations that are diverse with respect to race and sexual orientation. In this study, the racial makeup was considered one of the weaknesses, diverse sample would allow for greater generalization to a diverse population. CLINICAL IMPLICATIONS: To improve QOL of cancer patients, researchers in the future are advised to pay more attention to the following aspects: Using a variety of learning strategies including discussions, demonstrations, goal setting, contracting, modeling, mental practice, homework, recall-enhancing methods, workbooks, texts, and videotapes, and provide mutual aid and support. Involving significant others, such as spouse or family members, and encourage collaboration with other health care providers and self-efficacy of caregivers. Applying encouragement, persuasion, and direct or indirect support for the desired changes. Using both individual and small-group intervention approaches, especially collaborative and active participation strategies. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0228

How to Theorize Everyday Life With Cancer?

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BACKGROUND: Health care institutions have a big role when someone is diagnosed with cancer. However, in reality the diverse psychosocial influences of cancer become concrete and visible outside the medical environment where people actually *live* their *everyday life*. This makes everyday life analysis evidently valuable to psycho-oncology research. The aim of the presentation is to view everyday life from theoretical perspective: how to theorize everyday life with breast and prostate cancer? METHOD: The study takes a social-scientific perspective, and can be seen as an addition to the qualitative health research field. Theoretical background is in social constructionism and methodological choices are interdisciplinary and widely used in qualitative research. The main methodology balances between discursive illness research and experience of illness. The data was gathered through a public call for writings in 2009. The data consists of anonymous texts written by Finnish women and men with breast and prostate cancer and their loved ones. RESULTS: This is an early stage working paper and it is a part of a larger dissertation research studying how people with breast and prostate cancer and their loved ones define illness and everyday life. This paper utilizes current research on everyday life and the data gathered throught the public call for writings to theorize the everyday life with cancer. CONCLUSIONS: In the context of everyday life, the illness is seen as an experience that disrupts the routines and "normality" which causes the individuals, their families and wider social networks re-arrange their customary actions. RESEARCH IMPLICATIONS: The paper aims to induce discussion on theorizing everyday life with illness and how it could impact the individual and the society. CLINICAL IMPLICATIONS: The abstract is directed especially to onchology social workers and other professionals whose work focuses on supporting the people living with cancer outside the medical environment. ACKNOWLEDGEMENT OF FUNDING: None.

TUMOR SITE SPECIFIC ISSUES

P3-0494

Psycho-Social, Quality of Life and Medical Factors as Predictors of Survival in Patients With Brain Tumors

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BACKGROUND: The 5-year survival rates for malignant brain tumors are the third lowest among all types of cancer. The prognosis depends on the histology, the glioblastoma multiforme (grade IV) is the very aggressive tumor, with median patient survival ranging from 1 to 3 years, it's also the most common (80–85%) of brain tumors. The objective is to analyze the predictive survival value of a set of medical, psychological and functional variables in patients with glioma. METHOD: 135 patients new diagnosed with histological diagnosis of glioma were included. Average age: 55.4 years (SD: 1.15), male: 62%, Histological diagnosis: 96 Glioblastoma (GB) (71%), 23 Anaplastic astrocytoma (17%) (AA), 15 low grade I-II (12%). Mental status, distress symptoms and QoL assessments was performed on 2 times: 1 month after the surgical intervention and 4 months after initial assessment. The following psychological tests were used: Mini-Mental State Exam (MMSE) Spanish version, the Karnofsky Performance Status (KPS), the Barthel Index, the EORTC QLQ-C30 and the Hospital Anxiety and Depression Scale (HADS). Statistical analyses were descriptive and Multivariable Cox proportional hazards model. RESULTS: 135 patients were included, 97 died subjects in the moment of analysis, Median Overall Survival was 16.09 months (GB grade IV: 13.14 m; AA grade III: 16.62 m). The results showed on the baseline there were several variables statistically significant to predict patient survival ($p < 0.05$): histological grade, age (older than 45 years), performance status and quality of life. Only with 96 patients diagnosed of gliobastoma grade IV on baseline, the type of total resection, performance and mental status and QoL was statistically significant variables as survival predictors ($p < 0.05$). Besides on the second assessment only performance and mental status was significant ($p < 0.01$). CONCLUSIONS: Among the variables studied, the histological grade is the most significant factor in prediction of survival, but patient mental status and QoL is important too. We need to include psycho-social and QoL in the follow-up of patients with glioma, in order to best understand the relationship between medical and psycho-sociological factors and the patient survival. RESEARCH IMPLICATIONS: It gives us information about the medical and psycho-sociological variables that can explain the patient survival and more knowledge about the develop of illness. CLINICAL IMPLICATIONS: The knowledge of most significant variables in prediction of survival in patients diagnosed with glioma. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0165

Quality of Life and Psychosocial Adjustment in Colorectal Cancer Patients with Stoma and Nonstoma

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BACKGROUND: This study had been conducted with the aim to determine quality of life and psychosocial adjustment of colorectal cancer patients with stoma and nonstoma and to evaluate the relationships between these factors. Factors in the study were compared in terms of some sociodemographic and illness factors. METHOD: 60 colorectal cancer patients contributed to the study. Participants were given a personal information form, EORTC QLQ-C30 quality of life questionnaire, EORTC QLQ-CR38 quality of life questionnaire and Psychosocial Adjustment to Illness Scale. T-test and Mann–Whitney-U tests were used in the evaluation of differences among these groups. Spearman correlation was used in the evaluation of relationships between factors. RESULTS: According to the results, patients with stoma were found to be different from the nonstoma group in terms of global health status, physical functioning, cognitive functioning, micturition problems, chemo side-effects, gastrointestinal problems and weight loss and in terms of psychosocial adjustment, domestic environment and psychologic distress. Other factors were similar in the two groups. Although psychosocial adjustment of the two group is moderate, patients with stoma is significantly worse than patients without stoma. Patients with stoma have more problems with family and psychological adaptation than nonstoma patients. In addition, there are positive correlations between quality of life and psychosocial adjustment. CONCLUSIONS: Patients with stoma were found to be different from the nonstoma group in terms of some quality of life and psychosocial adjustment aspects. Patients with stoma have more problems in quality of life and psychosocial adjustment than nonstoma patients. RESEARCH IMPLICATIONS: This study is the first comparing study about stoma and non stoma patients with colorectal cancer in Turkey. We need more study in our country with this subject. CLINICAL IMPLICATIONS: Oncology clinics in a multidisciplinary approach to treatment are recommended to include experienced psychologists and psychiatrists about psycho-oncology and taking into account problems during the treatment of cancer patients with stoma, the planning of training and counseling services should be continued by them. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0641

Sleep Disturbance and Uncertainty Before Surgery in Patients With Oral Cavity Cancer

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BACKGROUND: Oral cavity cancer is one of the leading cancer in male in Taiwan. Surgery has been identified as the most effective treatment in this population. The purposes of this study were to (1) explore the levels of uncertainty, physical distress, and sleep status in pre-operative oral cavity cancer patients; and (2) examine the relationship between

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sleep disturbance and above mentioned factors. METHOD: A cross-sectional correlation study was conducted to recruit pre-operative oral cavity cancer patients in a medical center in Taiwan. Patients' sleep status, uncertainty, symptom severity were assessed two days before patients' surgery. Patients were assessed using: (1) Mishel's Uncertainty in Illness Scale (MUIS), (2) Symptom Severity Scale (SSS), (3) Brief Fatigue Inventory (BFI), (4) Sleep Disturbance Questionnaire (SDQ), and (5) Background Information Form. RESULTS: Patients reported to have moderate to high levels of uncertainty and sleep disturbance. For patients' uncertainty, there were 4 items with mean scores higher than 3. Patients reported to have mild to moderate levels of symptom severity and fatigue. Patients had higher levels of symptom severity, fatigue intensity, fatigue interference, and uncertainty were found to be related to worse sleep quality. CONCLUSIONS: Uncertainty and sleep disturbance are two major distress to oral cavity cancer patients before surgery. Health professionals should assess and intervene these problems before surgery. RESEARCH IMPLICATIONS: Uncertainty and its influence before cancer surgery should be further examined and followed to develop a more comprehensive intervention. CLINICAL IMPLICATIONS: Systematically assess cancer patients' uncertainty and sleep disturbance clinically before surgery is important to facilitate patients' life quality. ACKNOWLEDGEMENT OF FUNDING: This study was partly supported by the grant to Professor Yeur-Hur Lai from the Ministry of Science & Technology grant support (MOST) in Taiwan.

P3-0516

Why Are Head and Neck Cancer Patients "Resistant" to Change Their Health Behaviours? Patients' Perspectives on the Matter

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BACKGROUND: It has been shown that behaviour change with respect to smoking and alcohol consumption is second only to stage as prognostic for recurrence in head and neck cancer (HNC) patients. It is also well known that achieving behaviour change is very difficult for healthy people let alone people who have recently been diagnosed with a life-threatening illness. METHOD: Based on the Ottawa Model of Research Use, this study aims at better understanding barriers and facilitators to health behaviour change in HNC patients. This qualitative study conducts focus groups with HNC patients following standards of practice and respecting criteria for methodological rigour. Patients eligible to participate have been diagnosed with a primary HNC (TNM Classification) within the past 2 years and are selected using maximum variability sampling on axes of gender, age, cancer stage, and health behaviour status (smoking, alcohol misuse). Recruitment is done through two university-affiliated health centers. RESULTS: Apart from presenting preliminary data on health behavior change in 97 HNC patients from our Fonds de recherche Québec-Santé (FRQS)-funded study and reviewing the current literature on health behavior change in oncology, this presentation will cover themes elicited in the focus groups in the following areas: health care providers, coping with a life-threatening illness, illness course and anti-cancer treatments, and interpersonal relationships outside the medical system (family, friends, co-workers, neighbours, society). CONCLUSIONS: Providing excellent medical care includes engaging patients in making healthier lifestyle decisions, which can potentiate our anti-cancer treatments and impact our patients' wellbeing. Addressing health behaviours in head and neck oncology can be particularly challenging and commends close attention to the delicate context of a life-threatening illness and its related challenges. RESEARCH IMPLICATIONS: This study underlines barriers and facilitators of health behavior change in head and neck oncology, paving the way to designing a future trial addressing health promotion in this population. CLINICAL IMPLICATIONS: A careful assessment of barriers and facilitators to behavior change is an important first step in implementing strategies maximizing the likelihood of behavioral change in HNC patients. ACKNOWLEDGEMENT OF FUNDING: This study has been possible through funding from the Fonds de recherche Québec-Santé (FRQS), from which the Principal Investigator is also awarded a Clinician-Scientist Salary Award.

P3-0388

Anxiety and Depression Among Women With Cervical Cancer

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BACKGROUND: The prevalence of depression and anxiety in oncologic patients varies, depending on the type of tumor and its localization, diagnostic criteria and the difficulty in distinction of vegetative depression and anxiety symptoms and symptoms of cancer or symptoms arising as a result of applied

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therapeutic modalities. METHOD: The aim of this study was the assessment of the influence of the type of treatment for cervical carcinom, as well as personality dimensions on the levels of anxiety and depression before, 3 and 6 months after starting treatment: surgery (total hysteresctomy combined with cytostatics) or radiotherapy combined with cytostatics. We also compared the obtained results with control subject consisting of women who underwent cholecistectomy. Standard psychometric instruments employed included the Hamilton scale for anxiety, the Hamilton depression scale, Minnesota Multiphasic Personality Inventory (MMPI) and Eyseneck Personality Inventory (EPI). RESULTS: Most of subjects with cervical cancer presented high anxiety scores before starting the treatment- radiotherapy combined with cytostatics. Subjects with high levels of anxiety and depression had high scores on neurothic scales of MMPI. CONCLUSIONS: This study showed that the frequency and intensity of psychological problems (anxiety and depression) among women with cervical cancer increased during treatment, specially among subjects whose cancer were not extirpated. RESEARCH IMPLICATIONS: None. CLINICAL IMPLICATIONS: Influence on diagnostic and treatment procedure among women with cervical cancer. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0569

Hematologic Side Effects of Psychotropic Drugs in Cancer Patients

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BACKGROUND: A good psychopharmacologist is he who knows not only the effectiveness of medication but also the adverse reactions. Among these, the hematologic side effects are often neglected but are of extreme importance in the cancer patient. One of the factors that contribute to the lack of attention to these adverse reactions is the scarce literature. The aim of this work is alert to the hematological adverse reactions and what are the main psychoactive drugs involved. METHOD: Review of relevant literature by a research in pubmed and medline. RESULTS: Cancer patients have multiple risk factors for hematological adverse effects, with chemotherapy being one of the more frequent. Treatment with psychoactive drugs also entails hematologic adverse reactions. When it comes to agranulocytosis the first drug that comes to mind is clozapine, but this is just more newsworthy. All antipsychotics carry this risk, being more frequent with the typical. With regard to atypical, hematologic reactions are described for all of them. When it comes to antidepressants and mood stabilizers, there are particularities for each drug, being agranulocytosis a common risk, but not only in the case of mood stabilizers. CONCLUSIONS: Hematologic adverse reactions of psychiatric drugs are serious and life-threatening consequences, which must be in the mind of every psycho-oncologist, and must be part of the differential diagnosis of hematologic advents in each cancer patient, not assuming right in the beginning that the cause is chemotherapy. RESEARCH IMPLICATIONS: This study draws attention to the need for further research concerning the hematologic adverse reactions of psychiatric drugs, because the investigation is limited to certain drugs, such as clozapine, or is limited to case-reports. CLINICAL IMPLICATIONS: This study hopes to capture more attention from psycho-oncologists to their daily clinical practice in the sense that they begin to consider an adverse effect of psychiatric drugs in a cancer patient with neutropenia. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0562

Lung Cancer Patients' Metaphors for Phenomena of Avoidance and Denial of Illness

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BACKGROUND: Health care professionals in their clinical work with patients with life threatening illness, such as lung cancer, observe mostly the extreme and dysfunctional forms of denial which potentially could lead to less efficient treatment compliance. Less extreme forms of denial are often overlooked and therefore less understood. Patients' metaphors for phenomena of avoidance and denial of illness are presented. METHOD: The subject of this study is part of larger study on the nature of psychological distress in patients with inoperable lung cancer using combination of two qualitative methodological approaches: an interpretative phenomenological analysis and the constructivist grounded theory. 51 patients, 33 of them followed longitudinally from the diagnosis until at the most 1 year after were selected from two tertiary oncological settings in middle-eastern European country. Here are presented three case studies of patients' avoidance' and denial's illness metaphors. RESULTS: The first metaphor was "closing eyes down" and is specific because it was explained by patient watching other patients function like that. Since the most extreme form of denial (what I don't see, doesn't exist) works on unconscious level, is

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not surprising it didn't come from patients itself. The second metaphor was "lintel with respect" and can be understood as disavowal, subconscious self-deception in the face of accurate perception. The third metaphor was "to almost throw behind the ear" and can be explained as avoidance strategy (consciously look through unpleasant thoughts about illness being still aware of them). CONCLUSIONS: Careful analysis of patients' metaphors revealed there are different faces of denial and avoidance mechanisms which can rather be understand on continuum than all or nothing phenomena more often used in clinical praxis. It also revealed specific function or individual logic behind each mechanism including components such as the level of awareness of long-term illness prognosis and consequent experience and expression of emotional distress triggered by illness. It was also shown these mechanisms can coexist with other ones, such as fighting spirit, which emphasizes the importance of understanding these mechanisms not only microscopically but also on their macro level. RESEARCH IMPLICATIONS: The research implications of this small number case study are of qualitative nature. Patient's logic behind the coping strategies and defense mechanisms could be analyzed on different levels: perceptual, cognitive, emotional, physical. Thorough analysis of patients' explanations behind used mechanisms could help the researchers planning more carefully and sensitively the future research interviews about these mechanisms with patients. CLINICAL IMPLICATIONS: The clinical implications of understanding the patient's logic behind the coping strategies and defense mechanisms could possibly influence the development of more sophisticated approaches toward patients using less functional defense or coping mechanisms. Since the patient's use of these mechanisms is connected with their awareness of long-term illness prognosis, better insight into patients' logic behind these mechanisms can shed light also on patients' understanding of physicians' ways of communicating short and long-term illness prognosis. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0019

The Global Lung Cancer Coalition: Finding Common Ground in Our Diversity

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BACKGROUND: Since 2001, the Global Lung Cancer Coalition (GLCC) has been the international "voice" of lung cancer, committed to awareness raising and de-stigmatizing the disease. The activities of the 31 member organizations vary greatly as does the status of lung cancer in their 21 countries. What can a diverse coalition do to raise international awareness and benefit all members? Examining GLCC's structure and activities provides answers and may guide the creation of other international cancer coalitions. METHOD: Under a single sponsor and third party oversight, GLCC was created when universal challenges united five organizations. In 2005, the coalition assumed secretariat duties, allowing for funding diversity and better financial stewardship. GLCC is loosely structured with an in-person annual meeting and *ad hoc* committees. The Board of Directors is comprised of representatives of member organizations. Lung cancer specific organizations as well as general cancer and lung organizations with a dedication to lung cancer are welcome. New members are referred by current members or apply independently. Those from countries with existing membership must prove a unique perspective to be considered. RESULTS: GLCC is geographically diverse and the annual meeting is held on rotating continents, allowing most countries to be represented at each meeting. Member missions also vary and include prevention, patient's rights, smoking cessation/bans, research, advocacy, support and education. Members participate in joint activities, including information translation, contribution of website, social media and newsletter content, organizing awareness month events and bestowing journalism awards. A market research company completed two surveys in member countries on lung cancer-related issues, with results presented at international conferences. Members also collaborate on smaller projects, such as polling lung cancer support group facilitators on three continents. CONCLUSIONS: According to the 2011–2012 *European Patient Group Directory*, over 175 international patient organizations focus on topics from addiction to thalassemia. International cancer groups are less than 11% of that total, many of which are not cancer-specific and are primarily exclusive to Europe, online-only and/or informal in structure. GLCC shows that even in the case of a stigmatized cancer of poor prognosis, it is possible to have a productive and mutually beneficial international collaboration with disease-specific goals and activities, despite diversity in membership mission and geographic focus. RESEARCH IMPLICATIONS: There are known benefits to building international health coalitions but the true impact of groups like GLCC on its member organizations and the populations they serve is unknown and worthy of study. Researchers should consider using GLCC as a resource to understand and study the international lung cancer patient perspective on important topics such as how support-seeking behaviors, access issues or response to the diagnosis vary between countries and cultures. CLINICAL IMPLICATIONS: The coalition provides invaluable access for the sharing of practices and the global exchange of information and ideas. The opportunity to discuss mutual challenges and creative solutions may in turn lead to improved services and resources for use by members to the global lung cancer community at-large. Inter-country collaborations may also translate into improved services for those affected by lung cancer within member countries. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0001

Don't Touch That . . . How Trait and Experimentally-Induced Disgust Predict Avoidance in Colorectal Cancer Scenarios

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BACKGROUND: Disgust evolved to minimise health risks; exposure to potentially risky bodily products (faeces) is par for the course in colorectal cancer. This experimental study investigated whether trait and manipulated disgust independently and/or interactively predicted immediate and anticipated avoidance in colorectal cancer decision scenarios. METHOD: Eighty participants, aged 18–66 years, completed questionnaires assessing trait disgust prior to a laboratory session. Participants were gender block randomised to disgust or control conditions before completing tasks assessing *immediate* avoidance in response to a commonly used bowel disease device (stoma bag) and *anticipated* avoidance in hypothetical CRC scenarios. RESULTS: Manipulation checks confirmed the elicitation of disgust in the experimental condition ($F(2, 77) = 4.40$, $p = 0.016$, hp2 = 0.10). Persons in the experimental condition were more likely to exhibit *immediate* avoidance behaviors in response to the stoma bag ($F(1, 76) = 4.06$, $p = 0.048$, hp2 = 0.05) while greater trait disgust predicted greater delay before touching the bag ($F(1, 58) = 4.50$, $p = 0.038$, hp2 = 0.07). Trait disgust also increased the impact of state disgust on *anticipated* avoidance, namely delay in seeking medical help for bowel symptoms ($c^2(3, N = 80) = 11.95$, $p = 0.008$), and predicted rating "disgusting" chemotherapy side effects as more deterring to adherence ($F(1, 76) = 5.18$, $p = 0.026$, hp2 = 0.06). CONCLUSIONS: Both trait disgust and experimentally-induced state disgust were associated with greater immediate avoidance, and trait disgust was associated with greater deterrence to "disgusting" side effects. Trait disgust also moderated the influence of state disgust on anticipated avoidance, suggesting that more disgust sensitive individuals are prone to avoidance when considering potential exposure. RESEARCH IMPLICATIONS: This study provides the first empirical demonstration that state and trait aspects of disgust may interactively influence avoidant decision-making and behaviour in colorectal cancer contexts. It suggests the importance of examining disgust and avoidance in a health context that has had surprisingly little focus to date. CLINICAL IMPLICATIONS: Targeted communications and/or interventions aimed at disgust sensitive individuals in colorectal cancer contexts may be warranted. Simply asking people how they feel about such matters, combined with messages that acknowledge and normalize disgust responses and/or provide coping strategies could potentially alleviate avoidant decision-making. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0154

Social Support and Disease Hematooncológica

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BACKGROUND: The protective effects of the social support on the health are known from long ago, as it is known that it is one of the most important resources opposite to the stress, so much of direct as indirect form, in view of his paper absorber. The general aim of this investigation was to value the influence of the social support for the adjustment to the disease, the forecast and the quality of life. METHOD: There informed 78 patients, 36 women and 42 men, with an average of age of 58 ± 16 years with diagnosis of lymphoma of Hodgkin, lymphoma of not Hodgkin, myeloma multiple and leukemia lymphoblastic chronic. The average phase of the disease corresponded to the stage 3. The variables of study were the level of stress and the strategies of confrontation (ISEAC), the anxiety and the depression (HADS), the social support (AS-25), the optimism (LOT-R) and the quality of life (SF-36). RESULTS: The results reflect that the social support is capable of influencing positively the forecast, explaining 50% of his variance. The major perception of social support was associated with the utilization of the most positive strategies of confrontation (minor stoicism and passive, major catharsis), minor levels of depression and better quality of emotional life. Specifically, the anxiety associated negatively to the quality of global life explaining 43% of his variance. CONCLUSIONS: This study reveals the benefits of the availability of the social networks during an event as stressful as the experience of a critical illness. The benefits not only demonstrate to emotional and affective level but also on the quality of life of the patient. RESEARCH IMPLICATIONS: Given the results, the near investigations might be based on the study of the efficiency of the interventions destined to promote the availability of social networks and facilitating the communication for a better adjustment to the cancer process and an improvement of the quality of associate life. CLINICAL IMPLICATIONS: The oncohematologic treatment should include the psychological advice emphasizing the social and emotional areas for an ideal confrontation of the disease and an improvement of the experience of the same one. ACKNOWLEDGEMENT OF FUNDING: None.

P3-0555

The Relationship Between Vagal Nerve Activity and Survival in Pancreatic Cancer Is Mediated by Inflammation: Some Hope

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BACKGROUND: Recent studies show that the vagus nerve has a prognostic role in cancer, and this is hypothesized to be due to its inhibition of inflammation, the “petrol” of cancer. This study examined whether vagal activity, indexed by heart-rate variability (HRV) predicts survival in pancreatic cancer, and whether this is mediated by reduced inflammation. METHOD: We used a historial prospective design, where HRV was derived from existing EGCs of 272 Belgian patients with advanced pancreatic cancer. Their overall survival was ascertained by the national registry. C-reactive protein (CRP) was obtained as an inflammatory marker. Effects of confounders such as treatment and age were considered. RESULTS: Patients with relatively high HRV for cancer patients (SDNN > 20) survived double the days as those with low HRV. In a multivariate analysis, HRV significantly predicted survival, independent of confounders. However, CRP was related to both HRV and to overall survival, and when adding CRP to the analysis, HRV no longer predicted survival. Finally, in patients with short survival (<30 days), HRV was unrelated to CRP, while in those with longer survival, HRV was significantly inversely related to CRP. CONCLUSIONS: This is the first study showing that vagal nerve activity predicts survival in a severe cancer, and that this is mediated by inflammation. Furthermore, neuroimmunomodulation seems to be related to longer survival. The effects of vagal activation on cancer prognosis needs to be tested. RESEARCH IMPLICATIONS: The results support the hypothesized neuroimmunomodulatory role of the vagus nerve in cancer prognosis. CLINICAL IMPLICATIONS: Results suggest that studies need to test whether activating the vagus nerve can reduce cancer-related inflammation and improve prognosis. ACKNOWLEDGEMENT OF FUNDING: The study was supported by “Reliable Cancer Therapies.”

P3-0260

Barriers to Help-Seeking Amongst Obese Women With Symptoms of Gynaecological Cancers: A Healthcare Professionals’ Perspective

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BACKGROUND: Obese women are reported at higher risk of developing some gynaecological cancers than non-obese women. Weight-related barriers contribute to delay in healthcare utilisation, however, specific factors that may contribute to late presentation have not been examined. The aim of this presentation is to compare the perspectives of healthcare professionals (HPs) with patients’ experiences to explore barriers and gaps in HP knowledge regarding the help-seeking behaviour of obese women presenting with potential symptoms of gynaecological cancer. METHOD: Interviews were undertaken with twenty UK-based specialist gynaecological and oncology service HPs and seven obese female patients. Semi-structured interviews explored perceived weight-related and cultural barriers of obese women presenting with abnormal gynaecological symptoms, and identified potential interventions to improve help-seeking behaviour amongst this population. Interviews were transcribed verbatim. The HP study was analysed using the “framework” method and Interpretive Phenomenological Analysis for the patient study. Key themes were compared across the two studies. RESULTS: Five main themes emerged as “HP perceived” and “patient experienced” barriers amongst this population: Low Body-Esteem, Low Awareness of Gynaecological Cancer Risks/Symptoms, Sociocultural & Economic Barriers (i.e., language, religious & cultural values), Obesity as Physical Barrier (i.e., mobility, symptom recognition/interpretation difficulties), and HP Judgmental Attitudes. Suggested interventions included community education (e.g., distribution of risk/symptom information through media), and effective doctor-patient communication addressing increased risks associated with obesity. CONCLUSIONS: In summary, results highlighted individual and cultural influences to help-seeking for gynaecological cancers. This study enhances understanding for potential delay in this population and the importance of HP knowledge in this area. RESEARCH IMPLICATIONS: This research is timely given the current obesity public health concern and its association with increased risk, morbidity and mortality for some cancers. Although reducing levels of obesity is preferable, the current situation demands a focus on improving help-seeking behaviour amongst obese women to improve survival outcomes. This study builds foundation for larger patient focused research to explore sociocultural

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factors in more depth (i.e., across ethnicities/cultures) and develop predictors of delay in this population. CLINICAL IMPLICATIONS: Findings from this study provide a first step in a plan of work to inform the development of a culturally sensitive intervention to improve help-seeking amongst obese women. Interventions have been suggested by healthcare professionals to target community and primary care settings and will be further explored in future research investigation the patient perspective of help-seeking amongst obese and overweight women with symptoms of gynaecological cancers. ACKNOWLEDGEMENT OF FUNDING: None.

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