

PAPER ABSTRACTS OF THE APOS 8TH ANNUAL CONFERENCE

1-1

Patient Satisfaction With Cancer Care and Adherence to Medical Follow-Up and Prevention Behavior Recommendations: A Study of Long-Term Colorectal Cancer Survivors

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PURPOSE: This study was conducted to investigate the relationship between colorectal cancer survivors' satisfaction with medical care and adherence to guidelines for follow-up care and prevention behaviors. **METHODS:** Five hundred ninety-three individuals diagnosed with colon or rectal cancer 5–7 years prior to the study were identified through California Cancer Registry records and participated in a cross-sectional survey of prevention behavior after cancer. Patient satisfaction was measured by a modified version of the Short-Form Patient Satisfaction Questionnaire (PSQ-18; Marshall and Hayes, 1994). Adherence to clinical guidelines for follow-up care was assessed through a series of questions on the timing and frequency of routine checkups, colonoscopy, mammography, and Pap testing. Adherence to prevention behavior was assessed through questions about exercise, nutrition, alcohol consumption, smoking, and body weight. **RESULTS:** Most survivors reported general satisfaction with their cancer care. Adherence to clinical guidelines for follow-up care ranged from approximately 50% for Pap testing to over 90% for routine checkups. Adherence to recommendations for prevention behaviors ranged from under 10% for exercise to over 90% for alcohol. General satisfaction was positively related to adherence to clinical follow-up recommendations although there was no relationship between satisfaction in specific domains of care (e.g., communication) and adherence. Further, the number of recommendations survivors remembered receiving from their doctors was positively related to adherence and to satisfaction, but this measure of doctor communication did not mediate the satisfaction-adherence relationship. In contrast to the findings regarding adherence to follow-up, no relationships were found between general satisfaction and adherence

to prevention behavior recommendations. **CONCLUSIONS:** The findings indicate that general satisfaction with cancer care is modestly related to survivors' adherence to clinical guidelines for follow-up but not to prevention behavior guidelines. **RESEARCH IMPLICATIONS:** Given a link between patient satisfaction and adherence to follow-up behaviors after cancer, future work could more closely investigate precursors of satisfaction among cancer survivors as well as the effects of dissatisfaction on survivors' health practices. **CLINICAL IMPLICATIONS:** The findings of this study reiterate the importance of patient satisfaction and its potential influence on uptake and maintenance of health behavior after cancer. **FUNDING:** Internal CDC funding.

1-2

Meeting the Changing Emotional and Educational Needs of Breast Cancer Patients

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PURPOSE: Research has demonstrated that physical and emotional support can improve a breast cancer patient's prognosis. Group support has shown to be especially beneficial. Over the last 11 years we have provided an integrative program to address the physical, emotional and educational needs of breast cancer patients along a continuum of treatment and healing process. **METHODS:** We have a number of programs that address the concern of patients and family members. For the newly diagnosed patients, there is an on-going 6-week educational group that includes lectures by an oncology nurse, a nutritionist, a genetic counselor, a lymphedema therapist, a beautician and prosthetic fitter. There is an experiential session that demonstrates the power of relaxation and guided imagery. At the first session, a notebook is given to each participant. This notebook allows the patient to list medications, important phone numbers, test reports, and questions for their doctors. There is an on-going weekly support group as well attended by women in various stages of the process. Many of the women in this group are experiencing recurrences and demonstrate great courage to others in

attendance. A monthly group that meets in the evening is designed for women who have returned to their busy schedules of work and family but who continue to benefit from the support of others who understand their fears. We also provide a monthly support group designed to address the unique challenges of young women with breast cancer and another group addressing the issues of survivorship. Additionally, patients and their caregivers can participate in various exercise classes including yoga, tai chi and Pilates. Specialty classes including journal writing workshops, meditation classes, art classes and classes about wigs, head wraps and skincare during treatment. There is also a monthly support group for friends and family members to provide a forum to address their concerns, frustrations, fears and feelings of helplessness. Individual counseling is available on a time limited basis for patients and family members. **RESULTS:** Outcome studies of our programs have demonstrated that these interventions have helped patients at the time of their diagnosis, during and after treatment to better manage the emotional disruption caused by the diagnosis and treatment of breast cancer. **CONCLUSIONS:** The success of this approach is demonstrated in the continued growth of the attendance at these programs. The current day support group has weekly attendance of 25–30 women. **RESEARCH IMPLICATIONS:** Most current research delineates the value of one specific intervention. It is important to look at this continuum of care model to note the changing needs of patients throughout their journey. **CLINICAL IMPLICATIONS:** Patients who feel connected to a program, who sense they are benefiting from a program with stay within the facility that provides it and with the clinicians associated with it. **FUNDING:** None.

1-3

Predictors of Distress in Cancer Patients: BRFSS 2009 Findings

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PURPOSE: Emotional distress has previously been identified to affect 5.7% of cancer survivors in other population level data (NHIS 2003–2005, Hoffman et al., 2009; Kaiser et al., 2010). However, population level estimates of distress in this population are still lacking. Understanding cancer distress is essential in facilitating better development of preventions, screening and treatment strategies. The aim of the present study is to examine the demographic risk factors associated with increased distress in cancer patients. **METHODS:** Behavioral Risk Factor Surveillance System [2009; BRFSS] population-based data was used;

the final sample was 4930 fully evaluable cancer patients. Analyses were conducted using SAS 9.2; CDC sample replacement weights were used to adjust for sampling design and non-response. Variance estimates were calculated using the Taylor Linearization Method in SUDAAN in order to account for the BRFSS stratified multistage sampling design. Predictor variables included gender, perceived health, marital status, age, education, income, ethnicity, life satisfaction, emotional support, cancer type, smoking status, and insurance coverage. Outcome was non-somatic distress measured by the Kessler-6. Multivariate regression was used to identify risk factors of distress. **RESULTS:** The multivariate regression model accounted for 31% of non-somatic distress in cancer patients ($R^2 = 0.31$, $p < 0.001$). Increased distress was associated with females ($B = -0.51$, $p < 0.001$), decreased perceived health ($B = -0.44$, $p < 0.001$), younger age ($B = -0.02$, $p < 0.02$), decreased life satisfaction ($B = -1.75$, $p < 0.001$), decreased emotional support ($B = -0.49$, $p < 0.001$), and smokers ($B = -1.07$, $p < 0.001$). Marital status, education, income, ethnicity, cancer type, and insurance coverage were all significant univariate predictors of distress ($p < 0.01$); however, they were not significant predictors within the multivariate model. **CONCLUSIONS:** Our findings replicate the existing literature on cancer distress. Additionally, the present study suggested some modifiable predictors of distress; including, decrease life satisfaction, emotional support and perceived health. It is noteworthy that the present study identified 10.28% of survivors experiencing clinically significant levels of distress, much higher than in NHIS. **RESEARCH IMPLICATIONS:** Understanding the prevalence and correlates of distress have been derived from studies with small samples; therefore, population based studies are needed to understand trends across the population. **CLINICAL IMPLICATIONS:** Identifying clinically meaningful correlates of distress could help inform better prevention, screening, and treatment strategies. **FUNDING:** None.

1-4

The Impact of Cancer on Quality of Life for Childhood Cancer Survivors

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PURPOSE: To examine the extent to which childhood cancer survivors' perceptions of the impact of cancer are related to quality of life (QOL) and psychological distress. **METHODS:** Six hundred and twenty-one childhood cancer survivors (ages

18–39) completed mailed surveys assessing QOL and distress. A new psychometric measure designed specifically for long-term survivors of childhood cancer examined perceptions of how cancer has impacted survivors' lives. Hierarchical linear regression models analyzed the independent effects of perceived impacts of cancer on QOL and distress, controlling for significant covariates. **RESULTS:** Survivors were comparable to population norms on scores for QOL and distress, although 22% of survivors' scored clinically-significant levels of distress on the BSI-18. Survivors who were non-White, not employed/occupied, of lower household income and education, unmarried, diagnosed with a brain tumor, and reported health problems were significantly more likely to report an overall negative impact of cancer on their lives. After controlling for significant covariates, mental health functioning and distress was significantly worse for survivors who were more likely to perceive cancer as negative and less likely to perceive cancer as positive. Being unemployed/unoccupied and unmarried, and reporting health problems retained significant independent relationships to distress and mental health functioning after accounting for perceived impacts. **CONCLUSIONS:** Findings are consistent with prior studies in that adverse outcomes were associated with physical health problems, employment/occupation status, and relationship status. The perceived impact of cancer was observed to be significantly associated with QOL and distress. Findings suggest that psychological well-being may be partially a function of survivors' cognitive schema, or construction, of how cancer has impacted, or continues to impact, their current lives. The inverse may be true, as well. **RESEARCH IMPLICATIONS:** Research is needed to identify specific childhood cancer survivors at risk for developing psychological conditions and distress. Research that examines psychotherapeutic techniques aimed at addressing the meaning these individuals attribute to their experience of cancer may also support improved long-term outcomes. **CLINICAL IMPLICATIONS:** Psychotherapeutic interventions addressing perceptions of the impact and meaning of cancer may be beneficial in decreasing overall distress associated with cancer. **FUNDING:** US Department of Health and Human Services, National Institutes of Health, National Cancer Institute (K07 CA100380).

2-1

There's No Place Like Home: Preparing Children for Geographical and Relational Attachment Disruptions Following Parental Death to Cancer

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PURPOSE: The death of a parent to cancer precipitates significant transitions for children, disrupting feelings of safety and security. Children who lost both parents or who, due to divorce, are relocating across great distances following the death of their custodial parent incur profound secondary losses, including place attachment disruptions. Place attachment refers to our meaningful connections to our physical world. This encompasses treasured and consistent relationships, activities and environments that could otherwise support grief and adaptation. Secondary losses are frequently unacknowledged or not prioritized in caring for parentally bereaved children. **METHODS:** This presentation reports on over 10 years of work with over 600 families in a community based oncology support organization. Therapeutic work in this setting blends psychodynamic and structural family therapy techniques to facilitate building a safe and consistent structure for the child in preparation for a new home environment. Children transitioning to the care of noncustodial caretakers may be isolated in their grief. Clinical tools were thus designed to improve communication between the bereaved child and caregivers, to facilitate developmentally appropriate grief work, to build self esteem, and to identify links between the home the child is leaving and the one the child is joining. **RESULTS:** The clinician must create a holding environment to normalize and validate the child's experiences and to provide a consistent foundation for the child as they experience the chaos of multiple changes. When such an approach recognizes severed place attachments and other secondary losses, children and teens can move through their grief work to facilitate transition to new environments. **CONCLUSIONS:** APOS professionals will have the conceptual tools to frame bereavement work with children anticipating or recovering from severe displacement after parental loss. **RESEARCH IMPLICATIONS:** Longitudinal research using public health and preventions models is needed to identify the consequences of early parental loss for children from intact home and those from families of divorce. **CLINICAL IMPLICATIONS:** The clinician can function as a consistent transitional object for the child through the death of the parent, the transition to a new living environment, and the restructuring of family life. Partnerships with private practice clinicians are

critical to ongoing grief work and adaptation.
FUNDING: None.

2-2

Targeting Advanced Practice Nursing Interventions to Patient Problems in Ovarian Cancer

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PURPOSE: Ovarian cancer patients are prone to psychological distress due to aggressive treatment with uncertain outcomes. Distress identification and treatment are often inadequate, while best practices for distress among this population are yet to be determined. This study explores patient problems and advanced practice nursing (APN) interventions provided to ovarian cancer patients in light of distress level and receipt of mental health (MH) services. **METHODS:** Secondary analysis of data from 32 women was performed from study records of a completed clinical trial investigating QOL outcomes in ovarian cancer. 18 APN records per patient ($n = 534$ records) for 6 months following surgery were coded by content analysis, using the Omaha System to categorize patient problems and nursing interventions. High distress patients were offered mental health referral and treatment plans by a psychiatric consult-liaison nurse (PCLN). Patient groups included: High Distress (≥ 4 DT score) + PCLN; High Distress/ Refused PCLN; and Low Distress (< 4 DT score). Patient demographics, clinical characteristics, problems, and nursing interventions were compared using chi-square and ANOVA. **RESULTS:** 24/32 (75%) women reported high distress. Of these, 18 consented and 6 refused PCLN referral. Psychiatric diagnoses identified in eight women from MH evaluations. Reasons for refusing MH services included denial of coping problems, feeling overwhelmed, wanting to focus on positive things, seeing other practitioners for counseling, and adequate support from family, friends, and APN. High Distress + PCLN and Low Distress sub-samples received more interventions at study onset, but progressively fewer by study termination. The High Distress/Refused PCLN sub-sample received the fewest interventions at study onset, but the most interventions by study termination. This sub-sample received proportionately more nursing interventions for Environmental Problems, but less Teaching, Guidance, and Counseling for Coping with Mental Health Problems than the other two sub-samples. **CONCLUSIONS:** Advanced practice nursings play a critical role in helping to identify and promote treatment for MH problems in ovarian cancer. Some women who refuse MH

services for distress may suffer from unique challenges that are not well-addressed within our current health care system. **RESEARCH IMPLICATIONS:** This study identifies linkages between patient demographic and clinical problems, patient problems, and resulting APN interventions which may assist the researcher in identifying best practices in addressing psychological distress among women with ovarian cancer. **CLINICAL IMPLICATIONS:** Long-term nurse-patient relationships may be necessary to assist patients in learning self-management strategies for coping with cancer. **FUNDING:** Parent study funding: NIH, NINR, 1R01NR07778; United States Department of Defense Breast Cancer Pre-doctoral Fellowship, DAMD 17-00-1-0509.

2-3

Effects of Asynchronous Professional Facilitation on Behavioral Engagement in an Internet-Based Intervention for Cancer-Related Distress

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PURPOSE: Behavioral engagement data were collected from a pilot study of an Internet-based social-networking intervention to treat cancer survivors with significant distress. The purpose of the present study was to characterize behavioral engagement in the intervention, identify correlates of engagement, and evaluate the effects of facilitation. **METHODS:** Cancer survivors reporting elevated distress were eligible to participate in a randomized trial of an Internet-based social-networking intervention (www.health-space.net). Behavioral engagement, defined as posts to the discussion board, blog entries and replies, use of the weekly chat, and private messaging, was measured prospectively, as were facilitators' interventions (i.e., replies, private messages). **RESULTS:** Seventy-six participants (49 randomized to treatment, 27 wait-listed participants) were given access to health-space.net. 50% ($n = 38$) actively utilized the health-space.net intervention. Behavioral engagement was positively associated with distress ($OR = 1.24$, $p = 0.008$) but few other demographic or psychosocial characteristics. Mean use of the intervention was 4.8 hours across all participants and 7.9 hours among participants who posted at least once on the site. As expected, facilitation activities were strongly positively correlated with time spent using the intervention, $r = 0.83$, $p < 0.0001$. For each participant, time periods during which active facilitation occurred were compared with randomly-identified comparison periods in which no facilitation occurred.

Effects of active facilitation efforts were small and non-significant, OR = 1.06 (95% CI = 0.45–1.7), with facilitation efforts resulting in participant engagement 17.8% of the time, compared with 14.5% of time periods without facilitation. **CONCLUSIONS:** These results suggest that facilitation of asynchronous interventions is less influential than previously supposed, perhaps serving to reinforce active users without strongly stimulating subsequent use. **RESEARCH IMPLICATIONS:** Specific and precise measurement of behavioral engagement is an asset of Internet-based studies that can be exploited to identify both weaknesses and opportunities for improving effects of extant interventions. Future studies are proposed to compare the effects of non-facilitated social networks on behavioral engagement. **CLINICAL IMPLICATIONS:** Facilitation of real-time interactions, such as those that occur in a chat environment online or face-to-face, is likely to be more effective than in asynchronous forums. Additional methods for enhancing behavioral engagement should be explored. **FUNDING:** NCI #5R03CA137391-02.

2-4

Domestic Violence: When the Cancer Patient is the Perpetrator

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PURPOSE: There is increasing emphasis for health care providers to address domestic violence. Unique stressors related to cancer diagnosis and treatment can intensify the abusive relationship. When the cancer patient is the perpetrator, balancing support for both the patient and caregiver is often a challenge. Existing research rarely focuses on the caregiver as the victim. This presentation is based on an observable pattern in which the caregiver, once his/her situation is validated, continues to seek guidance and support. Issues addressed include caregiver's ambivalence toward providing positive support to patient, feeling guilty around wishing for patient's demise, and safety planning if warranted. Data obtained from oncology social workers at our cancer center will be presented to demonstrate the need for improved awareness, screening and interventions which instill a balance of support. **METHODS:** Domestic violence will be defined followed by descriptions of interventions designed to provide support to the victim (caregiver). Methods of staff based education for staff will be provided. **RESULTS:** APOS members will learn to recognize risk factors of domestic violence and how to perform a domestic violence screening. They will gain an understanding of how to provide support to both the patient and the caregiver, as well as assist the patient in finding new support system if caregiver is in need of a safety plan. APOS

members will have improved awareness of their feelings towards the patient who needs support as well as towards the caregiver. **CONCLUSIONS:** Domestic violence will be defined followed by descriptions of interventions designed to provide support to the victim (caregiver). Methods of staff based education for staff will be provided. **RESEARCH IMPLICATIONS:** There is little research on the prevalence of this problem in cancer care. More research is needed as this psychosocial issue warrants unique interventions. **CLINICAL IMPLICATIONS:** Identifying domestic violence followed by appropriate interventions will allow caregivers to receive optimal support. Caregivers will feel more comfortable disclosing their situations and subsequently seek support. The patient care plan should include supportive measures that ensure safety. **FUNDING:** None

3-1

Reflexology Improves Self Reported Physical Functioning in Advanced Breast Cancer: Results From an NCI-Funded Randomized Controlled Trial

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PURPOSE: A randomized clinical trial (RCT) of reflexology was conducted to evaluate its safety and efficacy on health-related quality of life (HRQOL) including symptoms and functioning of women with advanced breast cancer. Reflexology is a complementary and alternative medicine (CAM) therapy that involves the application of pressure to specific areas of the feet called reflexes. Over 80% of women with breast cancer use reflexology for symptom management (Boon et al. 2007). **METHODS:** Following the intake interview, women with advanced disease who were on chemotherapy were randomized into the reflexology group ($N = 94$), lay foot manipulation group ($N = 95$) or the conventional care control group ($N = 96$), and were interviewed again at weeks 5 and 11. The reflexology protocol consisted of four standardized weekly sessions delivered by certified reflexologists. Lay foot manipulation sessions were delivered by lay people who were specially trained to follow a protocol similar to true reflexology. Functioning was measured using Medical Outcomes Study Short Form 36 (Ware et al., 1993). Brief Pain Inventory, Brief Fatigue Inventory (Cleeland et al., 2000, Mendoza et al. 1999), and items from FACT-B (Cella et al., 1997) provided symptom measures. Linear mixed effects models were employed following intent-to-treat principles. **RESULTS:** No adverse events were reported, and over 89%

of women in the reflexology and lay foot manipulation groups completed 3 or 4 sessions. A longitudinal comparison revealed significant improvements in physical functioning for the reflexology group compared to the controls ($p < 0.04$), and reduction in the severity of dyspnea ($p < 0.01$). While lay foot manipulation did not significantly improve functioning, it did reduce severity of fatigue ($p < 0.02$) and overall symptom interference with activities of daily living ($p = 0.04$), when compared to controls. **CONCLUSIONS:** The established efficacy of reflexology supports its use as an intervention to improve HRQOL among women with advanced breast cancer. **RESEARCH IMPLICATIONS:** The therapeutic effects of lay foot manipulation delivered by a lay person open a new avenue for delivery of reflexology. **CLINICAL IMPLICATIONS:** The results indicate that reflexology is an addition to existing evidence-based supportive care interventions for advanced stage breast cancer patients during chemotherapy. **FUNDING:** National Cancer Institute Grant #R01 CA 104883-01A1.

3-2

An Empirical Approach to Healthcare Design: Research on Pediatric Oncology Units

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PURPOSE: To present a brief background of evidence-based hospital design (EBD) research. EBD, a growing field, subjects the hospital built environment to empirical study to identify design factors that contribute to patient, family, and staff well-being. Two studies conducted in pediatric hematology-oncology units will be discussed as examples of EBD research. **METHODS:** Study 1, a post-occupancy evaluation of a pediatric cancer unit's healing gardens, utilized observational methods to compare usage patterns of three hospital gardens by children, visitors, and staff (Sherman, Varni, Ulrich, & Malcarne, 2005). Each garden was distinct in size, location relative to patient/staff areas, and architectural features. Pilot data tracked psychosocial functioning in the hospital and gardens. Study 2 focuses on the interior of a pediatric hematology-oncology inpatient unit. It utilized objective environment ratings, self-report questionnaires, and structural equation modeling statistics to elucidate the network of relationships between physical design of children's hospital rooms, environmental satisfaction, and outcome measures including psychosocial functioning, parental healthcare satisfaction, staff co-worker satisfaction, and staff fatigue (Sherman, Malcarne, Roesch, Varni, & Katz, 2008).

RESULTS: Study 1 revealed distinct usage patterns for each garden suggestive of different privacy needs and design features for patient and staff users. These could inform future healing garden designs depending on their envisioned purpose. While these gardens were designed for patient use, patients were infrequent users suggesting the need for a reconceptualization of their purpose or an opportunity for programmatic changes to patient activities. Study 2 demonstrated that pediatric hematology-oncology patients, their parents, and staff were all more satisfied in rooms with better physical amenities. For parents, significant relationships between environmental satisfaction, healthcare satisfaction, and psychosocial functioning emerged. Likewise, environmental satisfaction was associated with co-worker satisfaction, psychosocial functioning, and fatigue among hospital staff. **CONCLUSIONS:** EBD research can yield lessons about the impact of hospital design on the well-being of patients, their families, and hospital staff. **RESEARCH IMPLICATIONS:** Researchers interested in EBD can use different methods to study aspects of design in their own institutions or establish collaborations between clinicians, researchers, and designers. **CLINICAL IMPLICATIONS:** Clinicians should be aware of the role environment may play in the well-being of their patients, families, and staff. **FUNDING:** NCI F31 CA107517-01A1.

3-3

A Cancer Center Dedicated to the Healing of Mind, Body and Spirit

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PURPOSE: To describe the process of planning and designing an adult cancer center which provides a healing, comfortable, patient-centered environment. **METHODS:** An architectural firm with a commitment to healing environment development and experience in cancer center planning was selected. A multidisciplinary team approach was used at all stages of design development. End users consisting of clinicians, nursing staff, administrators, and plant operations were intimately involved in the design including selection of materials, colors, and space utilization. By using this approach, design was interwoven with program development. **RESULTS:** The Roy and Patricia Disney Family Cancer Center was created. Specific spaces within the center designed to promote comfort and tranquility include indoor and outdoor areas for quiet contemplation, a Zen garden, meditation labyrinth, outdoor seating area surrounded by water features, a private meditation room with views onto the garden, and a yoga

studio and physical therapy suite which open onto the garden. The colors and materials used in the design of the building were selected from the natural environment to enhance a sense of healing, growth, and life rather than the customary sterile clinical atmosphere. Additionally, donated artwork freely adorns halls and exam rooms throughout the center. Since a loss of the sense of control is such a significant psychological factor accompanying a cancer diagnosis, many features of the center were chosen specifically to give patients a sense of control over their environment. A state-of-the-art radio-frequency identification system allows patients to control lighting, music, temperature and even video in their exam and treatment rooms. When patients enter the lobby, the system automatically sends a text message alerting the reception desk and nursing staff via wireless phones so they can be greeted by name in a timely fashion. **CONCLUSIONS:** The Roy and Patricia Disney Family Cancer Center is dedicated to the healing of mind, body, and spirit. The thoughtfulness that went into this design is appreciated and commented on regularly by the center's patients. Testimonials from patients on the design and the center's ability to calm and heal the mind and spirit will be shared with participants along with a photo tour of the cancer center's most distinctive features. **RESEARCH IMPLICATIONS:** The elements which create a "healing environment" should be further explored. **CLINICAL IMPLICATIONS:** Patients consider the environment to be part of their healing process. **FUNDING:** None.

3-4

A Statistical Examination of Demographic, Medical and Psychosocial Variables Related to Supportive Care Use

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PURPOSE: An evaluation of the statistical relationship between patient variables and supportive care use was therefore conducted. **METHODS:** Nine years of chart review data was collected. The goal was to assess demographic (gender, marital status, age, Aboriginal status, distance from the health care centre), medical (smoking status, smoking history, stage of cancer at diagnosis) and psychosocial (distress as measured by the Hospital Anxiety and Depression Scale, Zigmond & Snath, 1983) variables, as related to use of supportive care. **RESULTS:** The sample ($n = 7831$) was 50.7% male, 63.3% married, with a mean age of 64.1 years ($SD = 14.2$), and lived an average of 136.9 km from the healthcare centre ($SD = 202.8$). Aboriginal patients accounted for 4.2% of

the sample. Forty-five percent of patients accessed supportive care services, with the mean number of visits to supportive care being 2.1 ($SD = 5.8$). The primary cancer diagnoses consisted of breast (19.7%), prostate (15.7%), lung (13.5), and colorectal (12.1%) with other cancer types accounting for the remaining 39%. The mean stage at diagnosis was 2.3 ($SD = 1.2$), and patient distress levels on the HADS had a mean of 11.0 ($SD = 7.3$). Independently modeled logistic regressions were conducted. Patients who became supportive care clients were more likely to live closer to the health care centre, to be Aboriginal, married, and to be current smokers, however the variance accounted for by each variable was less than 1% (Nagelkerke R squared). Gender, age at diagnosis, and distress accounted for 5.8%, 8%, and 9.5% of the variance (Nagelkerke R squared) respectively, indicating that supportive care patients were more likely to be female, younger, and to report higher distress. Despite gender differences in supportive care use, there were no differences in overall distress levels. Odds ratios for dichotomous variables were also analyzed. All variables were entered into a linear regression model to examine number of visits to supportive care; findings support significant relationships for all variables however the total model accounts for only 9.6% of the variance. **CONCLUSIONS:** Findings indicate that men, individuals living further away, and older adults were less likely to become supportive care clients; reasons for this warrant consideration. Individuals with greater distress were more likely to access services, indicating that patients at higher risk are receiving treatment. **RESEARCH IMPLICATIONS:** There is an ongoing need to examine characteristics of supportive care clients, both to ensure those in need are accessing services but also to potentially target population subgroups that may be underrepresented. **CLINICAL IMPLICATIONS:** Distance as a potential barrier to supportive care use, and alternative services tailored to men, both warrant consideration. Alternative delivery methods need to be considered. **FUNDING:** None.

4-1

Use of Mindfulness Based Stress Reduction: A Mind-Body Program in Oncology

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PURPOSE: The purpose will be to demonstrate the benefits related to Mindfulness Based Stress Reduction (MBSR) on psychological, physical and biological research outcomes among varied cancer populations. Findings on comparison and the effects of MBSR, a mind-body CAM therapy

for breast cancer survivors and advanced stage cancer patients and their caregivers will be presented. **METHODS:** Two varied studies will be presented: (a) a two-group, randomized, waitlisted controlled design among 84 breast cancer patients, and (b) a single group, quasi-experimental pre-post test design among 26 advanced stage cancer patients and their caregivers. Both groups were recruited from H. Lee Moffitt Cancer Center and Research Institute and completed a 6-week MBSR program. Patients with breast cancer completed 6 weeks of classes, and advanced stage patient-caregiver dyads completed a modified 6 week program with 3 weeks in class and 3 weeks of self-study. Measures of psychological and physical symptoms and QOL measures were compared pre-post MBSR program along with biomarkers for both studies. **RESULTS:** Breast cancer patients improved on psychological and immune cell measures compared to a control group. Immune recovery after cancer treatment showed positive results. Women who received MBSR had T cells more readily activated by the mitogen PHA and an increase in the Th1/Th2 ratio. Advanced stage cancer patients and caregivers, showed significant improvement in psychological status and quality of life while caregiver changes in psychological status and QOL were improved but not statistically significant. Paired t-test results showed significant reductions in cortisol and IL-6 pre-post MBSR sessions. **CONCLUSIONS:** MBSR is an effective program among varied oncology populations, and has shown to improve psychological status and immune markers. **RESEARCH IMPLICATIONS:** MBSR as a mind body program among breast cancer survivors and advanced stage cancer patients and caregivers, needs further investigation with larger study populations to further identify additional significance. **CLINICAL IMPLICATIONS:** Although the content of the MBSR programs remain the same, the delivery mode can be varied for patients and caregivers. **FUNDING:** National Institutes of Health, National Cancer Institute: grant number R21 CA109168 and the H. Lee Moffitt Cancer Center Integrative Medicine Pilot Research Grant Program, Grant #15259.

4-2

Massage Therapy for BMT: A Lost Science in Nursing Care, a New Science in Comprehensive Cancer Care

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PURPOSE: The use of complementary and alternative medicine (CAM) in cancer patients has grown significantly in the past decade. Frequency of CAM use in cancer patients is typically about

60–80%. Massage therapy is an example of an integrative medicine approach that has been used in various populations as a means of reducing stress, tension, and pain. Within the general oncology setting, massage has been investigated and initial evidence has suggested benefits for pain, fatigue, and anxiety. However, data is limited on benefits for BMT patients, and clinical recommendations and guidelines are virtually nonexistent for safe massage, consequently this population is often not considered for adjunctive integrative therapies. Therefore, we will report on safe and effective methods for massage. **METHODS:** At Moffitt Cancer Center, An NCI-Designated Comprehensive Cancer Center in Tampa, Florida, US, over 100 BMT patients have been seen since January 1, 2010 for inpatient massage. All of these patients have reported symptom severity before and after each massage they received, using 0–10 rating scales of pain, fatigue, nausea, anxiety, emotional distress, physical distress, and overall QOL. **RESULTS:** Inpatient massage significantly improved important clinical symptoms for the BMT patient. Improvements were seen in pain (48%), nausea (39%), fatigue (56%), anxiety (44%), physical distress (46%) emotional distress (48%) and quality of life (35%). **CONCLUSIONS:** Massage is a highly effective means of symptom reduction for BMT patients. Massage can be delivered safely to BMT patients during their hospital stay. Massage should be considered as a standard adjunctive therapy for symptom control. **RESEARCH IMPLICATIONS:** Clearly further research is warranted investigating the effects of massage for this population. Additional investigation is needed involving medical outcomes, mechanisms, and duration of benefits. **CLINICAL IMPLICATIONS:** There are very few therapies (medical or integrative) with such effective benefits for symptom burden in this population. Massage is feasible, safe, effective, and economical. Massage has several benefits and very few side effects, and therefore should be considered as standard adjunctive care for symptom control in this population. **FUNDING:** None.

4-3

Complementary and Alternative Medicine Use and Beliefs in Lymphoma Survivors

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PURPOSE: The use of complementary and alternative medicine (CAM) in cancer patients has grown significantly in the past decade. Frequency of CAM use in cancer patients is typically higher than the general population, with recent estimates

reported at 60–90%. However, frequency reports specific to the hematologic malignancy patient are currently not documented, and the potential benefits, risks, and mechanisms of CAM modalities for this population are not currently known. Within the general oncology setting, CAM modalities have been investigated and initial evidence has suggested some benefits for symptom management (including nausea, pain, fatigue), and survival. However, several CAM modalities are contraindicated for the cancer patient, and many are not well understood. **METHODS:** In this study 343 long-term (5–20 years) lymphoma survivors (54% male, mean age = 61 years) completed a questionnaire on beliefs, knowledge and usage of complementary and alternative medicine. **RESULTS:** Overall, 54% reported using some form of CAM, (54% using a CAM therapy, 52% vitamins, and 45% supplements) a rate higher than that in the general population. Predictors of use included gender and education. The most commonly used modalities were: Chiropractic (15.5%), Calcium (15.5%), Massage (10%), Vitamin C (9.8%), Vitamin D (9.6%), and religion/spirituality (9.1%). When asked about CAM beliefs, 5% of patients reported that CAM could cure cancer, 6% reported CAM could prevent the spread of cancer, and 4% reported CAM can reduce the chance that conventional medicine works. **CONCLUSIONS:** This study suggests that long-term lymphoma survivors appear to use CAM at a rate higher than the general population. **RESEARCH IMPLICATIONS:** CAM beliefs and potential risks warrant further study in this population. **CLINICAL IMPLICATIONS:** CAM in lymphoma certainly needs to be addressed in patient education and clinical settings. **FUNDING:** None.

Abstracts were not submitted for Session 5.

6-1

What Precipitated Depression in African American Cancer Patients? Triggers and Stressors

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PURPOSE: This study examines “triggers” and general stressors during the cancer diagnosis and treatment processes that are associated with depression in African American (AA) cancer patients. **METHODS:** Seventy-three breast and prostate cancer survivors (33 men and 40 women) were recruited as a convenience sample. They participated in in-depth interviews. Using the mixed methods design, the interviews were audiotaped, transcribed, coded and quantified. Triangulation analysis was conducted to compare 34 depressed AA with 16 depressed Caucasian and 23 non-

depressed AA participants on the factors that were reported as “triggers” or stressors using the qualitative and quantitative data analyses. **RESULTS:** More depressed AA (10–20%) than depressed Caucasian or non-depressed AA patients reported stressors in three areas: finance (e.g., employment); personal relationships (e.g., sexual health); and family relations (e.g., conflicts). Triggers that exacerbated AA’s depression were identified. More depressed AA (20%) than depressed Caucasians or non-depressed AA participants reported vulnerability to depression when they began to perceive that they were experiencing limited capacity in performing activities of daily living. More depressed AA participants (14–38%) than depressed Caucasians or non-depressed AA participants reported a dramatic reaction to the cancer diagnosis: feeling shocked or sad. Preexisting depression played a significant role; it occurred in more depressed AA ($n = 9$, 27%) than depressed Caucasian participants ($n = 1$, 6%). **CONCLUSIONS:** The findings provided valuable information for identifying at-risk AA patients with cancer. The timing (cancer diagnosis, functional decline), a preexisting mental status, and other stressors, in the domains of finance, personal relationships, and family relations, need attention when assessing depression in AA cancer patients. **RESEARCH IMPLICATIONS:** Culturally focused and the accurate identification of depression in AA cancer patients continues to be a challenge. The results of this study identify future research issues within the context of time, diagnoses, and perceived triggers and stressors that suggest different approaches to assessing depression in this vulnerable population. **CLINICAL IMPLICATIONS:** Knowledge generated from this study came from the first hand personal experiences of AAs, and can help guide clinicians in developing effective methods of identifying depression among AA cancer patients. **FUNDING:** The study was supported by National Institutes of Health / National Cancer Institute (R03 CA115191).

6-2

Disparities in Mental Health Outcomes and Mental Health Coping Resources Between Rural and Nonrural Lung Cancer Survivors:

A Population-Based Study

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PURPOSE: Elimination of disparities in mental and physical health outcomes due to geographical residence (e.g., rural vs. nonrural residence) is a national priority in Healthy People 2010. Prior research suggests rural cancer survivors report poorer mental health (MH) outcomes relative to

nonrural survivors. This may be due to differences in access to and use of MH coping resources. The aim of this study is to identify disparities in MH outcomes and MH coping resources between rural and nonrural non-small cell lung cancer (LC) survivors. **METHODS:** One hundred and forty-four LC survivors (mean age = 62.7 years) completed an interview and questionnaire packet 12–15 months post-diagnosis. Survivors were recruited using a population-based, statewide SEER cancer registry. Rural ($n = 76$) and nonrural ($n = 68$) survivors were identified by county of residence using USDA RUC codes. Measures of MH outcomes and 4 categories of MH coping resources (interpersonal, intrapersonal, informational, tangible) were obtained. **RESULTS:** Logistic regression and t-test analyses indicated rural LC survivors were characterized by greater social constraints (effect size (ES) = 0.44; $p < 0.01$), lower MH help-seeking (ES = 0.39; $p < 0.02$), and cancer information-seeking efficacy (ES = 0.34; $p < 0.05$), less education (ES = 0.69; $p < 0.01$) and discretionary income (ES = 0.39; $p < 0.02$), were less likely to report insurance coverage for MH services (odds ratio (OR) = 0.43; $p < 0.02$) and home computer access (OR = 0.43; $p < 0.02$) and reported less extensive internet (ES = 0.40; $p < 0.02$) and email use (ES = 0.36; $p < 0.03$). Trends were also evident for rural survivors to report less extensive social networks (ES = 0.30; $p < 0.07$) and optimism (ES = 0.31; $p < 0.07$). Given these disparities in MH coping resources, it was unsurprising rural LC survivors reported poorer MOS-MH Functioning (ES = 0.44; $p < 0.01$) and more anxiety (ES = 0.40; $p < 0.02$) and depression (ES = 0.50; $p < 0.01$). **CONCLUSIONS:** Rural LC survivors are at risk for poorer MH outcomes, likely due to possession of fewer potential interpersonal, intrapersonal, informational, and tangible MH coping resources. **RESEARCH IMPLICATIONS:** Research needs to identify specific mechanisms underlying the observed disparities in MH outcomes between rural and nonrural cancer survivors. Focus should be placed on disparities in access to and appropriate use of potential MH coping resources. **CLINICAL IMPLICATIONS:** Rural LC cancer survivors should be considered “at risk” for poorer MH outcomes. Attention should be given to enhancing MH coping resources available to rural survivors. **FUNDING:** This research was supported by the Kentucky Lung Cancer Research Fund.

6-3

A Multidisciplinary Model of Care in Rural Health for Oncology Patients Receiving Care Closer to Home: A Qualitative Study

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PURPOSE: Teleoncology has helped close the gap between urban and rural communities to provide patients with equal access to oncology health services. The purpose of this qualitative study was to gain a better understanding about how health care professionals incorporate teleoncology in their clinical practices. Two research questions guided the study: What are the views of health care professionals on the use of teleoncology? How can the system be improved to support current practices and encourage greater participation by health care professionals? **METHODS:** A qualitative study was conducted between January and April 2009 which had REB approval. Twenty-one interviews and four focus groups were held with 39 participants, which included medical and radiation oncologists, primary nurses, teleoncology nurse coordinators, dietitians, social workers, physiotherapist, genetic counselors, administrators and support staff. All interviews were tape recorded and transcribed. Documents were imported into NVIVO 7 software to facilitate the organization and analysis of the data. Using thematic analysis, two researchers coded the data for interrater reliability as a means to reach consensus on themes and to develop a conceptual model. **RESULTS:** There were eight themes identified by the participants to explain how health care professionals engage in the use of teleoncology to provide patients with care closer to home. (1) Making the right choices for patient-centered care (2) Expanding the circle of care (3) Shifting practice (4) Dealing with the unexpected (5) Resolving the technical issues (6) Ensuring confidentiality (7) Sensitivity to culture and (8) Resource allocation. The types of cases identified as being appropriate for teleoncology were: follow-up care after treatment, consultations for palliative treatment and consultation for treatment decisions. The practice for utilizing teleoncology has also increased for patients receiving chemotherapy at a peripheral site and for genetic, social work, psychology, nutrition, and physiotherapy

consultations. **CONCLUSIONS:** The findings of this study confirm that the use of teleoncology is an alternate model of care that can be utilized to provide patients with access to a team of oncology specialists closer to home. **RESEARCH IMPLICATIONS:** Further studies are required to document clinical outcomes and financial implications for patients seen by clinicians via teleoncology. **CLINICAL IMPLICATIONS:** There are few studies documenting the use of teleoncology by health care professionals including psychosocial specialists. This study provides insight into the important aspects of patient care services to be considered when developing such a program. The findings of this study indicate that innovative models of care can be developed to meet the needs of cancer patients closer to home. **FUNDING:** Northern Cancer Research Foundation.

6-4

Enhancing Psychosocial Well-Being in Ethnically Diverse Reproductive Age BRCA+ Women

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PURPOSE: Women who carry a BRCA gene mutation are strongly advised to have their ovaries removed upon completion of childbearing, preferably no later than age 35–40. Our clinical observations and preliminary research findings suggest that this recommendation raises significant psychosocial concerns for premenopausal BRCA+ women, particularly regarding fertility and menopause. Little research has been conducted to systematically access these outcomes. The purpose of this study is to identify and describe the salient issues of psychosocial well-being (PSWB) related to fertility and menopause in ethnically diverse reproductive age BRCA+ women recommended to undergo oophorectomy. **METHODS:** The study consists of a one-time audio-tape recorded semi-structured interview expected to last 1–1½ hours. The sample includes at least 10 women (at least 30% Latinas) who learned of their BRCA status via participation in one of 4 cancer genetic clinics in southern CA between 6 months and 3 years previously (to allow time to experience PSWB concerns) and consented to recontacting for psychosocial studies. Sampling will continue until data saturation. Interviews will be conducted in English or Spanish per participant preference at the clinic site where she was seen for genetic assessment. **RESULTS:** Accrual to this IRB-approved study has just begun. Thematic analysis procedures will

be used to identify salient aspects of PSWB. We will identify common threads and relationships linking themes, to formulate a framework for future testing. Descriptive statistics (mean, range, SD, frequency) will be used to report socio-demographic data as appropriate. Findings will be presented at the conference. **CONCLUSIONS:** Findings will provide rich in-depth data about a critical untapped area of inquiry relevant to cancer prevention and control to improve the lives of younger ethnically diverse BRCA+ women facing early loss of fertility and premature menopause. **RESEARCH IMPLICATIONS:** Findings will be used to develop a culturally sensitive psychoeducational intervention for future pilot testing. **CLINICAL IMPLICATIONS:** As genetic testing is increasingly utilized, addressing the interrelated fertility and menopausal needs of reproductive age BRCA+ women will become increasingly important in clinical care. **FUNDING:** None.

7-1

Developing Effective Partnerships to Implement Recommendations of the Institute of Medicine Report Cancer Care for the Whole Patient: Meeting Psychosocial Health Needs

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PURPOSE: To describe the efforts of the American Psychosocial Oncology Society (APOS) and the Cancer Support Community (CSC) in the formation and initiatives of the Alliance for Quality Psychosocial Cancer Care to integrate psychosocial care services as part of quality cancer care. **METHODS:** Key stakeholders from the cancer and mental health communities with a significant interest on meeting the emotional needs of cancer patients, survivors and families joined together to form a coalition to ensure psychosocial care is integrated into the medical standard of care for people with cancer. The Alliance represents community services, clinical care providers, patient advocates, and researchers and is led by volunteer co-chairs and has five Committees: Standards of Care, Education and Awareness, Childhood Cancer, Policy and Advocacy; and Research and Demonstration Projects. Each Committee has identified several deliverables to meet the goals of the Alliance. **RESULTS:** In 2008, APOS and CSC joined forces to lead the creation of a coalition whose purpose is to implement key recommendations of IOM's 2007 report, Cancer Care for the Whole Patient. The report calls for the inclusion of psychosocial services as an integral component of quality cancer care, and provides a

series of recommendations to accomplish this goal. Supported by modest financial contributions from thirty-four member organizations and led by volunteer Co-Chairs, the Alliance is structured to convene key stakeholders (its members) to create and sustain momentum for individual organizations to implement the IOM recommendations as well as keep members informed of each others' activities to facilitate collaboration and avoid duplication. The Alliance also informs and educates key audiences through development and delivery of consistent messages that quality psychosocial care is critical to optimal clinical outcomes for people affected by cancer. In addition, the Alliance works with policy makers to advocate policies to ensure that all patients are screened and have access to quality psychosocial care, as well as advance translational research and standards of care in psychosocial oncology. **CONCLUSIONS:** The Alliance has made significant strides in creating awareness and securing commitment from its members to promote efforts to integrate psychosocial services as a critical standard for quality cancer care. **RESEARCH IMPLICATIONS:** The formation of the Alliance has research implications in terms of identifying research gaps for how to effectively integrate psychosocial screening and follow-up as part of the standard of quality cancer care. The Research and Demonstration Projects Committee and the Standards of Care Committee have each been working on initiatives to identify valid and reliable screening tools, as well as potential research projects to test these tools in all cancer care settings. **CLINICAL IMPLICATIONS:** The clinical implications are to develop models for how to effectively deliver psychosocial screening and follow-up care in the community, so that it becomes part of standard care. The longer term implications are determining whether integration of such services impacts patient outcomes, quality of life, or utilization of health care services. **FUNDING:** None.

7-2

Training of Interns in Psychosocial Oncology: Recommendations for Program Implementation

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PURPOSE: Cancer incidence projections, combined with greater appreciation of the psychosocial needs of cancer patients and their families, highlight an increasing demand for professionals trained in psychosocial oncology. Recommendations for psychosocial oncology training have been published and a small number of internship

programs are training students. However, literature about psychosocial oncology training is brief and nonspecific and little is available on how to implement such programs. We seek to begin filling this gap by discussing the implementation of the Simms/Mann-UCLA Center for Integrative Oncology internship program. This discussion will focus on premises in the literature, evaluation data from our own training program, and practical procedures and recommendations for implementation of other such training programs. **METHODS:** The need for training opportunities in psychosocial oncology will be discussed followed by a description of the Simms/Mann Center internship and its program of didactic and clinical training. Forty-one interns have been trained since the program was established 9 years ago. Supervising psychologists have garnered a great deal of experience in teaching/supervising young clinicians to develop a unique set of clinical skills and the ability to work in a variety of oncology settings. Program evaluation data will be presented. **RESULTS:** APOS members will learn about the implementation and maintenance of a successful psychosocial oncology training program. The Simms/Mann Center internship prepares trainees to successfully work in oncology settings; interns demonstrate significantly increased knowledge about psychosocial oncology after completing the training program, $t(22) = -11.90$, $p < 0.001$. Furthermore, interns derive great benefit from the experience as evidenced by their average training satisfaction rating of 9.67 (SD = 0.76) on a 10-point scale. **CONCLUSIONS:** By serving as a model, the Simms/Mann Center Psychosocial Oncology Internship shows that it is possible and practical to establish integrated training programs in existing care delivery systems. **RESEARCH IMPLICATIONS:** The post-training employment settings of interns can be tracked longitudinally to identify characteristics of trainees dedicated to pursuing a career in psychosocial oncology. **CLINICAL IMPLICATIONS:** There exists both need and opportunity to enhance early career training in psychosocial oncology. Doing so will further advance the role of psychosocial oncology professionals and effect positive change in the comprehensive care provided to cancer patients and their families. **FUNDING:** The training program has been supported by gifts and grants from the Simms/Mann Family Foundation, The Annenberg Foundation, the American Cancer Society and the Joseph Drown Foundation.

7-3

Academic Affiliation and Psychosocial Practice in Oncology: Opportunities Across the Lifespan of Our Careers

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PURPOSE: Oncology social work offers many opportunities to develop teaching skills. With patients, their families, colleagues, team members, supervisees, administrators and funders, our capacity to educate determines our effectiveness in meeting the challenges of psychosocial care to patients and our institutions. As adept communicators, we possess the requisite qualities of the skillful teacher. Knowledge, research, practice wisdom, compassion and group work skills make us apt candidates for part-time academic positions. Our exposure to crisis, chronic illness and death fosters a more reflective, existential and philosophical approach to people with whom we work. **METHODS:** This paper presentation will describe the rich experiences that an academic affiliation offers oncology social workers. Key issues to be addressed include: the transition from practitioner to educator; theories of adult learning and teaching; curriculum design and development; and careers in teaching. Innovative styles of teaching including the use of art, music, fiction, poetry and reflection will be featured. **RESULTS:** A model for organizing and structuring a syllabus and content of class sessions will be offered. The tensions and rhythms of learning, as well as an explication of the imposter syndrome for students and faculty will be discussed. Strategies to actively engage students in an interactive learning process, foster critical thinking, examine ethical dilemmas, explore the values of our profession and evidence based practice will be identified. **CONCLUSIONS:** Teaching in a school of social work as an adjunct professor is a wonderful complement to the rigors of oncology practice and a catalyst for transformative career pathing. The rewards of teaching, lessons learned, a literature review, guidelines for teaching effectively and a model for group teaching experiential exercises will be included. **RESEARCH IMPLICATIONS:** An academic affiliation offers significant challenges as well as possibilities for self care and renewal and is an area for ongoing research over the long haul. **CLINICAL IMPLICATIONS:** It is a creative way to expand our role, develop mentorship networks, attract students to the field and grow professionally. **FUNDING:** None

7-4

Rationale, Implementation and Findings From the American Cancer Society National Studies of Cancer Survivors

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PURPOSE: The diagnosis, treatment, and survival from cancer may impact a person's quality of life across physical, emotional, and social domains. A growing body of research has begun to document these issues, identify potential etiologies, and address disparities in physical and psychological outcomes. However, important knowledge gaps remain regarding cancer survivors' functioning across the survivorship continuum. In particular, most studies have focused on the first 5-years after diagnosis, so knowledge regarding long-term survivors is limited. In addition, the majority of this research has been conducted with breast cancer survivors, leaving questions about survivors of other cancers. **METHODS:** To address these issues, the American Cancer Society (ACS) developed a program of research called the ACS Studies of Cancer Survivors that includes three components: a longitudinal study of survivors of the 10 most highly incident cancers, in which more than 5,000 cancer survivors completed a baseline survey approximately 1 year after their diagnosis, with a second survey completed 1–2 years later. A third survey, timed to the 8th anniversary of survivors' diagnosis is currently in the field and will be completed in 2012. While longitudinal data are ideal, the ACS desired to investigate long-term survivorship issues more immediately, so a cross-sectional study of survivors of 6 prevalent cancers was also implemented. The nearly 10,000 survivors who participated in this study were 2, 5, and 10 years post-diagnoses at the time of sampling. Finally, as health care has moved towards outpatient services, the issues of family caregivers have taken on greater importance. Thus, ACS asked survivors in the longitudinal study to nominate their primary family caregiver, which resulted in over 2,000 caregivers being enrolled in a separate longitudinal study, providing the opportunity to examine dyadic relationships between survivors and their caregiver. **RESULTS:** In total, this program of research has resulted in 47 published peer-reviewed articles to date and over 100 presentations at national/international conferences. **CONCLUSIONS:** The current presentation will highlight major findings of the ACS Studies of Cancer Survivors and identify areas for future research, advocacy, and interventions intended to ameliorate the problems of cancer survivors and their caregivers as they move through the cancer survivorship continuum. **RESEARCH IMPLICATIONS:** This

portion of the symposium will highlight major findings of the ACS Studies of Cancer Survivors and identify areas for future research addressing issues faced by cancer survivors and their caregivers as they move through the cancer survivorship continuum. **CLINICAL IMPLICATIONS:** This portion of the symposium will highlight major research findings of the ACS Studies of Cancer Survivors and the clinical implications of those findings as backdrop for discussion about policy implications to advance future research and interventions addressing issues faced by cancer survivors and their caregivers as they move through the cancer survivorship continuum. **FUNDING:** None.

7-5

Patient Navigation Programs: Lifelines to Patient Quality of Life

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PURPOSE: Patient Navigation programs are designed to help guide cancer patients through the complex healthcare system so they can gain better access to care and overcome barriers they may otherwise face in getting the prevention, early detection, treatment and care services they need. The demands on our nation's healthcare system are expanding dramatically, with growing numbers of seniors, many of who will live for years with one or more chronic conditions and an influx of newly insured patients across age ranges resulting from the Affordable Care Act. Patient Navigators will be increasingly essential parts of healthcare teams to help meet the needs of these patients in getting access to quality cancer prevention, detection, treatment and care, including providing the gateway to finding psychosocial assessment and services that cancer patients and survivors will need. **METHODS:** This portion of the symposium will describe how patient navigation programs have been implemented and evaluated and describe navigators' roles as part of the care team in helping improve patients' access to quality cancer care and the patients' and families' experience within the healthcare system across the cancer continuum. **RESULTS:** The presentation will include an overview of evaluative studies and findings on patient navigation programs conducted to date and discuss significant implications for the use of navigation in a variety of settings at different points along the continuum. **CONCLUSIONS:** This presentation will discuss emerging use of patient navigation in oncology care and other disease processes. **RESEARCH IMPLICATIONS:** The discussion will include focus on identifying best measures for patient navigation and current work on development of national common outcome and process measures,

including clinical implications. **CLINICAL IMPLICATIONS:** The discussion will include focus on identifying best measures for patient navigation and current work on development of national common outcome and process measures, including clinical implications. **FUNDING:** None.

8-1

Decision Regret, Depression and Anxiety in Patients Undergoing Prognostication for Uveal Melanoma

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PURPOSE: Uveal melanoma is a rare cancer of the eye. At time of diagnosis, approximately 50% of patients already have micro-metastatic disease that is undetectable by current cancer screening methods. Existing treatment of these patients, following surgical excision or radiation therapy of the primary tumor, is surveillance to monitor for metastases. Currently there are primary tumor biopsy based methods to identify molecular prognostic markers of metastatic disease at the time of ophthalmic diagnosis. One study evaluating mood and anxiety in patients with uveal melanoma, found rates consistent with those found in other cancer populations. However, there are no studies evaluating mood and anxiety in patients undergoing prognostication for uveal melanoma. Further, regret about having this type of testing has not been studied in this population. **METHODS:** In this study, the Hospital Anxiety and Depression Scale (HADS) was administered to patients pre-operatively, and at follow up times of 3, 6, 9 and 12 months, to assess for depression and anxiety. A brief decision making regret scale was given to these patients at the same time as the HADS. **RESULTS:** Pre-operative data on 23 patients, showed that 39% ($N = 9$) had scores on the HADS consistent with either "suggestive or probable" depression or anxiety. The mean age of patients in this group was 52 and 66% of the group are men. In the non-anxious/depressed group, the average age was 58 and 64% of the group are men. With regard to decision regret, the majority of patients, 61% ($N = 14$), did not regret this decision. Only 2 (9%) patients completely regretted the decision to undergo cytogenetic testing. **CONCLUSIONS:** The preliminary data suggests that there are high rates of depression and/or anxiety in the uveal melanoma population at the pre-operative time point. It appears that the majority of patients do not regret the decision to undergo cytogenetic testing. **RESEARCH IMPLICATIONS:** Additional studies need to be done regarding the presence of depression and anxiety in patients with uveal melanoma as well as the impact of molecular prognostication on patients' psychological well-being.

CLINICAL IMPLICATIONS: Patients with uveal melanoma should be screened for depression and anxiety and counseled appropriately. **FUNDING:** None.

8-2

Depression and Survival in Stage IV Non-Small-Cell Lung Cancer: Relationships With Tumor Genotypes

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PURPOSE: While depression appears to be associated with worse survival from cancer, underlying mechanisms of the association are unknown. Depression might influence behaviors that impact survival, but might also be associated biologically with more aggressive tumors. We have found that patients with stage IV non-small-cell lung cancer (NSCLC) tumors that have worse prognosis, based on epidermal growth factor receptor (EGFR) status, are more likely to have depression at diagnosis. We hypothesize that the relationship between depression and survival in stage IV NSCLC patients is explained by EGFR mutation status of the tumors. **METHODS:** One hundred and fifty-one patients with newly diagnosed stage IV NSCLC were enrolled between 6/7/06 and 7/15/09 followed in a randomized controlled trial of early palliative care. At enrollment, depression was assessed with the Patient Health Questionnaire-9 (PHQ-9). Patients with tumor tissue available had EGFR mutation testing. An association between depression (PHQ-9 scores ≥ 10) and EGFR mutation status was tested using Chi-square. Associations of depression and EGFR mutation status with survival were tested separately using Cox proportional hazards models. Independent associations of depression and EGFR mutation status with survival were tested by including both variables in the proportional hazards model. All proportional hazards models were adjusted for performance status and stratified by randomization condition in the trial. **RESULTS:** By 9/9/10, 82% (124/151) patients had died. Over a quarter (41/151) in the sample had depression at enrollment. Depression was significantly associated with survival (HR = 1.56, $p = 0.03$). One-third (51/151) had EGFR mutation testing and EGFR mutation status was significantly associated with depression ($p = 0.03$). No patients (0/17) with EGFR mutations, which confer better prognosis, had depression. Almost half without EGFR mutations (11/23) and almost a third (30/100) with unknown EGFR mutation status had depression. EGFR mutation status was significantly associated with survival ($p = 0.006$). When both depression and EGFR mutation were

entered into the model, only EGFR mutation status remained significantly associated with survival ($p = 0.01$). **CONCLUSIONS:** Although depression is associated with worse survival in stage IV NSCLC, this relationship may be at least partially explained by EGFR mutation status. Depression may be a marker of EGFR mutation status. Molecular pathways underlying this relationship need to be explored. **RESEARCH IMPLICATIONS:** Proposes novel mechanism for association between depression and survival from cancer. **CLINICAL IMPLICATIONS:** Highlights relationships between symptoms and tumor genotypes. **FUNDING:** NCI K23 CA115908.

8-3

Development of an Inpatient Distress Screening Tool for Bone Marrow Transplant Patients

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PURPOSE: The identification of distress as the “6th vital sign” poses a challenge to the treatment team to assess and address the physical, emotional, economic, social and spiritual toll on cancer patients. Bone marrow transplantation (BMT), with the requirement of long weeks of inpatient hospital stays and arduous treatment protocols, has a profound impact on the quality of life of both patients and their families. Regular distress screening of inpatients allows the potential for both prevention and intervention which would ideally optimize patients’ ability to cope adaptively with treatment. **METHODS:** An 8 week pilot study was performed on a 23 bed BMT inpatient unit to assess the efficacy of using the NCCN Distress Thermometer and Patient Problem List with an inpatient BMT population. Patients received the DT/PPL upon admission and every Monday, with a follow up interview after each administration to address higher levels of distress and endorsed problems. The psychologist, chaplain and social worker collaborated with medical staff in critiquing the effectiveness of the pilot project in screening inpatients’ distress. **RESULTS:** Several drawbacks to using the DT/PPL emerged through the pilot and a new tool was developed as a brief, comprehensive, face valid screening instrument. The new measure focuses on practical, emotional, family and physical issues as well as spiritual concerns and uses a likert rating scale to assess degree of distress in each area. The new BMTU Distress Screening Measure (BMT-DSM) takes patients about 3–5 minutes to fill out, can be read aloud easily to less able or illiterate patients and the results are easily understood “at a glance” by medical staff. The measure can flag patients in need of intervention by appropriate staff (social work, psychologist,

chaplain, financial counselor) and assess the progress of interventions throughout the trajectory of the BMT inpatient stay. **CONCLUSIONS:** The BMT-DSM is a rapid instrument that requires low patient burden and gives useful information to the treatment team. **RESEARCH IMPLICATIONS:** The currently proposed BMTU Distress Screening Measure is in process of validation using the DT, the HADS, the brief R-COPE, the P-SMS, and the MiS. **CLINICAL IMPLICATIONS:** Screening for distress in an inpatient BMT unit may require a more specific screening tool to assess the unique concerns of BMT patients. **FUNDING:** None.

8-4

Challenges in Development and Implementation of a Comprehensive Plan of Recruitment and Retention for an R-01 Symptom Cluster Trial for Breast Cancer Survivors

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PURPOSE: To describe challenges and recruitment issues in a Mindfulness-Based Stress Reduction intervention for breast cancer survivors (MBSR(BC)) and develop strategies to overcome these challenges. **METHODS:** A two-group, randomized waitlisted controlled design is being completed among 300 patients 21 years or older with Stage 0, I, II, and III breast cancer. After assessing recruitment challenges during the first year, a well-organized database was developed to include patient eligibility, recruitment schedules and reasons for non-participation. In order to retain current and future study participants, a calling system was implemented, consisting of weekly and monthly reminder phone calls. **RESULTS:** Thus far, 1139 patients have been screened, 669 (59%) eligible patients have been approached and 123 (11%) patients have consented to participate. After the implementation of the recruitment database, the number of screened, ineligible participants decreased. Team members are able to track patient appointments and develop a follow-up schedule. Recruitment summaries are easily generated; for instance, team members can view how many patients are enrolled into the study, completed the study or were lost to follow-up. The number of patients lost to follow-up has decreased from the previous year. **CONCLUSIONS:** The current recruitment and retention process thus far appears to be assisting in achieving study outcomes, including the extent to which the MBSR(BC) program improves patient outcomes after treatment completion, the manner (mechanisms) by which the MBSR(BC) program is effective and if particular subgroups of patients

derive the most benefit from the MBSR(BC) program. **RESEARCH IMPLICATIONS:** Recruitment and retention is vital to the success of study outcomes. **CLINICAL IMPLICATIONS:** Development of a comprehensive recruitment and retention plan is vital to achieving research outcomes in clinical trials. Evaluation and monitoring of the process and plan must be continual. **FUNDING:** National Cancer Institute 1R01CA131080-01A2.

9-1

Institutional Funding for Psycho-Oncology Programs: Blessing or Curse?

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PURPOSE: Funding for psycho-oncology programs is a challenge. The purpose of this presentation is to consider the advantages and disadvantages of relying on institutional funds for a psycho-oncology program. **METHODS:** About 6000 new patients per year are treated at the Siteman Cancer Center. The Psycho-Oncology Service is totally supported by institutional funds and consists of 2 psychologists and a postdoctoral fellow. In 2009, we saw 327 new patients and provided 608 total patient visits. **RESULTS:** In the APOS survey conducted in 2009, 31 of 146 (21%) Institutions were reported to have psychosocial oncology programs supported entirely by institutional funds. Of these, 14 of 58 (24%) were large cancer centers, 12 of 33 (36%) were community-based treatment centers, and 4 of 40 (1%) were patient service organizations. There are several advantages to being totally supported by institutional funds. Some advantages are specific to psycho-oncology programs that don't bill for services, particularly: there is no requirement for a physician referral nor a DSM diagnosis, and patients can be seen regardless of their insurance status. Other potential advantages include stability of funding and greater flexibility in how funds are utilized (versus grant-funding). There are also disadvantages to relying solely on institutional funds. For programs that don't bill for services, the problem of being "pure cost" may diminish incentive to grow the program. There can also be variability in how "free services" are perceived by medical professionals and potential patients. For all programs, dependence on institutional funds means the financial success of the institution can become a bigger factor than clinical need in determining the scope of services. **CONCLUSIONS:** Institutional funding has advantages and disadvantages. As with other ventures, there is benefit to being diversified in terms of funding sources. **RESEARCH IMPLICATIONS:** It would be useful to examine differences in patient uptake of

psycho-oncology services that are billed versus those offered at no charge. **CLINICAL IMPLICATIONS:** With the mandates of the NCCN and IOM, there is impetus for psychosocial services to be delivered to cancer patients. Different funding sources may have implications for the range of services that can be provided. **FUNDING:** None.

9-2

Getting the Resources to Build Great Psychosocial Programs: Because No One Will Ever Give You Money for a Really Good One

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PURPOSE: Philanthropic support comprises a significant amount of resources for some psychosocial programs and little or none for others. There is no extant system to track donations to psychosocial programs nationally. Few clinicians, researchers or educators who participate in these programs ever receive formal training in fund raising. If programs want to be able to implement new and innovative projects they must think about funding from a wider variety of sources. **METHODS:** The literature reveals that even though 2008 was considered to be the worst economic climate since the Great Depression, charitable giving exceeded \$307 billion only a 2% decrease over 2007. Health organizations receive approximately 7% (\$21.64 billion) of total giving. The focus on fundraising across psychosocial programs nationally is uneven. Psychosocial programs are inherently humanistic in nature and are therefore of interest to donors. **RESULTS:** The presenter will use index cards to learn from the group what they perceive to be the major barriers to fund raising. The presenter will then discuss highly successful philanthropic efforts across 5 settings (4 major academic cancer centers and 1 small community hospital) and the practical approaches that were used to acquire considerable financial and other resources for psychosocial programs. At City of Hope philanthropy presently comprises 15% (and growing) of the operating budget for approximately 70 people. An endowment has been established that has over \$9 million and is on target to be at \$15 million by 2013. **CONCLUSIONS:** This is a unique time to be pursuing philanthropic support. Ultimately, philanthropic revenue streams are essential to all academic endeavors and represents an opportunity for psychosocial programs to build the infra-

structure to maximize growth and to having a dependable foundation to be great. Clinical, educational or research knowledge and skills that the participants already have can be extended to engage philanthropic resources. **RESEARCH IMPLICATIONS:** Donors are frequently interested in the development of new knowledge, especially data that can be published in peer reviewed journals. Psychosocial research in particular is of interest to donors. **CLINICAL IMPLICATIONS:** Philanthropic support is almost always focused on specific programs that benefit patients or their families. These funds can be used to underwrite salaries or innovative patient-centered psychosocial programs. **FUNDING:** None.

9-3

Fee-For-Service Payment for Counseling in a Comprehensive Cancer Center

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PURPOSE: The integration and financial support of counseling services is challenging and requires significant resources. The purpose of this project was to analyze inpatient and outpatient billing infrastructure, procedures, and limitations for MA., Ph.D., and Psy.D. level counselors. **METHODS:** Fee-for-service (FFS) billing and collections for three providers were audited for FY 2010. We asked the hematology and oncology section business manager and an institutional finances representative for the following: charges, contractual adjustments, net charges, payments, payment adjustments, and net collections. These sums were categorized by insurance type (private, managed care, Medicare and Medicaid) and billing CPT code, i.e., behavioral health and assessment (BHA) or DSM-IV-TR codes. Payment patterns were analyzed and different fee schedules for individual insurance carriers were recorded. **RESULTS:** Provider charges totaled \$89,884 resulting in \$34,437 in net collections. Percentage collections relative to charges was 21%, 40%, and 41% for Psy.D., MA., and Ph.D. providers respectively. Billing/collections (%) were \$25,907/\$9069 (35%) for BHA codes and \$63,977/\$25363 (40%) for DSM-IV-TR codes. Insurance companies varied in their payment policies for the type of degree held by counselors. The licensed professional psychologist (Ph.D.) was most often acceptable as a billing degree among the 3 providers/degrees analyzed. A case study illustrates the set of transactions necessary for patients to negotiate successfully FFS care. **CONCLUSIONS:** Fee-for-service activity can be integrated into ongoing medical care in both in- and out-patient settings. Tracking insurance reimbursement and

helping patients understand how the process works takes considerable resources. **RESEARCH IMPLICATIONS:** Further investigation is warranted for a full understanding of FFS opportunities and limitations for psychosocial programs that employ the full range of service providers including MD's, licensed professional counselors, licensed clinical social workers, nurse practitioners and others. **CLINICAL IMPLICATIONS:** The current analysis found that collected funds through FFS billing amounted to a small percentage of the total amount billed. In order to sustain expensive 1-1 counseling services, programs will need to supplement FFS activity with additional sources of revenue, i.e., bundled services, philanthropy and foundation grants. **FUNDING:** The Kathryn A. Millward Fund.

9-4

Strategies for Funding Psycho-Oncology Research Activities

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PURPOSE: Successful psycho-oncology programs at major cancer treatment centers are typically engaged in clinical care, training, and research. Conducting research is particularly important at the 66 U.S. National Cancer Institute-designated Cancer Centers because the quality and quantity of research taking place are major considerations in receiving this designation. The purpose of this presentation is to identify strategies that psycho-oncology programs can use to fund their research activities. **METHODS:** Sources of funding for research activities are varied and include institutional support, philanthropy, corporations in the health care sector, and governmental and charitable organizations with peer-reviewed grant programs. **RESULTS:** The scope and type of planned research activities will likely drive considerations of how much funding to seek and where to seek it. Peer-reviewed grants, combined with institutional support, are the major sources of funding at most centers for the faculty time, personnel, equipment, and resources needed to conduct psycho-oncology research. At the Moffitt Cancer Center, most psycho-oncology research is conducted by members of the Health Outcomes and Behavior Program. This program is currently comprised of 27 faculty who represent a wide range of disciplines. During the most recent fiscal year, this group obtained \$8.5 million in research grant funding. Of this amount, 75% was from the National Cancer Institute, 21% was from other branches of the National Institutes of Health and the American Cancer Society, and 4% was from non-peer reviewed sources. **CONCLUSIONS:**

Strategies for securing institutional support will be described during the course of this presentation. These strategies include aligning program goals with institutional goals and forging collaborations with researchers in other disciplines. Strategies for developing successful grant applications will also be described. These strategies include participating in grant-writing workshops, identifying effective mentors, and aligning one's research interests with current research priorities identified by funders. **RESEARCH IMPLICATIONS:** No single strategy for funding research activities applies to all psycho-oncology programs. Local considerations, including opportunities available, resources available, and institutional priorities, need to be carefully assessed in formulating plans. **CLINICAL IMPLICATIONS:** Research in psycho-oncology has the potential to improve the clinical care provided and experience delivering psychosocial care has the potential to enrich the clinical relevance of research activities. **FUNDING:** None.

10-1

Caring for Caregivers: An Intervention for Allogeneic Transplant Caregivers

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PURPOSE: Allogeneic transplant patients are required to have a caregiver for at least 100 days following infusion of their donor cells. Caregivers of allogeneic BMT patients are faced with significant challenges and are understandably quite stressed. They assume significant responsibility for the patient's care and survival following transplant, all under a veil of uncertainty as to the future. This experience has a major impact on them socially, emotionally, and financially. Although many interventions have targeted the cancer patient, few have focused on the caregiver. This presentation will describe an eight session manualized stress management intervention that is being utilized as part of an NIH randomized control trial for caregivers of allogeneic transplant patients. **METHODS:** Caregivers were part of a NIH-funded study assessing behavioral and physiological markers of stress in caregivers of allogeneic patients. After baseline data collection, caregivers were randomly assigned to an 8-session stress management intervention or treatment as usual. Part of the intervention includes the use of a device called a RESPerATE, which caregivers

were asked to use 4 or 5 times per week. The RESPeRATE entrains a slower respiratory rhythm. Stress management interventions, such as mindfulness meditation or relaxation, include exercises that slow respiration. The advantage of the RESPeRATE is the ability to download usage data. The stress management intervention focused on the following areas: 1) Stress – what is it and why is it important to manage, 2) Stress and the mind-body connection, 3) How our thoughts can lead to stress, 4) Coping with stress, 5) Strategies for maintaining energy and stamina, 6) Coping with uncertainty and fear of the unknown, 7) Managing changing relationships/communicating your needs, and 8) Getting the support you need. **RESULTS:** To date, 32 caregivers have been randomized to receive the stress management intervention. Of those receiving the intervention, two have dropped out, and three did not complete all eight sessions due to a patient death. Thus, despite the stresses and demands of caregiving, caregivers were receptive to the content of the sessions; they seemed to understand the stress management material and reported that they integrated some of the material into their coping strategies. Most caregivers complied with the recommended use of the RESPeRATE, averaging 4 days per week during the 12 week transplant process. During the 16 minute RESPeRATE sessions, caregivers averaged 11 minutes in the target therapeutic range of 10 breaths or less per minute. **CONCLUSIONS:** Despite the stress and demands caregivers of allogeneic transplant patients' face, they appear open to receiving support and stress management training. Caregivers had good compliance with the use of the RESPeRATE, which is thought to enhance relaxation and decrease stress. **RESEARCH IMPLICATIONS:** The long term benefit of stress management interventions for allogeneic transplant caregivers and the secondary benefit to the patient are still unknown. However, at the conclusion of this study more information should be gleaned about the efficacy of a stress management intervention. Caregivers play a key role in cancer patients' treatment and well-being so intervention research to support caregivers is critical. **CLINICAL IMPLICATIONS:** Caregivers of allogeneic transplant patients are under significant stress and face a great deal of uncertainty. Use of stress management interventions and techniques may offset the physical and psychological implications of stress. **FUNDING:** Study supported by a grant from the National Cancer Institute CA126971.

10-2

Educational Needs About Cancer Family History and Genetic Counseling for Cancer Risk Among Frontline Healthcare Clinicians in New York City

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PURPOSE: This study investigated the educational needs of frontline healthcare clinicians about cancer family history and genetic counseling for cancer risk. **METHODS:** We conducted a voluntary, anonymous survey among 1) general medicine clinicians 2) obstetrics/gynecology clinicians and 3) nurse practitioners at Mount Sinai School of Medicine in New York City. **RESULTS:** A total of 143 clinicians completed the survey (response rate 81%). The majority of clinicians (77.5%) reported regularly completing family histories on cancer risk for their patients (77.5%), yet only 1.7% considered themselves 'experts' in interpreting risk to make prevention, screening and treatment recommendations. Numerous barriers to cancer family history collection were noted. Over half (55.8%) reported referring patients to genetic counseling, although only 14.3% reported confidence in their ability to make appropriate referrals. The majority reported they would apply genetic counseling for cancer risk in their practice if they had the skills (84.9%). There was some variability found regarding specialty. **CONCLUSIONS:** Despite widespread use of family histories for cancer risk, barriers remain to appropriate cancer risk management among frontline healthcare clinicians. **RESEARCH IMPLICATIONS:** Study results underscore the need for future research in order to develop and test the feasibility of educational tools and programs for clinicians. **CLINICAL IMPLICATIONS:** Development of such tools and programs will ultimately assist clinicians with collection of cancer family history information, interpretation and application of genetic counseling in clinical practice. **FUNDING:** None.

10-3

Family Member Assessments of Significant Turning Points and Their Impact on Well-Being Occurring Throughout a Breast Cancer Experience

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PURPOSE: A study of the significant turning points that occur during experiences with breast cancer and their impact on individual well-being

was conducted to examine the ways in which family members (breast cancer survivors, their intimate partners, and additional family members such as sisters, sons, etc.) made sense of and coped with the cancer experience. **METHODS:** Sixty-four interviews with family members (20 female breast cancer survivors, 19 male intimate partners, and 25 additional family members) were conducted using a modified retrospective interview technique (RIT; Huston, Surra, Fitzgerald, & Cate, 1981). Participants constructed two-dimensional turning point graphs, creating a visual depiction of all significant turning points that occurred throughout a cancer experience. Participants also indicated the impact of each turning point on well-being. Semi-structured interviews followed graph completion. Inductive thematic analyses were conducted using a constant comparative method. A separate inductive analysis was conducted to evaluate graphical depictions for experiential trajectories. **RESULTS:** A total of 749 turning points were identified, with a mean of 11.7 events per participant. Fifteen supra-categories resulted, including both chronologically-oriented events (i.e., Diagnosis [3rd most frequently reported $n = 70$], Surgeries [most frequently reported $n = 100$], etc.), and non-chronologically oriented events (i.e., Family Rituals [2nd most frequently reported $n = 88$], Displays of Support, etc.). In addition, four patterns or trajectories of familial coping were identified (i.e., Positive, upward [$n = 10$]; Negative, downward [$n = 3$]; Minimal Up/Downturns [$n = 16$], and Turbulent [$n = 34$]). **CONCLUSIONS:** Findings lend insight into both the medically normative and non-cancer related significant events by which family members make sense of the breast cancer experience. Furthermore, implications of events on individual well-being offer additional insight into the specific events where social support and communal coping strategies may be most beneficial. **RESEARCH IMPLICATIONS:** Conclusions from this study inform work in the areas of communal coping, subjective well-being, family communication, and health communication research. **CLINICAL IMPLICATIONS:** This study usefully highlights both therapeutic and clinical intervention areas that can be anticipated by the medical community so that preventative measures can be taken to increase health and well-being, avoid psychological downturns, and ensure social support and coping mechanisms are intact for patients and their family members. **FUNDING:** None.

10-4

Barriers to Mental Health Service Use Among Parents Who Lost a Child to Cancer

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PURPOSE: There is evidence to suggest that bereaved parents underutilize mental health services after the loss of a child. For parents who lost a child to cancer, there is a common belief that parents do not seek services affiliated with the institution at which their child was treated to avoid painful reminders of their loss. However, prior studies have not examined barriers to bereavement mental health service use. The purpose of this study was to identify perceived barriers to accessing bereavement mental health services. **METHODS:** Participants were mothers ($n = 19$) and fathers ($n = 13$) who lost a child to cancer between 8 months and 3 years ago. Parents were administered a survey of mental health service use and perceived barriers to use at a single time point. **RESULTS:** Results showed that 77% of parents utilized at least one type of mental health service, including talk therapy (46%), psychotropic medication (27%), or a support group (46%). Parents endorsed several barriers to pursuing or continuing mental health services, including the belief that doing so would be too painful (30%), the feeling that finding help was too difficult (27%), parenting responsibilities (24%), financial barriers (21%), lack of time (18%), not believing anyone could help (18%), and feeling uncomfortable discussing their feelings (15%). Parents who reported that it was too difficult to find help had significantly higher levels of prolonged grief symptoms ($p = 0.001$). Notably, individuals with higher levels of prolonged grief were not more likely to use bereavement mental health services. The majority of parents (59%) indicated that they would like at least a little assistance with coping with the death of their child. **CONCLUSIONS:** While the majority of parents accessed mental health services at least one time, these findings suggest that parents bereaved by cancer who are experienced higher levels of distress and grief symptoms are underutilizing services, despite their suffering. **RESEARCH IMPLICATIONS:** Researchers should conduct longitudinal studies of bereavement mental health service use in larger samples at various points in the bereavement trajectory. **CLINICAL IMPLICATIONS:** Clinicians should increase outreach to parents after the death of a child to facilitate parents finding help. Potential ways of addressing other identified barriers will be discussed. **FUNDING:** National Cancer Institute R03 CA139944.

11-1

Assessing and Treating Cancer-Related Sexual Dysfunction in Women With Cancer

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PURPOSE: Cancer and its treatments affect the physiological, psychological and sociological realms of the woman's life and her ability to maintain sexual health. Sexual dysfunction results from premature ovarian failure from chemotherapy or pelvic radiation therapy especially when estrogen replacement is contraindicated. All phases of the sexual response cycle can be negatively affected after cancer treatment. Women describe feeling guilty for not wanting to participate in sexual activity with their partners which causes stress in the relationship, reduced intimacy and affection. This presentation will describe types of female sexual changes resulting from cancer and/or its treatments, and ways to address and treat female sexual dysfunction. **METHODS:** Clinical experience as well as an extensive literature review was used to identify female cancer-related sexual dysfunction. Best practice treatment options will be discussed and reviewed. **RESULTS:** After cancer treatment, women complain of decreased or no libido, vaginal dryness, vaginal stenosis, vaginal atrophy, dyspareunia, anorgasmia, delayed orgasm, and hot flashes. Lack of libido is the most commonly reported problem with as many as 67% of females complaining of this. There is a lack of evidence-based treatments available for female cancer-related sexual dysfunction since treatment options are limited by the type of cancer and its treatments. Most patients reported that best practice treatments improved their sexual functioning, but they did not return to pre-cancer level of functioning. Cognitive behavioral therapy as well as over-the-counter medications and prescription options will be discussed. **CONCLUSIONS:** The importance of addressing female sexual dysfunction after cancer treatment will be reiterated as well as the extent of sexual dysfunction that females experience. Best practice treatment options as well as limited evidence-based treatment options will be described. **RESEARCH IMPLICATIONS:** Research to measure the effectiveness of interventions for women with cancer-related sexual dysfunction is indicated. It lags behind interventions for men with cancer-related sexual dysfunction. **CLINICAL IMPLICATIONS:** Clinicians can implement some of the best practice treatment options which will be presented. It will heighten their interest in addressing and treating females with cancer-related sexual dysfunction. **FUNDING:** None.

11-2

Greater Cortisol Predicts Increased Insomnia in Patients Treated for Prostate Cancer

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PURPOSE: The prevalence of insomnia symptoms varies between 25 and 40% in prostate cancer patients. In the general population, studies have found a relationship between insomnia and hyperactivity of the hypothalamo-pituitary-adrenocortical (HPA) system, but it is not clear whether hypercortisolemia is a risk factor or a consequence of insomnia. As part of a larger longitudinal study, this investigation aimed to assess whether increased cortisol levels are a better predictor of insomnia at a subsequent time point than the reverse path (insomnia predicting higher cortisol) in patients with prostate cancer. **METHODS:** Sixty men scheduled to receive radiation therapy for prostate cancer, with or without androgen deprivation therapy (ADT), were assessed prior to receiving any treatment (baseline) and at seven additional times over a period of 16 months (1, 2, 4, 6, 8, 12, and 16 months) using the Insomnia Severity Index and plasma levels of cortisol. Data were analyzed using mixed modeling regressions controlling for temporal dependency and treatments received (with vs. without ADT). **RESULTS:** Greater insomnia symptoms at one time point were significantly predicted (beta = 0.94) by insomnia symptoms, $t(308) = 46.91$, $p < 0.001$, and cortisol levels (beta = 0.07), $t(308) = 3.36$, $p = 0.001$, at the previous assessment. Conversely, higher cortisol levels at one assessment were significantly predicted by cortisol levels at the previous time point (beta = 0.25), $t(293) = 4.79$, $p = 0.001$, marginally predicted by insomnia symptoms assessed at the same time (beta = 0.11), $t(293) = 1.90$, $p = 0.06$, but not significantly predicted by insomnia symptoms at the preceding time point, $t(293) = 0.38$, $p = 0.70$. **CONCLUSIONS:** Longitudinally, cortisol levels better predicted insomnia severity than insomnia severity predicted cortisol levels in patients treated for prostate cancer. **RESEARCH IMPLICATIONS:** These findings support the idea that HPA axis hyperactivity plays a role in the initiation of insomnia. **CLINICAL IMPLICATIONS:** Prostate cancer is a stressful life event which may induce hypercortisolemia. Interventions reducing stress levels could be useful in preventing the occurrence of sleep disturbances in this population. **FUNDING:** NARSAD, CIHR, FRSQ.

11-3

Symptom Clusters and Symptom Management Strategies of Older Breast Cancer Survivors

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PURPOSE: Older breast cancer survivors experience chronic, multiple, concurrent symptoms that have ambiguous causes (late effects of cancer, aging, comorbid health problems). Strategies used in self care of symptoms are not well understood. An individualized symptom management nursing intervention (IRIS) to reduce symptom distress in older cancer survivors utilizes individualized symptom management plans. The purpose of this study was to describe the types of symptoms experienced by older breast cancer survivors and the strategies they used in self care of those symptoms. **METHODS:** Participants were breast cancer survivors ($N = 190$, aged 65 and over, M age = 70, $M = 6$ comorbidities) at least 1 year post-diagnosis and 3 months post-treatment enrolled in IRIS (a randomized clinical trial). At baseline, each participant chose 1 or 2 target symptoms. Baseline target symptoms were coded into 13 symptom clusters by 4 independent raters ($Kappa = 0.97$). Those in the experimental group chose individualized strategies for self care of symptoms. Ratings of whether or not the strategy was worked on or helpful were completed every 2 weeks for 8 weeks. Strategies were coded into 20 strategy types. **RESULTS:** The 5 most frequently occurring symptom clusters and the corresponding types of strategies utilized were: musculoskeletal (18 strategy types), hormonal (18), sleep (15), fatigue (14), and weight gain/control (13). Shortness of breath was a low occurrence symptom cluster with a high number of types of strategies (15). The six most frequently chosen types of strategies were: reading information, communicating with health care providers, heat/cold/massage or other self-care strategies, physical activity changes, nutrition/diet, and medication-related strategies. The use of different types of strategies varied across the symptom clusters, except for 'contemplation' (thinking about behavior change) which was chosen by about one-third of women in each of the 5 symptom clusters. **CONCLUSIONS:** Older breast cancer survivors experience a complex set of symptoms and engaged in a wide variety of symptom management strategies. **RESEARCH IMPLICATIONS:** Individualized symptom management interventions are feasible with older cancer survivors. **CLINICAL IMPLICATIONS:** Older breast cancer survivors were willing to engage in complex self-care regimens for symptoms using a patient-centered approach. **FUNDING:** NIH/NIA/NCI Office of Cancer Survivorship.

11-4

Age Differences in the Presence of Pain and Psychological Distress in Younger and Older Cancer PatientsKrok J¹, Baker T¹, McMillan S²¹*University of South Florida, School of Aging Studies, Tampa, Florida, United States,* ²*University of South Florida, School of Nursing, Tampa, Florida, United States*

PURPOSE: The goal of this study was to examine differences between younger and older adults in reports of cancer pain, pain severity, and distress upon receiving outpatient services from a large comprehensive cancer center. **METHODS:** Two hundred seventy-four adults ($n = 113$, < 55 years of age; $n = 119$, ≥ 55 years of age) were interviewed regarding their pain severity, pain frequency, psychological symptoms, and psychological distress. Symptom data was collected from the Memorial Symptom Assessment Scale (MSAS). **RESULTS:** The mean age of the sample was 55.1 years ($SD \pm 12.47$). More than half of the sample were white (85%). Preliminary data indicated that 86% and 74% of younger and older patients, respectively, reported pain. Younger patients had significantly higher reports of pain ($t = -2.27$, $p < 0.05$), pain severity ($t = -2.10$, $p < 0.05$) and distress from pain ($t = -2.58$, $p < 0.05$) compared to their older counterparts. For both younger and older patients, pain severity was moderately correlated with psychological symptoms including difficulty concentrating ($r = 0.56$, $p < 0.001$), feeling nervous ($r = 0.49$, $p < 0.01$), and worrying ($r = 0.36$, $p < 0.05$). Receiving palliative symptom management ($b = -0.63$, $p < 0.05$) and being actively involved in one's religious community ($b = -0.071$, $p < 0.05$) were found to be associated with less pain severity among this sample of younger and older adults ($F_{11, 88} = 1.89$, $p < 0.05$). **CONCLUSIONS:** These findings indicate that older cancer patients may have developed more effective coping mechanisms to help them better cope with pain while receiving outpatient care for their cancer diagnosis. **RESEARCH IMPLICATIONS:** These findings indicate differences in the pain experience between younger and older patients. This is of particular importance, as more data focusing on the pain experience of older cancer patients is warranted. More importantly, empirical research is needed to understand the impact of pain and its relationship with psychological distress in more diverse and marginalized cancer populations across the age continuum. **CLINICAL IMPLICATIONS:** The findings promote the importance of addressing the unique physical and psychological concerns of younger and older cancer patients while effectively managing their pain. **FUNDING:** None.

12-1

Relationship of Sexual Problems to Psychological Adjustment and Quality of Life After Gynecologic Cancer

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PURPOSE: Research suggests that women have high rates of sexual problems and comparably lower rates of poor psychological adjustment or quality of life after treatment for gynecologic cancer. Few studies have examined the relationship of sexual problems to psychological adjustment and quality of life, however, and these studies have been limited methodologically. The current study sought to address limitations of previous studies and examine the relationship of sexual problems to mood, relationship satisfaction, and health-related quality of life following treatment. **METHODS:** As part of a larger study, endometrial ($n = 50$) and cervical ($n = 36$) cancer patients completed the Female Sexual Function Inventory (FSFI), Center for Epidemiologic Studies-Depression Scale, Abbreviated Dyadic Adjustment Scale, and Medical Outcomes Study-Short Form prior to (T0) and 3 months after treatment (T1). **RESULTS:** Sample mean age was 53.4 years. All women were partnered. Nearly 50% of the sample was sexually active at T0; these women were more likely to be younger and premenopausal ($ps < 0.05$). Sexual problems at T0 were associated with worse physical quality of life and less relationship satisfaction ($ps < 0.05$). At T1, 71% of the sample was sexually active. There were no demographic, disease or treatment differences between sexually active and inactive women. Women who were sexually active at T1 reported less depression, better mental quality of life, and more relationship satisfaction ($ps < 0.05$) but not physical quality of life ($p > 0.05$). At T1, mean FSFI score among sexually active women was 22.1 (SD = 8.5). More sexual pain and less satisfaction were associated with more depression ($ps < 0.05$). Problems with desire, arousal, orgasm, pain, and satisfaction were associated with less relationship satisfaction ($ps < 0.05$). Finally, problems with arousal, orgasm, pain, and satisfaction were associated with worse mental quality of life ($ps < 0.05$). **CONCLUSIONS:** Findings suggest that sexual problems after gynecologic cancer adversely affect psychological adjustment and mental quality of life. **RESEARCH IMPLICATIONS:** Future research should investigate this relationship in longer-term survivors and a comparable group of healthy women. **CLINICAL IMPLICATIONS:** Interventions to prevent or treat sexual problems may also serve to enhance emotional well-being and relationship satisfaction in survivorship. **FUNDING:**

American Cancer Society, MRS-06-082-01-CPPB.

12-2

Anxiety, Pain and Sexual Self-Esteem in Men Using Penile Injection Therapy for Erectile Dysfunction Following Radical Prostatectomy

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PURPOSE: Prostate cancer is the most common cancer in men. Radical prostatectomy (RP), a gold standard treatment, provides excellent cancer control. Unfortunately, up to 85% of men will experience erectile dysfunction (ED) following RP. The current best practices treatment for these men is the concept of erectile rehabilitation. Since oral medications to treat ED are generally ineffective following RP, most erectile rehabilitation programs utilize penile injection therapy. Penile injections produce excellent results; however anxiety and fear of pain lead to resistance. This prospective study examined anxiety, pain, and sexual self-esteem in patients using penile injections. **METHODS:** Men starting penile injection therapy post RP completed questionnaires prior to starting injection training and at a 4-month follow-up visit. The inventories included: Injection Anxiety Scale, Injection Pain Scale, Hospital Anxiety and Depression Scale (HADS), Self-Esteem and Relationship Questionnaire (SEAR), and IIEF Erectile Function Domain (EFD). **RESULTS:** Average age of the 125 men was 60 + 7 years. At 4 months, the frequency of ICI use was: 26% < 1/week, 29% 1/week, 41% 2/week, and 4% 3/week. Mean pain score at first injection was 2 ± 1.8 (range 0–10), and stayed consistently low across time periods. Mean anxiety score at first injection was 5.6 (range 0–10) and significantly decreased to a 4 at 4 months ($p < 0.05$). Mean HADS anxiety score also decreased from baseline to 4-months (4.6 vs. 3.8, $p < 0.05$). Anxiety was not associated with frequency of ICI use. Men reported improvement in self-esteem and relationship scores (SEAR Total Scores, range 0–100) and all SEAR subscale scores (range 0–100) from baseline to 4 months ($p < 0.01$): Total Score, 36 vs. 54; Sexual Relationship, 27 vs. 50; Confidence, 54 vs. 67; Sexual Self-Esteem, 57 vs. 70; Overall Relationship, 60 vs. 77. **CONCLUSIONS:** Men report low pain, while anxiety decreases and sexual self-esteem increases during penile injection use. This may help reduce resistance to penile injection therapy and is especially important in a penile rehabilitation where early intervention is crucial. **RESEARCH IMPLICATIONS:** Gold standard measures of male sexual functioning, and future research directions will be presented. **CLINICAL**

IMPLICATIONS: The best clinical practices for ED will be explored. **FUNDING:** Pfizer sponsored this research.

12-3

Self-Reported Appearance Concerns and Psychosexual Distress Among Women With the Neurofibromatosis Tumor Suppressor Syndrome

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PURPOSE: Patients with neurofibromatosis (NF) type 1 and 2 may have extensive skin tumors and disfiguring facial weakness, respectively; however, no research has examined appearance concerns among these patients. This study examined appearance concerns among female NF patients and compared appearance-related psychosexual distress of: 1) women with NF1 vs. NF2; 2) women with NF to general population norms; and 3) women with NF to clinical norms of post-mastectomy breast cancer survivors. **METHODS:** From January 2010 – present, we have administered surveys to patients treated at the Family Center for NF at the Massachusetts General Hospital in Boston. The Derriford Appearance Scale 59 (Harris et al., 1996) assessed: 1) current appearance concerns; and 2) appearance-related psychosexual distress (as measured by subscales for sexual/bodily and social self-consciousness). Norms for the general population and post-mastectomy breast cancer survivors were used for comparison. **RESULTS:** To date, participants are 56 women with NF1 and 30 with NF2 (M age = 37.8 years, SD = 12.38). The majority (84%) reported an appearance concern, with over half (56%) reporting they were most self-conscious about NF-related features (e.g., skin tumors), and the remainder reporting non NF-related concerns (e.g., weight). Although no differences in social self-consciousness were found between women with NF1 and NF2, there was a trend for women with NF1 to report more sexual/bodily self-consciousness ($p = 0.07$). Upon comparison to women in the general population, women with NF1 and NF2 reported a trend towards more sexual/bodily self-consciousness ($p = 0.07$) and greater social self-consciousness ($p < 0.001$). Compared to breast cancer survivors who received mastectomy, women with NF1 and NF2 reported greater levels of sexual/bodily and social self-consciousness ($ps < 0.001$). **CONCLUSIONS:** These findings support clinical anecdotes suggesting that the majority of women with NF experience appearance concerns and related distress. **RESEARCH IMPLICATIONS:** The results support the further investigation of appearance

concerns among women with NF to understand how such concerns impact psychosexual functioning and what types of interventions may alleviate these issues. **CLINICAL IMPLICATIONS:** These preliminary results may have implications for the development of psychosocial treatments, such as acceptance-based or cognitive-behavioral treatments, aimed at addressing appearance concerns and related distress among affected women. **FUNDING:** None.

12-4

A Brief Intervention Targeting Psychosexual Morbidity in Dyads Coping With Breast Cancer

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PURPOSE: The objective was to develop and assess acceptability and feasibility of an intervention to attenuate psychosexual morbidity for dyads coping with breast cancer. **METHODS:** This pilot study included three comparative groups: intervention in-person (25 dyads), intervention by telephone (14 dyads), and treatment as usual (25 dyads). Sample parameters were premenopausal/peri-menopausal, diagnosed within 6 months, and 20–55 years of age. A manual was developed for three one hour sessions that included the survivor and partner. Topics were communication, intimacy and sexual functioning, and effective coping strategies. Questionnaires were completed by survivors and partners at baseline, following completion of the intervention, 6 months post-intervention, and from the treatment as usual group at equivalent data points. Measures of sexual functioning, intimacy, dyadic satisfaction, body image, emotional response, and coping strategies were assessed. **RESULTS:** Thirty-nine/fifty dyads, 97.5%, completed three intervention sessions with equal satisfaction for both groups. Repeated measures ANOVA, $p < 0.05$, produced several trends that did not reach significance with a small sample size. Partners and survivors of both groups were similar at baseline on intimacy, however, the non-intervention group declined at T2 and remained lower than baseline at T3, while those in the intervention group remained stable from T1-T3. Trends were similar for survivor and partner dyadic satisfaction, and for survivors on sexual functioning. **CONCLUSIONS:** In-person and telephone modalities were equally feasible and acceptable. Telephone delivery permits greater flexibility and decreases cost. Including both partners in each session facilitates effective communication. **RESEARCH IMPLICATIONS:** An RCT is necessary as the next step. Many persons find discussing sexuality and intimacy highly uncomfortable, posing a unique challenge for intervention

research in this domain. **CLINICAL IMPLICATIONS:** Based on systems theory and supported by current findings, clinical interventions targeting intimacy and sexuality should include patients and partners to maximize effectiveness. Health Care Providers need to directly address sexual function related to breast cancer and its treatment with their patients. **FUNDING:** National Cancer Institute # R21 CA 108667, Walther Cancer Institute, Astra Zeneca.

13-1

It's All Good? Psychosocial Adaptation Among Young Adult Cancer Survivors

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PURPOSE: Cancer diagnosis and treatment have been linked to both negative and positive psychosocial impacts. However, most studies investigate only the negative impact and fail to examine gender differences. The “reentry” period, as patients transition from active treatment to extended survivorship, can be particularly challenging. Young adult cancer survivors (ages 18–39) face interrupted developmental milestones and increased interpersonal and emotional stressors while demonstrating lower 5-year survival rates relative to younger and older groups of cancer survivors. Unfortunately, few studies have examined this cohort and thus little is known about their experiences. **METHODS:** As part of a larger study, a heterogeneous group of young adult cancer survivors ($N = 304$, mean age = 31.8, women = 50.3%) were recruited from an online research panel and stratified by cohort (time post-active treatment: 0–12 months, 13–24 months, & 25–60 months). Participants completed measures assessing demographic and clinical characteristics, global impact of cancer, and positive and negative psychosocial impact of cancer across four subdomains (Stress Response/Coping, Self-Concept, Social Impact, and Spiritual/Existential). **RESULTS:** The majority of participants (37.8%) reported that their cancer affected their views about themselves and their life “somewhat” and 39.1% of participants described the overall impact of their cancer as “mostly positive; a little negative.” Women were more likely than men to describe the overall impact as more negative and less positive ($p = 0.016$). A **COHORT** (0–12 months, 13–24 months, 25–60 months) \times **GENDER** MANCOVA found a significant interaction effect for psychosocial impact ($p = 0.007$), specifically for negative stress response ($p = 0.004$) and negative social impact ($p = 0.016$). While women

reported greater negative stress response than men, this difference was most pronounced for participants 0–12 months post active treatment. Men reported greater negative social impact than women, but this difference was most pronounced for participants 13–24 months post active treatment. **CONCLUSIONS:** The psychosocial impact of cancer has both negative and positive components. Understanding the unique pattern of impact on young adult cancer survivors can guide future assessment and intervention efforts. **RESEARCH IMPLICATIONS:** Identifying patterns and types of psychosocial impact over time for young adult cancer survivors should incorporate global and specific approaches as well as positive and negative impacts. **CLINICAL IMPLICATIONS:** Interventions to reduce negative and enhance positive sequelae among young adult cancer survivors may benefit from tailored approaches. **FUNDING:** This work was supported by a Psychosocial and Behavioral Research Grant (PSB-08-15) funded by the American Cancer Society-Illinois Division.

13-2

Do You Care2talk? Examining an Online Support Website and Group for Young Adults With Cancer

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PURPOSE: The needs of young adults with cancer and cancer survivors are unique, but have been largely ignored until recently. It is only in the past decade that the need for specialized care for young adults with cancer has been clearly advocated. This need is especially poignant in isolated areas and smaller cancer centers, where patients can undergo their entire treatment without ever meeting another young adult patient. Distance to the healthcare centre, negative side-effects of treatment, and time constraints associated with this age frame are other barriers to seeking and using traditional supportive care services. To this effect, an online approach to psychosocial support for young adults (aged 18–44 years) with cancer and cancer survivors was piloted. **METHODS:** Care2talk was a two-part research project, part one being a questionnaire mailing to assess distress, social support, and interest in online support, and part two being the piloting of an online support group at www.care2talk.ca. The process and considerations for creating online support will be detailed. Questionnaire packages were received by 188 young adults; 42 individuals agreed to participate in the online group. The focus of this practice-based abstract is the care2talk 10 week online pilot project which began February 15th, 2010. Care2talk enabled

group and private chat, question and comment board, discussion forum, and housed a comprehensive list of resources. All written content was recorded. **RESULTS:** Just over one in five (42/188) young adults agreed to participate in the online group. Demographic, medical, and psychosocial characteristics of the sample, as well as significant differences between those interested, and not interested in participating, will be discussed. In particular, individuals interested in participating in the online group were more likely to be female, with a history of supportive care use, higher comfort with computer use, and to report greater distress. Key results highlighted that young adults were 1) eager to communicate with others in their age frame with similar experiences; 2) continue to experience significant concerns and distress. Topics and themes discussed by patients will be highlighted. The need for healthcare centers to provide safe and secure online support to young adults will be advocated. Basic guidelines for providing online care will be discussed. **CONCLUSIONS:** Young adults are clearly interested in online support and connecting with other patients online. Although the efficacy of online support and online group therapy in decreasing distress has yet to be evaluated, emerging results suggest that this is an effective medium that warrants further consideration. **RESEARCH IMPLICATIONS:** It is essential that professionally facilitated online support be effectively researched and tracked. In an increasingly mobile and online world, the need for effective psychosocial support is evident. Programs such as care2talk are an important first step towards this goal. **CLINICAL IMPLICATIONS:** Providing online support enables young adults to reach services at their convenience rather than within the 9 to 5 constraints that are perhaps best suited for retired adults, who are less likely to be facing life phase challenges such as employment, education, dependent children, or financial instability. In addition, cancer patients are demonstrating a growing interest in online services; it is essential that the services be available to meet these needs. **FUNDING:** The pilot phase of the care2talk project was generously sponsored by a Family Care Grant from the Thunder Bay Regional Health Sciences Centre Foundation.

13-3

Examining Distress in Young Adults With Cancer: What Do Different Distress Measures Tell Us?

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PURPOSE: The past decade has seen an on emphasis distress management and measurement,

as well as awareness that the psychosocial needs of young adults with cancer have been largely overlooked. Distress has been defined in both broad and narrow scopes; however the field of psycho-social oncology recognizes the social, psychological, emotional, spiritual, quality of life, and functional impacts of a cancer diagnosis and treatment that can affect overall distress. There is no gold standard in distress screening and many measures tap into specific facets of distress. In addition, research examining the distress of young adults with cancer is sparse. Our goal was to assess distress levels in young adult cancer patients across a number of distress measures. **METHODS:** As a component of a larger research study, young adults (18–44 years) with cancer diagnosed over a 5 year span were asked to complete a questionnaire package including the Hospital Anxiety and Depression Scale (HADS; Zigmond & Snaith, 1983), the Canadian Problem Checklist (CPC, Canada Journey Action Group, 2009), the Personal Well-being Checklist (PWC; Canada Journey Action Group, 2009), and the Edmonton Symptom Assessment System (ESAS; Canada Journey Action Group, 2009). Demographic, medical, and social support variables were also assessed. **RESULTS:** The mean age of the sample ($n = 71$) at time of cancer diagnosis was 33.75 years ($SD = 6.65$), and at time of questionnaire completion was 36.54 years ($SD = 6.44$). The sample was majority female (76.1%), married (57.7%) or common law (11.3%), and Caucasian (77.5%). The average stage of cancer at diagnosis was 1.78 ($SD = 1.05$), and mean length of time since diagnosis was 2.17 years ($SD = 1.66$). Distress scores on the HADS, the PWC, and the ESAS were correlated across all scales. The CPC demonstrated unique relationships with each measure. Mean scores across measures were as follows: HADS $M = 12.36$, $SD = 7.75$ (total possible score of 42); PWC $M = 18.06$, $SD = 7.66$ (total possible 30); ESAS $M = 23.33$, $SD = 19.38$ (total possible 90); and CPC $M = 5.94$, $SD = 4.27$ (total possible 21). Correlation strengths, variance, and theoretical implications will be discussed. **CONCLUSIONS:** The findings support that distress remains an issue for young adults with cancer years after diagnosis. The relationships among scales suggest that a comprehensive measure might be a more effective manner of screening for causes and levels of distress. **RESEARCH IMPLICATIONS:** These findings highlight the need to continue to measure and screen for distress in cancer patients, and support the need for further examination of sources and levels of distress in young adults with cancer. **CLINICAL IMPLICATIONS:** The findings of this study confirm the need to ensure psychosocial services are available and tailored to the young adult age

frame. Short, effective, and easily implementable mechanisms for distress screening are proposed as effective clinical tools. FUNDING: None.

13-4

Development of the Block Function Measure for Adolescent and Young Adults With Cancer

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PURPOSE: The purpose of this project was to develop a relevant and responsive instrument to measure function in adolescents and young adults (AYA) cancer survivors. **METHODS:** This was a qualitative research study applying tenets of community-based participatory research methodology to develop a measure of function. Qualitative surveys were administered to AYA survivors and healthcare professionals. A team of AYA cancer survivors, healthcare professionals and researchers used these data and relevant literature to build the tool, which was then reviewed by researchers, survivors and healthcare professionals. **RESULTS:** Qualitative surveys provided data on domains, definitions, and indicators within domains. Domains included life at home, work or school, relationships and development. Indicators included daily exercising, completing schoolwork, work productivity, caring for children and maintaining independence. Definitions ranged from general (being able to complete expected tasks through the day) to highly specific (caring for children or exercising without exhaustion). Surveys from healthcare professionals also offered insight into potential uses of the measure. These included use as a screen for referrals to rehabilitation services, social work or specialist care, a communication tool for patients and healthcare professionals, and an outcome measure for research. A team of AYA survivors, healthcare professionals and researchers designed the structure, identified domains and indicators and created items based on the qualitative data, literature and their own experiences. The tool, called the 'Block Function Measure' includes 16 items using a Likert-type scale in 3 domains. Healthcare professionals, researchers and survivors reported strong face validity. **CONCLUSIONS:** Qualitative data demonstrated the need for an AYA-specific tool in the breadth of relevant domains, as well as multiple potential uses. Working with a team of survivors and healthcare professionals was highly beneficial resulting in a relevant tool, and a meaningful process. **RESEARCH IMPLICATIONS:** The Block

Function Measure will now be tested for reliability and validity. It will be made available for use in research with AYA with cancer. **CLINICAL IMPLICATIONS:** Once the instrument is revised and tested, the Block Function Measure may be used in clinical care for AYAs across the cancer continuum serving as a screen, as communication tool and a prompt for referral. **FUNDING:** This project is funded by the Oregon Health and Science University Knight Cancer Institute.

14-1

Depression and the Older Cancer Patient

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PURPOSE: To teach attendees about depression in older cancer patients. Issues discussed will include prevalence, challenges of diagnosis and treatment in this vulnerable population. **METHODS:** This talk will combine a review of the literature as well as clinical experience. Symptoms in the elderly that help make a depression diagnosis include: stomach aches; diffuse somatic complaints; malaise/weight loss; and hopelessness, rather than just the DSM IV criteria that includes neurovegetative symptoms. Most interventions that show success are not specifically geared towards the elderly. Guidelines for choosing an antidepressant for an elderly cancer patient will be reviewed. **RESULTS:** Attendees will have a better idea of how to diagnose and treat depression in the elderly cancer patient. **CONCLUSIONS:** Many elderly patients are less willing to accept psychiatric treatment in the cancer setting when needed. Psychotherapy and psychiatric medications can be very helpful, but may need to be modified to accommodate the elderly and end of life. **RESEARCH IMPLICATIONS:** Most interventions that show success are not specifically geared towards the elderly. This talk will highlight the need for psychotherapeutic and psychopharmacologic research trials specifically focused on the older cancer patient. **CLINICAL IMPLICATIONS:** Depression is often under diagnosed and undertreated in older cancer patients. Psycho-oncologists can better inform their oncology colleagues about depression in this population as well as better treat those patients they come into contact with. **FUNDING:** None.

14-2

Sexuality and the Older Cancer Patient

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PURPOSE: The majority of cancer patients and survivors are over the age of 65. It is estimated

that sexual function morbidity occurs in 30% to up to 90% of cancer patients. Yet, issues of sexual functioning are rarely discussed with older cancer patients. Many times oncologists believe that older cancer patients have little concern regarding sexual functioning, despite evidence that suggests that over 50% of older adults are sexually active. For women, cancer treatments can negatively impact sexual desire, orgasm function, and vaginal tissue health. For men, cancer treatments can have deleterious effects on libido, erections, and ability to ejaculate. For both men and women these difficulties can have serious quality of life implications. This presentation will discuss the types of sexual difficulties reported after cancer treatments by older adults, and outline the treatment strategies and outcome data to support these strategies. **METHODS:** An extensive literature review and clinical experience was used to identify the primary sexual dysfunctions older adults experience after cancer treatment, and highlight the evidence based strategies to treat these sexual dysfunctions. **RESULTS:** The types of sexual dysfunction reported by women after cancer treatment include: dyspareunia, vaginismus, low desire, and orgasm changes. The literature suggests that sexual intervention strategies can effectively treat many of these dysfunctions. Men report erectile dysfunction, difficulty reaching orgasm, dry orgasm, low sexual desire, penile length alterations, penile curvature (Peyronie's Disease), and orgasm associated urine leak. Erectile dysfunction is the most commonly reported problem, with as many as 85% of men post prostate cancer treatment reporting difficulty with erections. Although treatments exist for most of these sexual difficulties, treatments for erectile dysfunction are the most varied and have the greatest evidence base to support their use. **CONCLUSIONS:** APOS professions will learn 1) the sexual difficulties older adults experience after cancer treatments, and 2) the evidence based treatments to address these difficulties. **RESEARCH IMPLICATIONS:** Gold standard measures of male and female sexual functioning, and future research directions will be presented. **CLINICAL IMPLICATIONS:** The best clinical practices will be presented. **FUNDING:** None.

Abstracts were not submitted for Session 15.

16-1

It's a Family Affair: A Qualitative Examination of the Psychosocial Issues of African American Prostate Cancer Survivors and Their Spouses

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PURPOSE: Few research studies have comprehensively examined the psychosocial issues experienced by African American prostate cancer survivors and their spouses, despite the disproportionate impact of this disease. The primary goal of this exploratory study was to identify the most salient psychosocial dimensions of quality of life, as self-reported by African American prostate cancer survivors and their spouses. Secondly, we identified the preferred communication channels for receipt of education on strategies to address psychosocial issues associated with prostate cancer survivorship. **METHODS:** Twelve African American couples were recruited from a National Cancer Institute Comprehensive Cancer Center cancer registry and a state-based non-profit organization to participate in face to face interviews utilizing the principles and concepts of Community Based Participatory Research (CBPR). The qualitative research design, triangulation of observers, was employed which involves using multiple observers or researchers during the conduct of data collection efforts, which adds alternative perspectives, backgrounds, and social characteristics, ultimately reducing the study limitations. The interview guide was structured according to the Quality of Life Conceptual Model. The interview transcripts were analyzed using a combination of hand coding and Atlas.ti software. Content analysis was conducted using an immersion/crystallizing analysis plan. **RESULTS:** Common themes regarding the psychosocial needs of African American couples based on the behavioral, social, psychological, and spiritual domains emerged. Divergent perspectives were identified between the male prostate cancer survivors and their female spouses. **CONCLUSIONS:** This study highlights the need for more in-depth investigations of psychosocial issues among African American couples. Furthermore, divergent perspectives between African American survivors and their spouses were identified, highlighting the need for couple-centered interventions. The findings of this study will assist in the development and testing of culturally appropriate community education resources and interventions to minimize the impact of the burden of prostate cancer treatment among African

Americans. **RESEARCH IMPLICATIONS:** Our exploratory study of African American couples surviving prostate cancer points to the need for further research and intervention development to address the domains of social, psychological, spiritual, and physical well-being and its sub-categories with a goal to improve QOL and psychosocial adjustment to prostate cancer diagnosis and treatment. **CLINICAL IMPLICATIONS:** The findings from this study will assist in the development and testing of culturally appropriate educational resources and interventions for African American prostate cancer survivors and their spouses. These findings also highlights the general need for more in-depth investigations of psychosocial issues from a dyadic perspective to ensure interventions are comprehensive in scope, meaning, and impact. **FUNDING:** This research was supported in part by funding from the American Cancer Society, Institutional Research Grant # 60132530120.

16-2

Nuevo Amanecer: A Description of a Community-Based, Randomized Clinical Trial of a Peer Support Counseling Intervention for Latina Breast Cancer Patients

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PURPOSE: Describe a randomized, controlled trial to test the effects of a community-based, peer-delivered support intervention on distress and quality of life among newly diagnosed Spanish-speaking Latinas with breast cancer. **METHODS:** Community-based participatory research (CBPR) approaches were used to culturally adapt a social-cognitive theory-based psychosocial intervention for delivery by peers in community-based settings in Spanish. Cultural adaptation involved a 6-step transcreation process: 1) engagement of a community advisory board; 2) identification of key cultural themes; 3) identification of key theory-based constructs and evidence-based skills; 4) integration of cultural themes and theoretical constructs and skills; 5) pretesting; and 6) manualization. **RESULTS:** Key cultural themes identified through qualitative research included: 1) need for simple cancer information in Spanish; 2) sense of powerlessness; 3) importance of self-advocacy; 4) fear of death; 5) need for emotional support; 6) difficulty expressing feelings; 7) central role of family; 8) spirituality; 9) building trust through personalismo (positive interpersonal relationships); and 10) need for culturally competent cancer care. Key theoretical constructs/skills

included: 1) self-efficacy; 2) self-regulation; 3) cognitive reframing; 4) expressing needs and emotions; 5) modeling; and 6) stress management. The new 8-week program consists of weekly in-person sessions on: 1) managing the initial impact of cancer; 2) finding cancer information; 3) talking about cancer with family; 4) unhelpful thoughts and helpful thoughts; 5) decreasing unhelpful thoughts and increasing helpful thoughts; 6) stress management; 7) setting goals; and 8) setting goals for the future. Latinas within 1 month of breast cancer diagnosis will be randomized to receive the program immediately or 5 months later. Assessments of distress (Brief Symptom Inventory-18) and breast cancer-specific quality of life (Functional Assessment of Chronic Illness Therapy) will occur at baseline, post-intervention, and 3 months later. **CONCLUSIONS:** Cultural adaptation of evidence-based psychosocial interventions requires on-going input from community partners, cancer survivors, and researchers to integrate key cultural and evidence-based constructs. **RESEARCH IMPLICATIONS:** Community-based participatory research approaches can result in translation of evidence-based psychosocial interventions for testing in community-based settings using rigorous methods. **CLINICAL IMPLICATIONS:** Community-based participatory research approaches can yield psychosocial support interventions, which are culturally relevant and rooted in the life experiences of underserved populations. **FUNDING:** California Breast Cancer Research Program Awards 15BB-1300 and 15BB-1301.

16-3

Lessons Learned From an Expressive Writing Intervention Among Minority Breast Cancer Survivors Using Community-Based Participatory Approach and Mixed Methods

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PURPOSE: Little attention has been focused on Asian American breast cancer survivors' psychological needs and few intervention studies have been conducted in the population due to recruitment and methodological challenges. The study aimed to test the cultural sensitivity and health benefits of an intervention of expressive writing among Chinese breast cancer survivors with Limited English Proficiency. **METHODS:** We used a community-based participatory approach (CBPR) and mixed qualitative and quantitative methods.

Chinese-fluent breast cancer survivors (age = $54 < u > + < /u > 11$) who finished primary treatment participated in the study and engaged in three expressive writing intervention sessions. Self-reported health outcomes (quality of life, physical and psychological health) were assessed at study baseline and 3-month and 6-month follow-ups after the intervention. Cultural sensitivity of the intervention was assessed through qualitative and quantitative mixed methods. Written essays are analyzed using content analysis to identify unique needs from this population. **RESULTS:** The study yielded high participation (95%), completion (90%), and compliance rates (100%). Quantitative analysis revealed that improvement in quality of life, fatigue, positive affect, fatigue, intrusive thoughts, and posttraumatic stress symptoms (with all effect sizes above medium). The study materials were culturally sensitive and the study was meaningful or valuable to participants. Qualitative analysis indicated special needs for this population and that writing about cancer experience helped survivors freely express their emotions, increased their faith, and promoted posttraumatic growth. **CONCLUSIONS:** The study is culturally sensitive and meaningful to Chinese breast cancer survivors. By evaluating the cultural fit of the intervention to promote the well-being of survivors, the study directly benefited Chinese American breast cancer survivors, a group burdened by unnecessary cancer health disparities. **RESEARCH IMPLICATIONS:** Community-based participatory research and mixed qualitative and quantitative methods appear to be useful approaches in studies with minority survivors. Future research should be conducted to better understand the mechanisms why expressive writing benefits cancer survivors as well as replicating the study with other cancer survivor populations. **CLINICAL IMPLICATIONS:** Expressive writing intervention has the potential to be a brief and cost-effective intervention to promote survivorship and well-being. **FUNDING:** Susan G. Komen Foundation BCTR0707861 (PI: Qian Lu), American Cancer Society MRSCT-10-011-01-CPPB (PI: Qian Lu), 3 U01 CA114640-02S5 (PI: Moon Chen; Pilot PI: Qian Lu).

16-4

Psycho-Educational and Spiritual Interventions for Low Income Cancer Patients: Results of a Randomized Versus Patient Preference Trial

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PURPOSE: Despite evidence that psychosocial interventions offer benefits to quality of life (QoL) after cancer, effects are modest, and at times, inconsistent. Reasons for this may be due to small

sample sizes, low enrollment rates, and poor intervention adherence plaguing the field of psychosocial oncology research. Enrollment and adherence are lowest among underserved populations and ethnic minority cancer survivors who may face socioeconomic and cultural barriers to participation. Research on preferences, needs and practices regarding psychosocial interventions among cancer patients clearly indicates that it is not “one-size-fits-all”. The Mind-Body Cancer Research Program was developed to meet the documented psychosocial and spiritual needs of the ethnic minority and underserved cancer patient with advanced disease and those on active treatment by comparing two different interventions, a spiritual support group and the standard-of-care psycho-educational group, and two different methodologies, randomized assignment versus patient preference. **METHODS:** The study design was implemented in two steps: 1) the development of a spiritual-existential group and a psycho-educational group, and 2) the assessment of two methodologies on enrollment, retention and outcome of the group interventions: a) a randomized comparison trial, and b) a patient preference trial, whereby patients could participate in their group of choice. The Mind-Body Cancer Research Program was implemented between 2004-2010 within a major cancer center in the underserved community of Bronx, New York. **RESULTS:** The sample ($n = 114$) was predominantly female, African-American or Hispanic, U.S. immigrants, and high school educated. Retention was modest with only 54% completing a pre- and post-intervention assessment, and as many as 23% not attending the intervention. Those who chose not to enroll in the intervention study were more likely to be male (29% vs. 19%), less likely to be self-referred (6% vs. 18%) or doctor-referred (21% vs. 37%), less likely to be African American (30% vs. 50%) and more likely to be Hispanic (38% vs. 24%), ($ps < 0.05$). Those who enrolled in the Preference trial reported lower religiosity and social support and higher use of active coping than those in the Randomized trial. In the Preference trial, there were 69% of patients who chose the Stress Management group versus only 31% who chose the Spiritual Support Group. Reasons for choosing Stress Management centered on wanting to learn how to manage stress/difficult emotions (60%), and/or feeling spiritually supported already (15%). Reasons for choosing Spiritual Support were based on wanting to enhance or reinforce their spiritual practices/beliefs (50%) and/or address existential concerns such as the need to maintain hope, peace, sanity, and cope with death (20%). Those choosing the Spiritual Support Group endorsed having higher education, more private religious activity, better quality of life, lower anxiety, and greater use of humor as a cop-

ing strategy. Adherence to and positive evaluation of the program were highest among the Preference arm. **CONCLUSIONS:** This research presents a glimpse into the challenges and successes related to implementing a psychosocial intervention study with underserved, active treatment cancer patients, as well as the importance of enhancing enrollment, participation and outcome among these populations in psychosocial research. **RESEARCH IMPLICATIONS:** It is important to identify culturally-competent research methods to help enhance access and interest in behavioral research for underserved cancer patient populations. **CLINICAL IMPLICATIONS:** It is not always one-size-fits-all when it comes to psychosocial care, and allowing patients a choice of intervention may not only improve adherence but outcome as well. **FUNDING:** American Cancer Society.

16-5

Addressing the Needs of Underserved Cancer Patients via a Telephonic Intervention Based on a Cognitive Behavioral, Socio-Ecological, Cultural and Patient-Centered Approach

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PURPOSE: A substantial number of cervical cancer survivors (CCS) experience significant quality of life (QOL) distress indicating a need for psychosocial intervention. Yet, little research focuses on psychosocial interventions with this population. Studies have long demonstrated that psychosocial interventions have proven efficacy in enhancing psychological functioning and QOL among cancer survivors. This study aims to describe a culturally, socio-ecological informed, psychosocial intervention to improve knowledge of the psychological impact of cervical cancer, increase awareness of appropriate psychological resources, increase psychological functioning, and enhance family communication with a multiethnic sample of CCS. **METHODS:** The study was guided by the contextual model of Health Related Quality of Life and the Culturally Responsive Model of Research Design. The content of the intervention is based on a cognitive-behavioral, problem-focused model. The six intervention domains included: 1) Health Education, 2) Coping Skills, 3) Balancing Emotions/Stress, 4) Family/Social Communication, 5) Relational/Sexual Communication, and 6) Finances/Employment. Weekly on-going training and supervision of staff addressed clinical, cultural, socio-ecological and support care issues. **RESULTS:** A total 117 CCS participated in the interventions, including 59 (53%) Latina-Americans and 52 (47%) European-Americans. The domains of greatest concern to CCS were Health Education, Balancing Emo-

tions/Stress, Relations/Sexual Communication, and Finances/Employment. 68% reported that the telephone sessions were very helpful to them; 82% reported that the survivorship booklet was somewhat to very helpful, and 90% reported that it increased their knowledge of the impact of cancer on their life. The majority, (95%) of CCS reported that they would refer other survivors to this study. **CONCLUSIONS:** Intervention participants had better knowledge of the psychological and physical impact of cervical cancer and increased awareness of resources at follow-up compared to the comparison group. Intervention group participants improved significantly in psychological functioning between baseline and 6th/12th month follow-up, and improved more in psychological functioning than the comparison group. **RESEARCH IMPLICATIONS:** The results of this study can inform research studies to address the survivorship needs of underserved and ethnic minority cancer survivors. **CLINICAL IMPLICATIONS:** Cervical cancer survivors are more likely to have a more pronounced HRQOL co-morbidity indicating a need for psychosocial intervention that is clinically, socio-ecologically, culturally and linguistically informed and delivered in a patient/survivorship centered approach. **FUNDING:** ACS.

17-1

Assessment of Pediatric Infection Control Isolation Practices and the Psychological Consequences of a "Safety" Practice

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PURPOSE: The objectives are threefold: to review current medical quarantine practices for management of hospital infectious diseases in pediatric medical inpatients (also referred to as isolation procedures); to assess effective implementation strategies for isolation procedures; and to describe the social/emotional aspects of medical isolation in medically ill youth. **METHODS:** A cohort of parents of medically ill inpatients was interviewed with a survey designed to assess current practices and elicit parental concerns regarding isolation procedures. The authors will review effective infection control safety measures and appropriate teaching to parents and pediatric patients. Results gathered from parent interviews will be discussed. Interventions based on parent feedback for improving the patient's quality of life during isolation will be presented. **RESULTS:** Current medical isolation practices and their impact on patients and their families will be

described. Changing current hospital isolation procedures and practices can have an impact on more effective patient care. Assessment of the social/emotional aspects of isolation may improve isolation adherence and guide development of future interventions for pediatric inpatients. **CONCLUSIONS:** Clearer guidelines and attention to psychosocial factors impacting pediatric patients placed on isolation may lead to increased adherence and less psychosocial stress, thereby increasing safety for all members of the hospital community. **RESEARCH IMPLICATIONS:** Few studies have been conducted to date examining adherence to isolation precautions and/or the psychosocial impact of medical isolation on the pediatric population. Given the increasing prevalence of anti-microbial drug resistance there is an immediate need for effective interventions targeted within this group. **CLINICAL IMPLICATIONS:** Caregiver feedback will be used to identify the specific psychosocial stressors involved in medical isolation, as well as guide development of effective interventions targeting reduction of emotional distress for both pediatric patients and their caregivers while placed on medical isolation. **FUNDING:** None.

17-2

Assessing Suicidal Thoughts and Behaviors in a Medical Setting

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PURPOSE: Youth suicide is an international public health threat. In the United States alone, over 1200 children and adolescents die by suicide each year. Moreover, one million children and adolescents attempt suicide annually and tens of millions more have intrusive thoughts about killing themselves. Medical patients are a vulnerable population at higher risk than the general public for suicidal thoughts and behaviors; yet very few studies have focused on assessing suicide in the medically ill. Hospital-based suicides, while rare, are the second most common reported sentinel event to the Joint Commission, and many times involve non-psychiatric patients. Whether or not medical patients should be screened for suicide remains controversial. The purpose of this talk is twofold: to discuss a brief epidemiology of suicidal thoughts and behaviors and the risks they pose in a medical setting; and to present a study aimed at creating a suicide screening tool for medical patients. **METHODS:** A comprehensive literature review on suicidal thoughts and behaviors in a medical setting will be synthesized and discussed. An IRB-approved multi-site suicide screening tool development study, including

patients from three children's hospitals pediatric emergency departments, will be presented. **RESULTS:** Very little is known about suicide risk in medically ill populations; studies show that screening for depression alone may not be adequate for identifying patients at risk for suicidal thoughts and behaviors, especially with oncology patients. A suicide screening tool, adapted for use with a pediatric medical population identified medical patients at risk for suicide. The majority of parents of pediatric patients found suicide screening acceptable. Patient opinions about screening were also elicited and favored nurses asking patients directly about suicide. **CONCLUSIONS:** Literature review and a current study will demonstrate that medical patients, and cancer patients in particular, are at risk for suicide. Screening for suicidal thoughts and behaviors in a medical setting is feasible, and can identify patients who may have otherwise gone unrecognized. **RESEARCH IMPLICATIONS:** Assessing suicide risk in medically ill patients is greatly understudied. **CLINICAL IMPLICATIONS:** Clinicians can use this information to feel more comfortable assessing for suicidal thoughts and behaviors in medically ill patients. **FUNDING:** National Institute of Mental Health.

17-3

The Evaluation and Management of the Suicidal Patient With Cancer at the End of Life

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PURPOSE: Patients with end-stage cancer frequently make statements interpreted as expressions of suicidal intent. These statements range widely from examples of momentary anxiety or frustration to explicit requests for physician-assisted suicide. The purpose of this presentation is to provide a framework for the diagnostic and management challenges posed by patients with advanced cancer who may be suicidal. **METHODS:** A literature review of clinical and research reports on suicidal ideation and behavior in patients with advanced cancer will be presented. Several distinct clinical scenarios will be described to illustrate various diagnostic and therapeutic approaches to the patient with end-stage cancer and suicidality. **RESULTS:** Growing numbers of cancer programs are implementing systematic screening for suicidal ideation and have generated important estimates of the prevalence of suicidal ideation in the oncology setting. Consensus is lacking with respect to when, how and by whom patients with advanced cancer should be screened for suicide risk. Studies utilizing data from cancer registries demonstrate clearly that cancer patients are at increased risk for suicidal ideation,

attempts and completions compared to the general population. These data also suggest that suicide risk in patients with cancer depends on cancer type or site and timing with respect to diagnosis. Unfortunately, accurate data on suicide phenomenology at the end of life are lacking and the clinical management of end-stage cancer patients remains, to a large extent, a clinical art. **CONCLUSIONS:** Suicidality in patients with end-stage cancer is an under-appreciated and inadequately researched area. Education in the detection and management of suicide risk at the end of life is an important and ongoing need for clinicians who work with cancer patients. **RESEARCH IMPLICATIONS:** Data are needed with which to develop more sensitive and specific methods of detecting patients at high risk of attempting suicide. **CLINICAL IMPLICATIONS:** The higher rates of suicidal ideation and behavior in cancer patients provide a compelling rationale for routine and sophisticated screening in this population. **FUNDING:** Elements of this work were supported by the Livestrong Foundation; the V Foundation and the North Carolina University Cancer Research Fund.

17-4

The Black Box Warning Regarding Antidepressants and Suicidality: Implications for Psycho-Oncology Across the Lifespan

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PURPOSE: The black box warning recommended by the FDA joint advisory committee in 2004 regarding the association of antidepressants with increased risk for suicidality in youth, resulted in changes in the prescribing patterns of antidepressants to children and adolescents. The black box revision in 2007 extended this warning to young adults, and recommended close monitoring for suicidality in individuals of all ages started on anti-depressant therapy. The unique dilemmas of treating children, adolescents and adults with cancer raise important questions about how to balance these warnings with the needs of this population. **METHODS:** The available literature on antidepressant treatment of children and adults with cancer will be reviewed. The clinical challenges of diagnosis and co-morbidity will be addressed, with an emphasis on decision-making and clinical assessment of efficacy. **RESULTS:** There is limited data on the efficacy of antidepressant therapy among patients with cancer, and on prescribing patterns in this population. Psychiatrists and oncology providers must rely largely on clinical judgment to assess risks and benefits of treatment, with careful integration of medical and psychiatric issues. The close medical monitoring

of these patients provides opportunity for observation and rapid changes in therapy in the event of suicidality. **CONCLUSIONS:** Psycho-oncologists are in a unique position to make clinical assessments regarding the relative safety of their patients with co-morbid depression and cancer, and the utility of antidepressant medication. Clinicians and researchers are encouraged to document safe and effective antidepressant treatment in this population to enhance our understanding and the development of best practices. **RESEARCH IMPLICATIONS:** Given the limited data on the safe prescribing of anti-depressants for patients with cancer, investigators are encouraged to continue to describe current practice and consider more rigorous medication trials in psycho-oncology. **CLINICAL IMPLICATIONS:** The clinical use of antidepressants in patients with cancer in the context of the FDA black box warning bears discussion, as psychiatrists balance risks and benefits in this medically ill and closely monitored group of patients. **FUNDING:** None.

18-1

A Nursing Intervention for the Post-Mastectomy Patient: ABCs to Recovery

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PURPOSE: A pilot study of interventions of education to prepare patients for self-management and the wearing of the Papilla Gown, especially designed for mastectomy patients was conducted to evaluate feasibility and effects on activity (A), body image (B), comfort (C), and lymphedema. **METHODS:** A randomly assigned study 2 (Gown: Papilla, Hospital) × 2 (Treatment group: Study Education, Routine Education) designed with a focus on immediate post-mastectomy care. Pre- and post-testing took place within the outpatient clinics. The ABC data were collected from the Functional Activity Index, Body Image scale, Post Mastectomy Gown Comfort Instrument, and tape measurement for the presence of lymphedema. A tape measure was used to measure arm size to determine the presence of edema at 7 days before and at 6 month after surgery. The two-way MANOVA was used to determine the main effect of each variable and the interaction of the two independent variables, which were the specially designed post-mastectomy gown and specialized education, on the dependent variables, ABC, and lymphedema. **RESULTS:** The mean age of the sample ($N = 138$) was 56 years. Majority of women were married and fairly educated. The study revealed that the patients who

received interventions of Papilla Gown and the study education program increased physical activity, comfort level, and decreased lymphedema incidence. Both the treatment and control groups had no significant increase in body image scores from time 1 to time 2. The lymphedema arm measure score significantly increased for participants who did not wear the Papilla Gown ($p < 0.01$). The control group showed a higher incidence of lymphedema with a 2.6 cm increased arm circumference. **CONCLUSIONS:** The study will lay the foundation for a model that can be employed by hospitals to increase patients' knowledge of breast cancer care and help them assert a concept of a "speedy recovery of ABC". **RESEARCH IMPLICATIONS:** Field testing of the intervention with a large sample will decide the effectiveness in reaching the program's major goals. **CLINICAL IMPLICATIONS:** The results will be used to further modify the intervention and to increase awareness of health care professionals of the specific needs of post mastectomy patients. **FUNDING:** Sigma Theta Tau International Nursing Society, Oncology Nursing Society, Texas Woman's University.

18-2

Use of a Patient-Directed Cancer Treatment Summary by Breast Cancer Survivors

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PURPOSE: A descriptive survey was conducted to identify patterns of completion and use of a newly developed Patient-directed Treatment Summary Form (PTSF) by breast cancer survivors (BCS). The PTSF was created to identify effective mechanisms for providing and coordinating follow-up care of BCS in a community setting. **METHODS:** An 18-item survey questionnaire was developed by study investigators, based on literature and guided by Orem's model of self-care. After review by a panel of experts to determine face validity, the survey was mailed to 600 BCS diagnosed with DCIS or invasive breast cancer in the prior 2 years who had received a copy of the PTSF. Survey questions addressed: time since diagnosis, completion of the PTSF, preference for who should complete it and a question about how it was used. **RESULTS:** The response rate was 32% (194), however only 34.6% of the respondents reported receipt of the PTSF. 63% ($N = 36$) reported completing the form and 54.2% reported not using the PTSF in managing their cancer care. Of those reporting receipt of PTSF ($N = 62$) 92% expressed that at completion of cancer treatment, they would like to have all of their treatment information in one place. 74.2% of all respondents

reported that they would prefer having their doctors complete a treatment summary and 79% reported that they would like to receive a written follow-up plan of care. Only 54% of all respondents reported that they knew how often they should receive follow-up tests related to monitoring their health after completing cancer treatment. **CONCLUSIONS:** Cancer survivors often receive inadequate or poorly coordinated follow-up care post-treatment with psychosocial and educational needs being frequent concerns during this period (Jacobsen, 2009). Findings from this study indicate that BCS need education related to follow-up care after completing cancer treatment and continued efforts are needed to integrate medical records systems. **RESEARCH IMPLICATIONS:** Findings support the need for additional studies to identify effective mechanisms for coordinating and providing follow-up care for BCS in a community-based setting. **CLINICAL IMPLICATIONS:** Results confirm the need to develop strategies and protocols which provide BCS with coordinated follow-up care within our health care systems. **FUNDING:** Torrance Memorial Medical Center, UCLA/LIVESTRONG™ Survivorship Center of Excellence.

18-3

Body Image Therapy Services: Enhancing Psychosocial Care for Patients With Tumors Affecting the Face and Breast

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PURPOSE: This program was designed for patients at MD Anderson Cancer Center that have head and neck or breast cancer, because these groups are known to experience considerable difficulties adjusting to body image changes resulting from cancer and its treatment. The primary goal is to enhance delivery of psychosocial services through an on-site behavioral specialist that provides evidence-based interventions to alleviate body image distress. Treatment is based on a cognitive-behavioral therapy model which has an extensive literature supporting its efficacy to treat body image difficulties. **METHODS:** This program is available to patients in the Head and Neck Center and/or Center for Reconstructive Surgery. Emphasis is placed on acceptance of body image changes and increasing self-confidence in social situations. Patients are encouraged to identify and challenge faulty appearance-related assumptions. Behavioral techniques focus on adaptive coping skills, body image exposure exercises, relaxation techniques, and coaching on social/interpersonal skills. The number of sessions each patient is seen varies based on individual needs and interests. **RESULTS:** To date, 163 patients have been seen, and there have been a

total of 376 clinic visits. The number of visits per patient ranged from 1 to 18. Disease site was evenly split between breast and head and neck. Nearly 80% of patients seen were women. Specific treatment strategies will be reviewed, and data will be presented from satisfaction surveys administered to patients and clinic staff. Additional information will be presented about ways that this program has gained increased visibility as well as how it complements an expanding research program. **CONCLUSIONS:** This specialty program addresses a critical psychosocial issue for patients, and has been very well-received by both patients and healthcare providers alike. **RESEARCH IMPLICATIONS:** Patients provide critical information about the nature and extent of body image difficulties which can be used to develop appropriate assessment tools and to expand upon treatment strategies to assist this population. **CLINICAL IMPLICATIONS:** This program improves collaborative care and management of patients with body image difficulties and can prevent more serious behavioral and psychosocial problems through early recognition and intervention. **FUNDING:** Volunteer Endowment for Patient Support Program at M. D. Anderson Cancer Center.

18-4

Effects of Qigong/Tai Chi Easy on Breast Cancer Survivors' Fatigue, Weight and Quality of Life

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PURPOSE: For some breast cancer survivors, fatigue and other symptoms may persist years after treatment. "Meditative Movement," such as tai chi, yoga, or qigong is often used by survivors, suggesting these are important recovery strategies to test. **METHODS:** A double-blind RCT tested effects of two gentle forms of exercise on fatigue and other symptoms: (a) Qigong/Tai Chi Easy (QG/TCE) designed to cultivate "qi" through meditative states and a focus on the breath and (b)

sham Qigong (SQG). Both exercise forms were called "Rejuvenating Movement" for participant blinding. 87 post-menopausal, persistently fatigued breast cancer survivors (Stage I-III, age 40-75), 6 months to 5 years past primary treatment were randomized to participate in a 12-week QG/TCE or SQG intervention with weekly classes and DVD-guided practice at home. **RESULTS:** The primary hypothesized outcome variable, fatigue (Fatigue Symptom Inventory, FSI), was significantly improved in response to Qigong/TCE compared to the SQG control ($p < 0.05$ for overall FSI and subscales). Baseline values for fatigue were not significantly different between groups. For QG/TCE, FSI decreased (4.44-2.14); less so for SQG (3.88-2.58). Body Mass Index (BMI) also dropped in the QG/TCE group and increased slightly in the SQG group, approaching a significant difference in change between groups ($p = 0.059$). Combining both groups, significant improvements were found pre- to post-intervention, including perceived cognitive function and objective cognitive performance, depression, sleep quality, global wellness and all of the SF-36 subscales. Physical activity (METs) significantly increased across both groups; participants who were sedentary at study entry ($n = 43$) nearly tripled from pre- to post-intervention (3.26-9.38 METs, $p < 0.01$). **CONCLUSIONS:** Findings suggest that QG/TCE is effective for alleviating fatigue among breast cancer survivors. Further, it appears that a gentle exercise program (with or without the emphasis on "qi") may improve sleep disruption, depression, cognitive dysfunction, and quality of life-related deficits, and help fatigued survivors to bridge from inactivity to higher levels of activity and experience. **RESEARCH IMPLICATIONS:** The combination of gentle exercise with a focus on breath and meditative states (i.e., Meditative Movement) may be an important avenue of exploration in future research regarding symptom reduction and weight management in breast cancer survivors. **CLINICAL IMPLICATIONS:** The gentle exercises used for both arms of this intervention hold promise for survivors in overcoming persistent symptoms among breast cancer survivors, with some advantage shown for QG/TCE. **FUNDING:** (Funding: NIH/NCCAM U01 AT002706-03).

P1-1**Influence of the Family of Oncological Patients: An Ethical Problem?**

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PURPOSE: Evaluate the influence of the family in the medical act, particularly in the following: (a) the communication with the patient, (b) taking therapeutic decisions, (c) Doctors' emotions. **METHODS:** Instruments: Specifically designed questionnaire. Sample: 50 doctors, 26 relatives. **RESULTS:** The 68% of doctors believe that they always have to give real information to the patient. On the other hand only the 37% consider that giving this information to the family is always important. 73% of the relatives think that they have to receive that information, and only 50% of this sample believes that they really have this information always. It's highly frequent for doctors (95% of the cases) to be asked by relatives to hide information of an adverse diagnostic or prognostic to the patient. The 35% of the sample rejects this demand. The 41% of times professionals who have been graduated for 11 years or more refuse to do this, the less experienced ones a 26%. Relatives admit that they ask the doctor to hide information only in a 31% of the cases. Of this percentage, 50% of them declare that doctor accept to do this. The 50% of the medical sample recognize at least one negative feeling for the relatives. Women emphasize anguish (38%) while men put stress on anger (38%). **CONCLUSIONS:** Following the results, we can say that the bond with the family influences the communication with the patient and taking therapeutic decisions; hiding unfavorable information to the patient was associated to an express request of their relatives. Negative emotions must be considered since the above mentioned emotions may be an obstacle to the correct performance of the professional. It's a priority to consider all those aspects because the medical act may be interfered by the influence of the family which can place the doctor on an ethical crossroads in relation to the respect of the patient's autonomy principle. **RESEARCH IMPLICATIONS:** Working with the patient's family usually bring out ethical matters that must be taken into account by the

medical team. **CLINICAL IMPLICATIONS:** Oncological patients' attention requires working with the patient, their family and the medical team. Minimizing the importance that family has in the evolution of the patient may become an obstacle or complication in the treatment or the quality of life of the patient. **FUNDING:** None.

P1-2**Personal Websites of Women With Breast Cancer: Use, Utility and Barriers to Use**

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PURPOSE: To determine the use, perceived utility, and barriers to use of personal webpages by women with breast cancer and breast cancer survivors. **METHODS:** Data were collected from 46 women with breast cancer who participated in the intervention arm of a randomized, controlled trial of a program to teach women to develop personal webpages (Project Connect Online) 1 month (T1) and 5 months (T2) after creating their websites. **RESULTS:** Twenty percent of women who participated in a workshop to create personal webpages did not use their website in the following month, whereas the remaining 80% of women spent on average 3.03 (SD = 4.83) hours on their website during the month following workshop participation. At T2, 42.5% of women reported spending no time on their website during the previous month; 57.5% of women spent on average 1.78 hours (SD = 2.78) working on their website. On average, women checked their websites "once a week" at T1 and "less than once a week" at T2. On Likert-type scales ranging from 1 to 5, women at T2 reported that the websites were "very useful" for allowing them to tell the story of their experience ($M = 3.80$, $SD = 1.28$), "moderately useful" as a place to express their emotions ($M = 3.15$, $SD = 1.46$), and "moderately useful" at reducing having to repeat information for family and friends (3.05, $SD = 1.28$). Women who reported website use at T2 rated their experience as "fairly positive" ($M = 5.71$, $SD = 1.28$) on Likert-type scales ranging from 1 to 7. Based on qualitative responses from women, the most common barrier to website use was lack of time. Many women indicated that they felt the website would be most useful during medical treatment. **CONCLUSIONS:** Women with breast cancer found using personal websites a positive

experience, although a significant proportion of women found lack of time to be a barrier to website use. **RESEARCH IMPLICATIONS:** Future studies with larger samples should examine predictors of website use. **CLINICAL IMPLICATIONS:** Personal websites may aid women with breast cancer by providing a place for creating a narrative of their experience and for sharing their emotional experience. Maintaining a personal website may be most useful for women currently in treatment for breast cancer. **FUNDING:** Susan G. Komen for the Cure.

P1-3

Crossing the Bridge: Managing End-of-Life Issues

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PURPOSE: Grief and loss are frequently encountered responses to dealing with any serious chronic illness. When that illness has the potential to be terminal, handling the impact of loss, bereavement and end-of-life planning and care are essential component to the delivery of care. The Norton Cancer Institute has implemented a guide for patients dealing with issues related to end-of-life as well as bereavement resources for families coping with loss of a loved one. This presentation will describe resources available to patients and families as well as examine staff and family responses to the bereavement program. **METHODS:** This presentation will review the system wide interventions that assist with end-of-life care and provide bereavement resources to grieving families. The presentation will discuss the role of the consultation liaison team, highlighting efforts taken to normalize the experiences of grief and bereavement while educating individuals about complicated grief. Additionally, survey data will reveal the impact of this endeavor. **RESULTS:** Survey data will examine the impact this effort has on staff and families. **CONCLUSIONS:** Bereavement interventions are helpful for ameliorating both familial and provider grief. **RESEARCH IMPLICATIONS:** Program data may be translated to areas outside of cancer care. **CLINICAL IMPLICATIONS:** This program could be replicated at other institutions. **FUNDING:** None.

P1-4

Mourning Coming From Changes Caused by Cancer Due to the Experience of a Child Patient

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PURPOSE: The child diagnosed with cancer goes through significant transformation processes that collaborate to developing other processes, such as

symbolic mourning, related to losses due to cancer, and preliminary mourning, related to the imminent loss of their lives. This research studies how the child deals with the losses due to the treatment process to which they are submitted, so that those that were involved on the treatment of the child are able to create means to help her. **METHODS:** This is a descriptive research based on a qualitative approach, which counted on the participation of two 6-year-old children, who were staying at a support institution for children with cancer, in São Paulo, Brazil. The data were gathered during recreational games, and through three drawings, presenting an story by each participant. The analysis procedures for the research were: the interpretation of each drawing and its corresponding story, from the 1st session that was held with the participants, as well as of each transcription from the recreational games carried out by them. **RESULTS:** The analysis allows us to reflect upon the illness process due to cancer related to child mourning. We can notice some of the symptoms derived from this, such as the notion of feeling threatened by the world, the participants' low self-esteem, as well as the regression of their behavior in relation to their ages. **CONCLUSIONS:** It is necessary that Health professional and the people close to the child acknowledge child mourning during the illness process. **RESEARCH IMPLICATIONS:** This research points new procedure possibilities as well as gives direction for new researches on this area. **CLINICAL IMPLICATIONS:** It is necessary a more human care by the Health professionals, who need to employ a careful analysis over the losses suffered by children with cancer. **FUNDING:** Cancer; child; mourning.

P1-5

Family Support — Supporting the Family

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PURPOSE: Over the years it has become apparent that parents and siblings of patients are often left without support because the parent has felt they are not able to leave the patient or their other children at home to attend a parent group. The Family support group at the CCFK was created in 2009 in response to the growing family-centered needs for psychosocial support among our family and patient population. This program affords parents the comfort of knowing that all their children are taken care of, enabling them to enjoy their time as they interact with families who share similar concerns and who understand what each is going through. **METHODS:** The family support group meets monthly. Each session begins with a communal dinner and splits into kids and parent time. The parents meet with the music ther-

apist and psychologist to explore timely focal points and the children meet with the social worker and child life specialist to work on therapeutic crafts projects. Caregivers have the comfort of knowing their children are safe and nearby and are better able to incorporate cognitive reframing, music therapy, and group process to decrease levels of anxiety associated with the disease. **RESULTS:** The group consists of a core of five families who have developed a sense of empowerment and belonging. Because they are able to express themselves to others who are undergoing similar experiences, each is better able to address feelings such as anger, hurt, fear, and hope. They draw comfort from each other and don't feel as alone when coming into the clinic for treatment. The group helps to decrease the children's fears and anxieties about coming into the treatment center. **CONCLUSIONS:** Recognition that cancer affects not only the patient but the entire family has led to the formation of the Family Support Group. Interventions targeting the entire family are needed to have a positive effect on treatment and recovery. **RESEARCH IMPLICATIONS:** Family groups can be tracked overtime. These longitudinal studies can help evaluate for overall psychological health and the ability to return to "normal" family life. **CLINICAL IMPLICATIONS:** This program can help in the implementation of a standard of care in order to better serve families of the pediatric oncology population. **FUNDING:** Amanda Cirelli Foundation

P1-6

Comprehensive Meta-Analysis of Mindfulness Based Stress Reduction Outcomes, Clinical Status and Other Moderators of Effect Size

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PURPOSE: This meta-analysis was conducted to investigate the effects of use of Mindfulness Based Stress Reduction (MBSR) (Jon Kabat-Zinn's approach) on psychological, physical or biological outcomes across varied populations. **METHODS:** Sixty-four studies met the inclusion criteria of use of MBSR (Kabat-Zinn's approach) as a research intervention and provision of mean(s) and standard deviation(s) for at least one outcome measure (psychological, biological, or both). Also analyzed were potential moderators of effect size

including outcome type (psychological vs. biological), design (one group pre-post designs versus randomized 2 group experimental designs), and type of clinical populations (cancer versus non-cancer samples). Study designs varied, but all included a baseline and post-assessment score for the outcome(s). Fixed-effects and random effects meta-analyses were conducted for the entire sample of studies and for the moderator analyses. **RESULTS:** Across different designs, outcomes and populations, MBSR is consistently successful as a stress-reducing treatment (Cohen's $d = 0.49$, $p < 0.0001$). This effect was not moderated by study design or by gender. The effect size for cancer patients ($d = 0.34$) was not as large as for other clinical samples ($d = 0.58$), but statistically greater than zero ($p < 0.001$). **CONCLUSIONS:** The results of this meta-analysis support MBSR as an effective program that improves psychological and physical stress across varied clinical and non-clinical populations. The consistency observed in the effect sizes underscores the generalizability of the results. **RESEARCH IMPLICATIONS:** Future randomized clinical trials could further validate MBSR with varied oncology clinical populations. In addition, future investigation should also consider how MBSR works (mechanisms), psychologically and biologically. **CLINICAL IMPLICATIONS:** Since MBSR is identified to be an effective clinical program, implementation of MBSR programs to assist oncology patients with stress and physical symptoms due to treatment or disease processes or use with caregivers of oncology patients should be supported and implemented. **FUNDING:** None.

P1-7

Internet-Based, Virtual Support Groups for Mesothelioma Patients

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PURPOSE: Mesothelioma has a multidimensional impact on a patient's life. Despite a range of treatment options prognosis is poor and quality of life is often sacrificed for short-term survival gains. Small number of cases, etiology of disease, heavy treatment burden and short survival means patients are often isolated and have difficulty coping with profound emotional burdens. Traditional, face-to-face support groups are difficult to facilitate with this population, in part because patients are prone to shortness of breath and fatigue; severely limiting mobility and access groups. At MSKCC, a Virtual Groups Program has been designed to create real-time, live, facilitator-moderated, web-based support and education for patients to avail themselves from home. This unique online support group method will be uti-

lized to address the psychosocial and educational needs of mesothelioma patients. **METHODS:** The close-ended, Virtual support groups will consist of 5–10 patients and run for 6 weeks. These groups will provide educational material, practical advice about coping with mesothelioma, and help facilitate mutual support among members sharing similar experiences. The theoretical framework for the groups is Interpersonal Psychotherapy (IPT). IPT has been widely used with medically ill patients because it focuses on role changes and interpersonal issues. Group members will be asked a series of questions post session – questions will address feasibility and assess whether psychosocial and educational needs were met. **RESULTS:** It is anticipated that IPT will help mesothelioma patients better manage anxiety and role changes. In addition, psychological and physical symptom burden, social support and quality of life will be effectively addressed via a Virtual support group model. **CONCLUSIONS:** Internet-based support groups are an effective modality used to meet psychosocial needs and reduce distress in the mesothelioma patient population. **RESEARCH IMPLICATIONS:** There are few supportive interventions available to assist mesothelioma patients experiencing emotional burdens during the course of their illness. Very little has been written about the efficacy of virtual groups. **CLINICAL IMPLICATIONS:** This intervention will show that Internet-based support groups can connect geographically disbursed, disabled and distressed patients. Subsequently, this group model can be widely recommended for use in both urban and rural settings. **FUNDING:** This program was funded by the Baker Street Foundation. IRB approval has been requested.

P1-8

George Washington Survivorship Center Psychiatric Services: An Innovative Model to Address the Psychiatric Needs of Cancer Patients and Survivors

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PURPOSE: Psychiatric support can be critical to patient adherence to treatment and health outcomes of cancer survivors. According to NHIS data, 5.6% of adult-onset cancer survivors screened positive for severe psychological distress compared to 3% of people with no cancer diagnosis. While one-third of survivors who experienced serious distress reported using mental health services, 18 percent said they could not afford these services. In

response to this need, the George Washington University Medical Center (GWUMC) initiated an innovative model to provide free, time-limited counseling and medication management to cancer patients and survivors through its Survivorship Center Psychiatric Services (SCPS) Program. **METHODS:** In 2010, GWUMC refined and expanded a pilot program launched in 2009 to provide free psychiatric support for cancer patients. Patients at any point in the cancer continuum can be referred by clinical staff to the SCPS Program to receive 6–8 sessions of problem-focused psychotherapy or medication management. Each case is presented at a multidisciplinary conference that includes social work, four medical residents, and three psychiatry supervisors. Patients requiring long-term counseling or medication management are seen at a reduced-rate or referred to appropriate long-term care. Quarterly reports are submitted to program leadership to ensure program goals are met and improvements are ongoing. **RESULTS:** Patient assessment includes repeat PHQ and mental status examination. Improved PHQ scores and mental status of SCPS patients indicate program effectiveness. **CONCLUSIONS:** With 20–40% of cancer survivors experiencing significant distress, the provision of affordable, integrated psychiatric support can improve patient adherence to treatment plans and survivorship outcomes. The SCPS model is highly sustainable as it is integrated into the medical residency program, providing training for medical residents and free services for patients. **RESEARCH IMPLICATIONS:** As the program grows, additional outcomes data will be collected for ongoing assessment and for comparison of effectiveness across different clinical settings. **CLINICAL IMPLICATIONS:** The SCPS program is a model for other institutions to establish an effective, sustainable psychiatric clinical program that supports cancer survivors' supportive care needs affordably. **FUNDING:** This program is funded by the George Washington Cancer Institute and the George Washington Medical Faculty Associates.

P1-9

Dignity Therapy in a Community-Based Hospice Setting: A Qualitative Analysis of Emergent Themes

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PURPOSE: Background and Study Purpose: Dignity Therapy is a brief, empirically-supported, individualized psychotherapy designed for patients at the end of life. The psychotherapy allows patients to create a formalized “legacy” document which can

be disseminated to desired loved ones and family members. This is the first study to implement Dignity Therapy in a “real-world” community-based hospice setting. In so doing, it offers new information about the most common topics discussed by patients when completing this type of clinical treatment. **METHODS:** Patients completed Dignity Therapy as part of a clinical service offered within a community-based hospice setting. Utilizing grounded theory and coding consensus procedures, patients’ legacy transcripts were qualitatively analyzed by two study investigators to measure the most common emergent themes. **RESULTS:** The 27 patients in this study had a mean age of 69 years (range 33–98 years), and 56% ($n = 15$) were men. The patients were predominantly Caucasian (93%, $n = 25$), and the majority had a primary diagnosis of cancer (70%, $n = 19$). Most completed Dignity Therapy approximately 2 months prior to their death (mean number of days elapsed between interview and death = 67). Three primary topics emerged in 100% of the patients’ legacy documents: autobiographical information, love, and lessons learned in life. The most commonly discussed lesson was one of accepting one’s imperfections (93%). Over 90% of the patients discussed their defining roles in life, their accomplishments, their self-perceived character traits, and “times they were important.” The majority of patients also discussed “unfinished business” (89%), hopes and dreams for their loved ones (78%), catalyzing experiences (74%), and offered advice for the future (67%). **CONCLUSIONS:** These findings offer information about the most frequently discussed topics among patients completing Dignity Therapy in a community-based hospice setting. **RESEARCH IMPLICATIONS:** Researchers may benefit from using these results as a comparison when replicating Dignity Therapy studies in differing and more diverse populations. **CLINICAL IMPLICATIONS:** These results can help clinicians more fully understand which topics may be the most important to discuss with patients when they desire to create a legacy at the end of life. **FUNDING:** N/A.

P1-10

Outpatient Clinic-Based Depression Screening in Lung Cancer Patients

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PURPOSE: To evaluate the prevalence of depression among lung cancer patients, and validate the ability to perform a depression screen in a busy outpatient practice. **METHODS:** Between Febru-

ary and May 2010, 143 patients were given the Patient Health Questionnaire-2 (PHQ-2), a validated two-item depression screening tool. Patients endorsing either or both items completed the Patient Health Questionnaire-9 (PHQ-9), a nine-item depression assessment tool. Patients with mild or worse depression were offered a referral to a mental health care provider. **RESULTS:** One hundred and thirty-one of the 143 patients completed the screen. 32 of 131 patients (24%) endorsed one or more items on the questionnaire. 26 patients endorsed feeling “down, depressed, or hopeless”, and 23 patients endorsed “bothered by little interest or pleasure in doing things”. 17 patients (13%) endorsed both items. 23 of 32 patients with a positive PHQ-2 screen completed the PHQ-9, with mean score 10.5 (SD 4.24), suggesting moderate depression. Mean PHQ-9 scores did not differ significantly between those who endorsed one (10.44) or both (10.57) PHQ-2 items. Distribution of the depression scores were: 14 patients scored 5–9 (mild), 4 patients scored 10–14 (moderate), 4 patients scored 15–19 (moderately severe), and 1 patient scored 20–27 (severe). PHQ-9 item “feeling tired or having little energy” scored the highest, with a mean value of 2.39 on a 0–3 scale. No patient endorsed suicidality. Only 1 of 32 patients with a positive PHQ-2 screen was being followed by a psychiatrist, and none accepted a referral to a mental health provider. **CONCLUSIONS:** A high incidence of depression was reported among lung cancer patients, yet no suicidality was endorsed. Depression severity ranged from mild to severe. The most endorsed PHQ-9 item was fatigue, though it is uncertain if this reflects a true symptom of depression, a sequela of lung cancer itself, or both. Lung cancer patients with depression are unlikely to receive mental health services. **RESEARCH IMPLICATIONS:** Findings suggest a high prevalence of depression in lung cancer; however, the cancer-related symptom of fatigue may confound this assessment. **CLINICAL IMPLICATIONS:** The PHQ-2 questionnaire is an effective means of depression screening which can be administered in clinic. Oncologists should be mindful of untreated depression among patients. **FUNDING:** None

P1-11 was withdrawn.

P1-12

Hematopoietic Stem Cell Transplant: The Young Adult Experience

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PURPOSE: Hematopoietic stem cell transplant (HSCT) is an intense, complex, uncertain and

unique experience for patients, and has the potential to cause prolonged physical and psychological distress. Because of the diagnoses treated by HSCT, the age range is lower than most cancers and can include young adults. The purpose of this study is to describe the first year following transplantation for young adults (YA) using a developmental framework to highlight the unique experiences of this group. **METHODS:** This mixed-methods longitudinal clinical trial tested the effects of a standardized teaching intervention on quality of life outcomes for allogeneic HSCT patients at discharge, 3, 6, and 12 months post hospitalization. The sample consisted of 24 YA (10 from the experimental group and 14 from the control group) a subset of 282 allogeneic HSCT patients recruited from one large medical center on the Western Coast of the US. **RESULTS:** The mean age of this cohort of patients at transplant was 21.5, 11 were male and 13 were female; 13 were Hispanic. Most had a diagnosis of acute leukemia (83.5%) and had a sibling transplant (62.5%). Fifteen were in remission when transplanted. Readmission data and reasons for readmissions included infections, relapse, failure to thrive, and other complications. Content analysis was used to classify patient comments about the experience, using the four dimensions of quality of life as major categories (physical well being and functioning, psychological well being, social well being, and spiritual well being). Themes identified included sexuality/fertility, fatigue, depression/poor coping habits, adherence issues, use of technology, dependency issues, changes in roles/relationships, issues with school/education, financial issues, family problems/issues, fear of the future, uncertainty, death and life appreciation. Two cases studies will be presented to illustrate two of Erickson's Stages of Development: Identity vs. Role Confusion and Intimacy vs. Isolation. **CONCLUSIONS:** This study presents qualitative data on a unique young adult HSCT population. **RESEARCH IMPLICATIONS:** Implications: This descriptive research can provide the foundation for developing and testing interventions to support this vulnerable population. **CLINICAL IMPLICATIONS:** Clinical approaches may include supporting peer to peer connections, recognition of independence/dependency struggles, strategies based on developmental stage and awareness of the uniqueness of the YA population. **FUNDING:** Acknowledgement: NCI R01-CA107446, Structured Nursing Intervention Protocol for HCT Patients.

P1-13

ShopTalk: The Usefulness and Feasibility of a Therapeutic Board Game for Youth Living With a Serious Illness

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PURPOSE: ShopTalk is a therapeutic game, designed to help youth living with cancer talk about their illness in a non-threatening way. This study was designed to learn how the game is being used in clinical settings and to gather information regarding its usefulness in establishing a therapeutic relationship and assessing the impact of cancer on a child's life. **METHODS:** ShopTalk was distributed at a social work pediatric oncology conference and to 70 sites. Game-holders were asked to complete a survey regarding their clinical experience using ShopTalk. **RESULTS:** Responses came from 109 professionals. Approximately 56% have been using ShopTalk in their practice. Of those who had not yet used the game, all but 6% planned to use the game with the appropriate youth. ShopTalk is being utilized with children <17, most commonly ages 9–12 (74%). The majority of individuals use ShopTalk with oncology patients (74%) and their siblings (25%); along with utility with other medical illnesses (30%). Preliminary results suggest that ShopTalk is being used in individual therapy sessions (79%), groups (28%) and family therapy sessions (26%). ShopTalk has been identified as an effective tool in identifying coping skills and psychological adjustment, as well as issues related to family relationships, depression/sadness, stress, and view of prognosis, peer relationships, and self-esteem. Respondents found ShopTalk useful from diagnosis to end-of-life. Four respondents reported adverse responses: discomfort with questions that could result in therapist self-disclosure, questions that tap end-of-life issues, and confusion with game design. Interest exists for creating a version of ShopTalk for children whose parents are ill. **CONCLUSIONS:** ShopTalk appears to be a beneficial therapeutic tool in building rapport and identifying/discussing difficult issues with medically ill children. **RESEARCH IMPLICATIONS:** Future studies should explore patient/therapist outcomes. **CLINICAL IMPLICATIONS:** Most respondents cited the joy of having a new tool for their therapeutic toolbox with 35 comments reflecting the following sentiment. "It's been incredibly useful so far, and I'll definitely keep using it! In fact, I'd like to use it more often than I actually have time to do!" Question cards for other specific illnesses and for children whose parents are ill are needed. **FUNDING:** NCI Intramural Research Program.

P1-14**Social Support and Hopelessness in Depressed Cancer Survivors: Examination of the Hopelessness Theory of Depression**

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PURPOSE: The Hopelessness Theory of Depression (Abramson et al., 1989) postulates that hopelessness in individuals will lead to depression but that social support may buffer this relationship. Previous examination in newly diagnosed breast cancer recurrence patients supported this theory (Brothers & Andersen, 2009). However, little is known about how hopelessness and social support may influence response to treatment for depression. A Phase II trial of a novel biobehavioral/cognitive behavior therapy intervention was effective in depression remittance (Brothers & Andersen, 2010). The current study aim was to evaluate the impact of social support and hopelessness on depression within that trial. **METHODS:** Cancer survivors diagnosed with a current Major Depressive Disorder (MDD) were accrued ($n = 36$). Participants were on average assessed 4 years post-diagnosis ($SD = 4$), 48 years old ($SD = 10$), married (86%), and Caucasian (84%). Half were breast cancer survivors. Measures included: Perceived Social Support-Family (PSS-Fam) and PSS-Friends (PSS-Fr), Beck Hopelessness Scale (BHS), and Beck Depression Inventory (BDI). **RESULTS:** As hypothesized, paired samples t -tests demonstrated significant improvements pre-/post-intervention in BHS [pre-mean = 7 ($SD = 4$), post-mean = 4 ($SD = 4$) with 58% meeting clinically significant hopelessness pre-mean and 25% meeting post-mean, $p = 0.02$], PSS-Fam [pre-mean = 14 ($SD = 5$), post-mean = 17 ($SD = 4$), $p = 0.002$], and PSS-Fr [pre-mean = 14 ($SD = 7$), post-mean = 16 ($SD = 5$), $p = 0.03$]. Means of hopelessness were higher in the current sample than those found in the general population (Dozois et al., 2003) and our previous research with recurrence patients (means = 3 for BHS) and lower for social support (mean = 17 for PSS-Fam/PSS-Fr). Mixed-effects models showed that baseline depressive symptoms were greater in those high in hopelessness ($p > 0.01$) and/or low in support for both PSS-Fam ($p > 0.001$) and PSS-Fr ($p = 0.08$). Response to treatment was similar regardless of pre hopelessness or social support levels. **CONCLUSIONS:** When compared with our prior data with newly diagnosed recurrence patients (Brothers & Andersen, 2009), depressed cancer survivors reported significantly worse hopelessness and social support. **RESEARCH IMPLICATIONS:** Both were significantly improved through the use of a biobehavioral/CBT intervention. Additional investiga-

tion into the potential buffering effects of social support in this population is warranted. **CLINICAL IMPLICATIONS:** Impairment in hopelessness and/or social support was associated with higher depressive symptoms, necessitating additional treatment to achieve depression remittance. **FUNDING:** The Columbus Affiliate of Susan G. Komen for the Cure, The Ohio State University Targeted Investments in Excellence Award, The Ohio State University Graduate School, and the National Cancer Institute (2K05CA098133).

P1-15**The Teen Impact Experience: A Web-Casting Pilot Project for Teens With Cancer and Blood Diseases**

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PURPOSE: In response to the 2009-2010 H1N1 flu pandemic, Teen Impact, a program supporting teens and young adults with cancer or blood diseases, implemented and evaluated a video web-cast of live group psychotherapy sessions. Due to visitor restrictions limiting participation in group psychotherapy for patients on active treatment, an adjunct video web-cast was provided in addition to the bi-monthly social therapy groups as an alternative method for these patients to remain connected and involved with their peers. **METHODS:** This was an unanticipated pilot project due to an unexpected event. As a result, members on treatment were invited to participate and were linked via video web-cast to the live group during three video web-cast sessions over a 6-month period. Questions were asked informally to determine if this type of intervention served its purpose and to determine if future video web-casts should be considered. **RESULTS:** Of the initial thirteen members invited to participate, a total of six participated in the video web-cast portion of the group. Evaluation indicated that on-going members of the face-to-face group did not like the video web-cast; they expressed dissatisfaction with lack of in-person interaction with other members. New members responded positively, acknowledging that it provided them with support from others with similar stories without having to face members they did not know in person. **CONCLUSIONS:** Findings suggest that video web-cast increased accessibility to specific subgroups that would not otherwise been able to participate, and it served as a stepping-stone for future Teen Impact related program participation. **RESEARCH IMPLICATIONS:** These findings serve as a basis for an expanded implementation and evaluation of video web-cast group psychotherapy services to medically isolated patients and/or group members with limited ability to par-

ticipate in person. **CLINICAL IMPLICATIONS:** There is no substitution for the therapeutic benefits of in-person attendance. Participation in video web-cast of groups should be limited to those that are medically prohibited from attending the group and/or those that are constrained by distance. A recommended group of participants for video web-cast is hospitalized patients who are prohibited from leaving the inpatient unit, such as those found on a bone marrow transplant unit. **FUNDING:** None.

P1-16

Supporting Quality of Life in Pediatric Oncology: A Child Life Perspective

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PURPOSE: Anxiety and stress related to illness, separation, hospitalization and medical encounters can interfere with a child's optimal response to medical treatment and care. A child's healthcare encounter can at times be a positive growth experience when truly comprehensive care is given. Comprehensive care includes all aspects of the child's well being, including not only medical but psychosocial as well (ACCH. 1984). Child Life specialists offer psychosocially sound, developmentally appropriate programs to help children cope with the hospital experience. Armed with a strong background in child development and family systems, Child life specialists promote effective coping through play, preparation, education, and self-expression activities. The Child Life program in the oncology department is designed to facilitate the continuation of normal living patterns, reduce the stress associated with hospitalization and to enhance individual patient treatment goals. The poster will demonstrate the therapeutic value of play as well as its implications for children and youth. **METHODS:** Play is an essential, natural part of childhood, important in its own right. Play facilitates coping, mastery, self-expression, creativity, achievement and learning, and is vital to a child's optimal growth and development. Play is an integral aspect of the child life practice with infants, children and youth of all ages (Child Life Council, 1997). The components of evidence-based practice will be established through the amalgamation of patient input, clinical experience, and research. Original photographs and documentation will be utilized in a creative fashion to illustrate these themes in a pediatric oncology setting. **RESULTS:** American Psychosocial Oncology Society members will be able to identify and discuss the therapeutic value of play for children and youth undergoing cancer treatments. The poster will compare and contrast various

child life approaches utilized in a pediatric oncology setting. Participants will recognize the significance for continued advocacy of these psychosocial programs. **CONCLUSIONS:** Faced with the on-going challenge of finding new and innovative program components, a variety of unique and creative opportunities for therapeutic interactions (including physical and emotional benefits) for pediatric oncology patients and families will be shared with APOS professionals. **RESEARCH IMPLICATIONS:** Qualitative and longitudinal studies focusing on pediatric oncology Child life programs can provide insight into long-term adjustment and coping. **CLINICAL IMPLICATIONS:** Child Life specialists have an opportunity to effect change in clinical practice that supports not only the needs of the child with cancer and his/her parents, but also to advocate for the well siblings' psychosocial needs. (Murray, J. S., 2001). **FUNDING:** None.

P1-17

Lowering Patient Distress

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PURPOSE: According to the National Cancer Institute, "distress is a multifactorial unpleasant emotional experience of the psychological (cognitive, behavioral, emotional), social, and/or spiritual nature that may interfere with the ability to cope effectively with cancer, its physical symptoms and its treatment." Psychosocial Council members gathered to brainstorm ideas to assure that the goal was met. The Psychosocial Distress Pilot was generated from this brainstorming session. The aim of the pilot that followed challenged the team "to reduce the patients' distress score to <4 in 50% of patients assessed in a two week" time frame. **METHODS:** For a pilot period of 2 weeks, two pilot sites integrated the NCCN Distress Thermometer into their patient visit process as a "6th vital sign". To facilitate the intervention, process maps were created of the current and pilot patient visit processes. On alternating weeks during the pilot period, Nurses and Social Work Counselors screened patients scoring a distress score of >4. Patients were referred to appropriate services, and their closing distress scores were assessed (FU1). A second follow-up distress score was obtained 2–3 weeks later (FU2). The intervention also included the following pre-pilot planning activities: Communication, training at all levels in the pilot clinics and the Department of Social Work and management of staff anxiety and coverage. **RESULTS:** During the pilot phase, 33% ($N = 1,330$) of the patients who completed the NCCN Distress Thermometer had an opening distress score of ≥ 4 , which is

consistent with literature findings. Qualitative feedback indicates significant problems with logistics—scheduling, training, clinic flow and space need to be modified to incorporate the tool. Time spent by nurses and social workers varied significantly. Most patients showed a combination of physical and emotional distress indicators. **CONCLUSIONS:** The team identified significant returns from this project: Decreased patient distress, increased patient satisfaction, and decreased physician and nursing time spent addressing the psychosocial needs of distressed patients. In addition, the team also recommended further discussion to address perceived redundancy in physical symptoms and nursing assessment, space availability for psychosocial counseling, and further analysis to gain greater insight due to the high number of confounding factors. **RESEARCH IMPLICATIONS:** Now that the distress is tracked as the 6th vital sign, the data will be there to help gain a better understanding of how distress can fluctuate throughout the continuum of care. **CLINICAL IMPLICATIONS:** The pilot study helped understand the volume and intensity of distress experienced by patients along with the impact of intervention from different disciplines. **FUNDING:** None.

P1-18

Delivery and Evaluation of Psycho-Educational Cancer Survivorship Programs in Canada

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PURPOSE: To deliver and evaluate two psycho-educational group interventions, one for cancer survivors and the other for their support persons, as they enter the post-treatment phase of the cancer trajectory. **METHODS:** Cancer Transitions is a 6-week program for cancer survivors and EMPOWER is a 3 week program for the support persons of cancer survivors. Both programs provide education and support on medical issues and overall well-being after treatment is complete. For this study the programs were delivered at four locations across Canada; these included both cancer agencies and community based organizations. The adoption sites participated in a pre-program and post-program quantitative and qualitative research evaluation. Participants completed a series of questionnaires to assess changes in their mental and physical health, social support, coping skills and general self-efficacy. **RESULTS:** The implementation process was successful at all the adoption sites. There was demand for both programs, although recruitment took longer, and the numbers were smaller, for the EMPOWER program. Attendance was excellent throughout the duration of each program. Participants evaluated

program content in each program and rated it as highly relevant. Participant impact findings showed improvements at the post-program evaluation. For Cancer Transitions, significant outcomes ($p < 0.05$) were observed for many of the subscales within the individual measures. The quantitative evaluation for the EMPOWER program is ongoing due to smaller recruitment numbers. **CONCLUSIONS:** The need and success to date of both programs support their continued integration into survivorship supportive care programming at a national level. **RESEARCH IMPLICATIONS:** Evaluation of these programs and other survivorship programs will continue in order to provide evidence-based research to support clinical delivery. **CLINICAL IMPLICATIONS:** Evidence-based program and participant evaluation can be translated into clinical action and support the delivery of needed survivorship programs in Canada. **FUNDING:** Funded by the Canadian Partnership Against Cancer.

P1-19

The Economics of Cancer Care: Improving Quality, Compliance and Outcomes

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PURPOSE: In 2009 the National Institutes of Health estimated that the cost of cancer care for the preceding year was over \$228 billion dollars. Cancer treatment, alone, is one of the major costs. As our nation struggles to recover from the devastation of financial recession, it is important for health care providers to offer interventions that ensure access to quality medical care. Financial barriers can lead to significant distress and prevent patients from receiving care. Cancer is the second leading cause of death in the United States and each day more than 1500 people will die from the disease. This presentation will examine the complex psychosocial needs of patients at an ambulatory cancer center and efforts to reduce barriers that are likely to delay or prevent treatment. **METHODS:** The social workers at our cancer center ($N = 4$) tracked reason for social work intervention for a month during the late summer of 2010. Data were collected for the following variables: Coordination of Family Meeting, Domestic violence, Financial Applications, Housing, Insurance, Medication Assistance, Mental Health and Transportation. For the purpose of data analysis, any of the above variables related to finances were grouped. **RESULTS:** Data was obtained on 313 single episode encounters during this month. The collected data shows that 49% of interventions were related to financial issues and 37% related to mental health/coping. **CONCLUSIONS:** Our data clearly show that the

majority of recent social work interventions were in response to financial stressors. The current economic crisis has had a direct impact on the psychosocial needs of patients and families seeking cancer care. **RESEARCH IMPLICATIONS:** The findings of this study support the need for a long term study that further examines how economic instability impacts cancer treatment on a patient level. The study should also evaluate how economics impact coping, decision making and quality of life for cancer patients. **CLINICAL IMPLICATIONS:** The findings of this data confirm that the economic financial crisis has had a significant impact on the psychosocial needs of patients. Cancer care must include support and services that help patients deal with the financial aspect of cancer. Inadequately addressing this issue can subsequently lead to problems with compliance, increased patient distress and poor outcomes. **FUNDING:** None.

P1-20

Meeting the Unmet Needs: The Organizational Strategies to Facilitate Access to Psychosocial Care for Cancer Patients

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PURPOSE: Cancer patients who need psychosocial care suffer from a “double dose” of stigma: having a cancer and a mental disorder. Understandably, active sought-out help has been infrequent in this population. We demonstrate strategies on an organizational level to facilitate access to psychosocial care for cancer patients, including routine screening for psychosocial distress, case management and multi-disciplinary coordination. **METHODS:** 1. The Distress Thermometer (DT) has been used to screen psychosocial distress in new cancer patients at KF-SYSCC since 2005. In 2007, adopted as the 6th vital sign, DT screening was extended to all out- and in-patients. 2. All new patients of breast, liver, and colo-rectal cancers are assigned to case managers. 3. Weekly multi-disciplinary team meetings of each of the above three cancer types were conducted with the participation of a psychiatrist and/or a social worker. There is also a weekly meeting of social workers, nursing staff, clinical psychologist and psychiatrists to coordinate their care for those who need ongoing psychosocial intervention. **RESULTS:** 1. Vulnerable patients are referred for evaluation and intervention early in the process of cancer care. 2. Case managers provide points of contact for patients with continuity. They keep all treatment data of the patients. They often assist with the patient preparation for accepting psychosocial care. 3. Members of psychosocial team, by

actively communicating and interacting with the oncologists, surgeons and other professionals, have become good liaisons in providing holistic treatment for patients. **CONCLUSIONS:** Routine screening for psychosocial distress, case management and multi-disciplinary coordination mandated through the institutional planning prove helpful in providing appropriate psychosocial health services for cancer patients. **RESEARCH IMPLICATIONS:** Studies may be designed to assess how these strategies affect the quality of life, anxiety and depression, and adherence to and outcome of cancer treatment. **CLINICAL IMPLICATIONS:** Case management, along with the multidisciplinary coordination and routine screening of psychosocial distress, has been added to all patient services of other cancer types commonly treated at KF-SYSCC, i.e., lung, head and neck, prostate and thyroid. **FUNDING:** None.

P1-21

Introducing Advance Directives Document, the “Five Wishes,” to a Cancer Center in Taiwan

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PURPOSE: Five Wishes (FW) was introduced in 1997 and is now administered by Aging with Dignity of Florida, USA. It has been accepted as a legal document in 42 states and translated into 26 languages. To promote the concept of advance care planning in Taiwan, the Mandarin version of FW has been revised to reflect the cultural, legal and local spiritual/religious concerns. Series of educational events are planned to facilitate the understanding and acceptance of FW by the staff and the patients at the cancer center. **METHODS:** 1. Authorization by Aging with Dignity, Florida, USA, and revision of the Mandarin version of FW: April to October, 2009. 2. Approval by the Palliative Care Committee of KF-SYSCC and final editing and printing of the document: December 2009 to March 2010. 3. In-service training and education for the staff. All attendees were given a copy of the FW booklet. They were instructed to fill in the booklet as if they were completing such a document for themselves: July to September, 2010. **RESULTS:** Thirty-five nurse practitioners participated in the in-service educational meeting for 30 minutes. Another meeting for an hour was conducted for all the medical staff and some staff of other clinical and administrative departments. About 50% of the medical staff and 40% of the administrative staff participated. Most of them will endorse its use for our patients. Some have started using it to initiate discussions about end of life care with patients, families and other staff. Some

will in fact add it to their own advance care planning. **CONCLUSIONS:** The revised Mandarin version of FW is well received by our staff. In a few instances where patients were introduced to it, they also responded very well. We are now offering it to all patients who are referred to our palliative care team for consultation or for direct palliative care. **RESEARCH IMPLICATIONS:** Further studies will be needed to test whether our findings can be applied to patients and families in other institutions and in the general population in Taiwan and other Asian countries. **CLINICAL IMPLICATIONS:** With adequate planning and training, the revised Mandarin version of FW can be used for patients and families at KF-SYSCC in Taiwan. **FUNDING:** None.

P1-22

Palliative Care: More Than Just Pain Relief, the Role of the Psychologist in General Hospital of Yaounde

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PURPOSE: Government statistics collected from National AIDS control community, National cancer community and National Cancer registry has presented a staggering increase in the number of patients coming for treatment at advanced stage of their illness. Approximately 220,000 patients are in need of palliative care yearly. Although pain relief and symptom control have proven to be the most acceptable medical treatment for palliative care patients, it is important for the professionals and the patients' families to know that, palliative care is not just about pain relief, it is also working with the identified actors to discuss End of Life issues, existential distress, loss of meaning, loss of dignity and despair. **METHODS:** Sixty-four patients were selected and registered to participate in palliative care follow up. Selection was done by interviews, questionnaires and review of medical files. The patients and family signed a consent form to participate in the program. Patients were consulted by psychologist and social workers for out-patient and when they were hospitalized for other complications. Patients were scheduled for follow up sessions once or twice a month depending on the patients' situation. Home visits were available for critical and emergency cases. The families were not left out. **RESULTS:** Patients awareness of psychological follow up during palliative stage increased. The families found relief when hard questions and concerns were discussed with professional guid-

ance. Those who were approaching the End, important task were addressed which gave the patient a sense of completion, surrendering to the unknown and letting go. **CONCLUSIONS:** The role of a psychologist in palliative care is beyond pain relief. Patients and family members are followed up from the time of palliative care diagnosis to End of life. This service addresses physical, psychological, social and spiritual expectation and needs while remaining sensitive to personal, cultural and religious values and beliefs. **RESEARCH IMPLICATIONS:** The implication of this practice base research is to emphasize that palliative care will produce best results to the patient when initiated early. **CLINICAL IMPLICATIONS:** When palliative care is well structured and implemented by competent professionals, it will address family issues which will give peace of mind to families. **FUNDING:** None.

P1-23 was withdrawn.

P1-24

Integrating a Palliative Care Consult Service Into a Children's Cancer Center: Lessons Learned

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PURPOSE: To facilitate acceptance and utilization of an external palliative care team within a comprehensive pediatric cancer center and to educate oncology physicians, nurses, and staff regarding the value of specialized palliative care consultation. Challenges included building relationships, trust, and correcting misconceptions about palliative care. **METHODS:** An inpatient palliative care consult team was hired and the service was piloted in the division of pediatric oncology in a large, urban children's hospital. To facilitate a link between palliative care and oncology, a psychologist was hired from within oncology to serve as consultant to the palliative care service. Palliative care team members built relationships with oncology clinicians and solicited informal feedback on performance. Palliative team practices were revised based on this feedback. **RESULTS:** Many issues were addressed including misconceptions that palliative care is relegated to end-of-life, how the palliative team should interact with patients, their role as consultants with regard to patient care, and best practices for communication and collaboration with the medical team. After a year of providing consultation to oncology, as well as formal and informal education, referrals to palliative care have increased and palliative team input has become sought after on a more regular basis. **CONCLUSIONS:** Although the launch

of a new palliative care service meets many obstacles, it is essential that this task be approached with flexibility, communication, and openness to feedback so that needed adjustments can be made to fit the culture of the existing oncology program. **RESEARCH IMPLICATIONS:** This model for integrating a new palliative care service may serve as the basis for follow-up research that addresses questions related to patient and clinician satisfaction, clinical outcomes, and feasibility of various models of palliative care. For instance, it is essential to track specific referral sources and to assess physician satisfaction with the service. This data may provide useful information in the ongoing development of the palliative care service. **CLINICAL IMPLICATIONS:** Because palliative care is particularly difficult to implement, our experience with integrating a new palliative care service into an existing pediatric cancer center may serve as a model for other settings where new support services must be integrated into existing frameworks for care. **FUNDING:** None.

P1-25

Professional Ethics in Bereavement Research: How Not Why, A Critical Update of the Literature

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PURPOSE: To increase understanding of bereavement reactions and relevance of therapeutic interventions for bereaved people, more empirical research is needed. However, major obstacles, including ethical considerations, hinder the progress in this field. Ignorance of ethical problematics rose in bereavement research and of arguments of Research Ethics Boards could be restricting for professionals trying to improve the quality of care especially in palliative care units, where the question of grief is acute. Precise criticism of Research Ethics Boards and difficulties inherent in such research remain unrecognized, while no recent review of literature about how to pass those difficulties exists. **METHODS:** Using PsycInfo and Medline, we systematically searched the literature with keywords and retrieved relevant literature. PsycInfo and Medline “experimental ethics” and “grie*” yielded respectively 24 and 202 references, and “experimental ethics” and “bereav*” yielded 17 and 73 references (1990 to 2010). We read through abstract to detect main problematics about professional ethics in bereavement research. **RESULTS:** 1/ Bereavement research is hampered by ethical reluctance of Research Ethics Boards (informed consent of vulnerable participants and emotional disturbance induced by participation). 2/ Five ethical imperatives in all research with human subjects have to be respected in bereavement studies. 3/ Bereaved people can by their own identify

precautions that have to be taken, interest and finally necessity of bereavement research. 4/ Specificities of cancer are not taken into account in bereavement literature. **CONCLUSIONS:** Few empirical studies collect bereaved people’s opinion about research although criteria emerge from this review (time, way, use of particular tools, especially qualitative methods) to guarantee at each step of the study its ethical aspect. Thus ethical bereavement research is not only possible, but also necessary. **RESEARCH IMPLICATIONS:** The findings of this review support the need of going further into research with bereaved people, especially after cancer, which induces specificities in grief reactions. More prospective and qualitative studies are needed. **CLINICAL IMPLICATIONS:** Results indicate that bereaved people, even soon after the deceased of their loved one, are certainly emotionally vulnerable, but not lacking of competences for informed consent necessary for bereavement research. Bereavement research also can represent benefits for participants. **FUNDING:** None.

P1-26

Spousal Experience of Cancer Patients’ End-of-Life: A Descriptive Study

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PURPOSE: Although spouses of cancer patients in end-of-life are considered by public authorities and by common sense as vulnerable persons, there have been few empirical studies exploring their daily life, difficulties and process of coping with cancer in particular, with caregiving and with impending death. Factors concerning relation between patients and spouses are not always taking into account to explain burden or adaptation of spouse caregivers. **METHODS:** Predictors of adjustment measured among spouses of terminal ill cancer patients 1–6 months before death (1) Burden: Montgomery Borgatta Caregiver Burden Scale (Montgomery and Borgatta, 2000); (2) Attachment: Experiences in Close Relationship Scale (Brennan, Clark and Shaver, 1998); Adjustment (1) Psychopathology: MINI (Sheehan et al., 1998), Beck Depression Inventory (1961, 1996); (2) Social adjustment: Social Adjustment Scale (Weissman et al., 1974, 1976, 1978) **RESULTS:** Data are now being analyzed. The mean age of the sample ($N = 35$) is 60.2 years. The majority of participants are men ($N = 25$), retired and well-educated. Preliminary analyses suggest that: 1/ majority of spouses report a burden experience linked with their caregiving experience, but no clinical level of psycho-emotional distress. 2/ Positive correlations emerge between insecure anxiety attachment and characteristics and intensity of burden, and with

adjustment of spouse caregivers. 3/ Participants can report risk/protective factors in their adaptation to the patient's end-of-life, in terms of coping strategies. **CONCLUSIONS:** Although spouses-caregivers of end-of-life cancer patients have to cope with distress caused by the disease and deep changes in their relations with the patients, most of them adjust progressively to this situation, while some of them experience a particularly hard burden and those vulnerable spouses can be screened through certain characteristics. **RESEARCH IMPLICATIONS:** Factors upstream from death, like styles of attachment, or spousal experience of illness and end-of-life, impact on the emotional and social adjustment of the spouse-caregivers. More studies are thus needed on incidence of these factors after the decease, on spousal adjustment to grief, with both quantitative and qualitative methods. **CLINICAL IMPLICATIONS:** Precise identification of these factors would contribute to the provision of primary and secondary prevention, and the creation of therapeutic intervention for bereaved spouses through cancer. **FUNDING:** None.

P1-27

Young Adults Embracing Survivorship — YES Program

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PURPOSE: Young adults are recognized as a vulnerable population, uniquely affected by the cancer experience. The purpose of the YES program was to provide a venue for support, education, and social networking among this population in order to positively impact their cancer experience. **METHODS:** Annual YES programs addressed the needs of the young adult cancer survivor and their families. The program reconvened quarterly to provide ongoing education and support on specific topics, as well as socialization and networking for the participants. The significant feature of the program plan was to have young adult cancer survivors participate in planning the sessions in an effort to make them meaningful and relevant. **RESULTS:** There have been three annual well-attended YES program events, with a number of participants consistently attending, however there has been little success in establishing a pattern of sustained attendance and participation in quarterly programs. Issues that were consistently revealed during the program sessions were the parents concerns of not knowing how to best support their young adult child, and when to have their young adult child manage their cancer on their own. **CONCLUSIONS:** There is evidence that APOS professionals

caring for young adult patients and their families need information and training in order to adequately support the young adult cancer patient and their parent caregivers. **RESEARCH IMPLICATIONS:** There is a need for expanding and disseminating knowledge related to the unique needs of parents of young adult cancer patients. Research should be aimed at exploring the needs of the parents and the challenges faced by the health care professionals advocating and caring for them as adult patients, yet struggling with meeting the needs of the parents who are often placed in the role of caretaker of their adult child. **CLINICAL IMPLICATIONS:** Implementing programs aimed at addressing the needs of the parents of young adult cancer patients, as well as the unique challenges of those caring for these families would enhance care provided. **FUNDING:** Towson University College of Graduate Studies and Research; The Ulman Cancer Fund; The Leukemia and Lymphoma Society, Hunt Valley, Maryland Chapter; YMCA at Stadium Place, Baltimore, Maryland.

P1-28

Terminal Phase of Cancer Disease: Results of Principal Clinical and Psycho-Sociologic Aspects Involving Patients and Caregivers

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PURPOSE: Cancer patients at a terminal stage of disease are suffering a global psychophysical situation, since in addition to clinical symptoms they progressively lose autonomy, pain involving also family caregivers, whose assistance effort undermines their social and job relationship network and their psychophysical balance as well. **METHODS:** From March 2007 to February 2009, by means of anonymous questionnaires and interviews made by our team, 122 patients with cancer in terminal stage and 150 caregivers have been evaluated. **RESULTS:** Among enlisted patients (aged 69.3 ± 10.4) the 96% was supported by one caregiver at least (76% women, 24% men, average age 51.4 years old ± 11.8 years old); only for 4% of the cases, patients were supported by social service. Knowledge of disease stage was present for 41.5% of cases where 25.6% demonstrated consciousness of prognosis; on the other side the 18.4% demonstrated not to have consciousness of disease showing positive expectation about its evolution. 27.2% of patients had a mood apparently adequate to the clinic context, 46.9% was in a depression and 25.9% showed anger, hostility and refusal. Psychophysical the disease

of the relative influenced negatively on relationship life of the caregiver in 74% of the cases, on familiar life in 79.6%, on job and economic life in 52.4% and on psychophysical welfare in 65.8% of the cases. **CONCLUSIONS:** The results highlighted the psycho-social complexity of terminal patient and his family, where role of medical and nursing team is based on delicate communication and relationship variables and it needs a constant calibration on the uniqueness of each single patient and caregiver. **RESEARCH IMPLICATIONS:** In the overall assessment of these patients beyond the clinical symptoms, it is essential to search and assess the psycho-social effects of the disease determines the patient and the caregiver and/or family. **CLINICAL IMPLICATIONS:** Patients in the terminal stage of the disease have a comprehensive mental and physical suffering as well as the clinical symptoms gradually lose autonomy and suffering directly involves the caregiver-family, whose commitment to service Dermine a psychological impact that brings negative physical. **FUNDING:** None.

P1-29

Improving the Quality of Life of Adult Cancer Caregivers: A Systematic Review

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PURPOSE: Caregivers face many challenges as they learn to cope with the complex tasks necessary to care for a loved one with cancer. Not only must caregivers continue to manage the obligations and responsibilities of their own lives, they bear the additional burden of supporting, nursing, and managing the health and personal needs of another. As a result, caregivers frequently experience increased anxiety, depression, perceived burden, and decreased quality of life (QoL). Recent systematic reviews have focused on the specific changes in the caregiver's life. There is a lack of rigorous review of psychosocial interventions specifically for caregivers to improve their QoL. This systematic review evaluates psychosocial interventions to improve QoL for primary caregivers of adult cancer patients with the goal of informing best clinical practice based on the most recent evidence. **METHODS:** A systematic review of randomized controlled trials examining the effects of psychosocial treatments on QoL of cancer caregivers was conducted. Extensive searches were performed of databases including MEDLINE, PsychINFO, EMBASE, CINAHL, and Cochrane Database Library for articles that met study inclusion criteria. A hand search of the reference sections of all included studies and the Journal of Psycho-Oncology and the Journal of the National Cancer Institute was performed in order to assure

that a maximal number of relevant studies were included. **RESULTS:** Findings suggest that due to differences in disease trajectory, caregiver needs, and additional responsibilities of caregivers, therapeutic approaches for improving QoL of cancer caregivers vary greatly depending on these variables. Such concerns underscore the importance of continual assessment of caregiver needs during each phase of the caregiving role. **CONCLUSIONS:** There are, however, a limited number of rigorous studies evaluating effective psychosocial interventions to improve the QoL of adult caregivers for cancer patients. **RESEARCH IMPLICATIONS:** Further rigorous clinical trials are needed to inform future systematic reviews for the psychosocial care of cancer caregivers. **CLINICAL IMPLICATIONS:** Available literature suggests that education about treatment and expected patient changes and interventions targeting communication skills are most beneficial. **FUNDING:** None.

P1-30

International Families Seeking Medical Care in the United States: Adaptations and Challenges

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PURPOSE: Many international cancer patients are treated in U.S. hospitals, most of whom come from Spanish-speaking countries. Very little is known about the challenges and concerns of caregivers who come to access medical treatments for their children. The aim of this prospective, qualitative study is to describe the experiences of international caregivers in four areas: reasons for making the decision to seek treatment internationally, barriers to adaption, acceptability of treatment termination and incidence of personal growth. **METHODS:** Participants include English- and Spanish-speaking caregivers who have traveled to the US solely to obtain medical treatment at a research hospital for their child (age 0–25) and have been in the US for at least 3 months. Focus groups were used to develop interview questions. During the study, each participant is interviewed for 1 hour. Data is then transcribed, translated, uploaded into NVIVO8 and coded by two independent coders. The accrual goal is 30 interviews. **RESULTS:** To date, four pilot interviews have been completed and analyzed. Five themes emerged as caregivers identified their most salient experiences in accessing treatment internationally. The strongest motivating factors for coming to the US included a lack of treatment options and the recognition that

benefits of bringing home a healthy child could outweigh the sacrifice of uprooting their lives. Language barrier was a primary obstacle to overcome. Easier adaptation was facilitated by non-medical supports such as housing, transportation, and spiritual support. As for discussing treatment discontinuation, all participants said it was not an option. Finally, positive growth experiences included greater family unification, pride in successful adaptation and a desire to help other families with children who have cancer. **CONCLUSIONS:** Key findings of the study suggest that international care-giving is challenging but spiritual supports, community connections, and pride associated with personal growth can ease the process of adaptation. **RESEARCH IMPLICATIONS:** This is the first known study to address the issue of transnational parenting due to a child's medical illness. **CLINICAL IMPLICATIONS:** The information obtained will help identify risk and protective factors experienced by the international cancer caregiver population in order to develop systems-level interventions and facilitate adaptation. **FUNDING:** NIMH & NCI, National Institutes of Health.

P1-31

Problem Orientation and Mood Disturbance Among Spouses of Men With Prostate Cancer

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PURPOSE: Prostate cancer (PC) is a 'relationship disease' in that both the patient and partner/spouse experience disease-related distress. Spousal distress may undermine social support given to the patient, thus it is important to understand what factors influence mood disturbance in PC spouses. Previous research has demonstrated that spousal distress is associated with coping skills. A spouse's orientation to PC in their thoughts, feelings, and perceived ability to manage the disease-related stressors may be positive (e.g., problem as an opportunity) or negative (e.g., problem as a major threat). Although both styles have been associated with better (positive) or worse (negative) mental health, these orientations are not mutually exclusive, thus it is of interest to examine the main and interactive effects of these two styles in predicting mental health. **METHODS:** Baseline data from a randomized controlled trial of problem-solving therapy for PC couples were used. Spouses ($N = 164$) filled out the Social Problem-Solving Inventory-Revised (SPSI; D'Zurilla, Chang, Nottingham, & Faccini,

1998), and the Profile of Mood States (POMS; McNair, Lorr, & Droppleman, 1971). **RESULTS:** Spouses reported a moderate positive problem orientation ($M = 13.27$, $SD = 3.54$), and a lower negative problem orientation ($M = 9.93$, $SD = 6.32$) on the SPSI, and modest mood disturbance on the seven POMS subscales. Pearson's correlations between orientation and mood disturbance were generally significant and in the expected direction. Seven hierarchical multiple regressions with positive orientation, negative orientation, and the interaction between these two revealed that negative problem orientation is the best predictor of mood disturbance, although the interaction accounted for a significant increase in explained variance for the depression-dejection ($F[3, 160] = 17.68$, $p < 0.001$, $\Delta R^2 = 0.024$) and confusion-bewilderment ($F[3, 160] = 20.36$, $p < 0.001$, $\Delta R^2 = 0.024$) subscales. **CONCLUSIONS:** Negative problem orientation is associated with spousal mood disturbance, although interactions between orientation styles may also be predictive in some domains. **Research implications:** These results suggest that orientation style interactions should be further explored. **CLINICAL IMPLICATIONS:** It is important to assess for negative orientation among PC spouses in clinical contexts. **FUNDING:** This study was funded by the National Cancer Institute.

P1-32

Distress Levels of Prostate Cancer Patients' Spousal Caregivers

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PURPOSE: Prior research has demonstrated that spousal caregivers' emotional states affect patient health, and many interventions target spousal distress. This analysis sought to determine actual distress levels of wives of prostate cancer patients, specifically those who seek out interventions to better cope with the cancer experience. **METHODS:** As part of a larger investigation, 163 wives of prostate cancer patients completed written questionnaires. Participants were recruited by flyers, to which interested couples responded volun-

tarily. Distress was measured using the Impact of Event Scale-Revised (IES-R), the Mental Outcomes Study Short-Form Health Survey (SF-36) and the Profile of Mood States (POMS). The IES-R is comprised of three subscales measuring Avoidance, Intrusion and Hyperarousal; higher scores indicate more distress and total scores under nine have been considered sub-clinical in previous research. The SF-36 consists of eight subscales contributing to Physical and Mental Health component scores, which are standardized so the normative mean = 50 (SD = 10). The POMS assesses six discrete affective states and sums them into a total mood disturbance score where higher values reflect more distress. A normative female population has a mean of 33.4 (SD = 37.1). **RESULTS:** The mean of the total scores on the IES-R was 2.62 (SD = 2.34). On the SF-36, participant means on the Physical and Mental Health component scores were 50.47 (SD = 12.19) and 44.14 (SD = 14.32) respectively. POMS total scores had a mean of 26.38 (SD = 37.32). **CONCLUSIONS:** Wives' distress levels were normal or sub-clinical on all constructs excepting the Mental Health component score, on which values were more than half a standard deviation below the normalized mean. It must be noted that these results are based on self-selecting wives who are coping well enough to actively seek support. **RESEARCH IMPLICATIONS:** Wives suffering from excessive distress related to a husband's prostate cancer might not self-select to participate in research, even when an investigational intervention is specifically designed to alleviate distress. Further research should specifically target the inclusion of highly distressed wives. **CLINICAL IMPLICATIONS:** Spouses presenting for a problem-solving intervention were, on average, experiencing low distress; however, spouses who did not self-refer may be more distressed. **FUNDING:** UCSDCCF, NCI, CCRP.

P1-33

The Social Ecology of Cancer-Related Disability: Case Studies of Caregiving for Rectal Cancer Survivors

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PURPOSE: The onset of medical problems can challenge cancer survivors' adaptations to their

treatment-related disabilities. In the case of rectal cancer patients, problems with the ostomy can result in considerable suffering. Understanding the context for compromised ostomy care requires a holistic approach to the physical and sociocultural environments in which ostomy care is embedded. We used social ecology theory to examine how downward transitions in health affect ostomy care. **METHODS:** This ethnographic study used in-depth interviews, fieldwork, and medical record review. Participants were long-term colorectal cancer survivors from two regions of Kaiser Permanente who were receiving at least 1 hour of unpaid caregiving per week because of their health problems. Their primary informal caregivers also participated in the research. From a sample of 31 families who participated in baseline interviews, we identified five families undergoing major health or caregiving transitions (one family did not experience a downward transition and thus was not included). These families were followed by ethnographers for 8–15 months. Medical records for each patient were reviewed in detail. We used a case study approach for data analysis. **RESULTS:** All patients were white elders (ages 66–71). Three were male, and all had multiple medical problems. Medical issues that altered caregiving during this time included a myocardial infarction, psychological issues, and progressive kidney failure necessitating dialysis. Family caregivers ranged in age from 54 to 73. Two were spouses and two were daughters-in-law. Two families also employed paid caregivers during the time they were in our study. Only one wife caregiver helped with ostomy care, while the other three caregivers performed many other aspects of caregiving (meals, laundry, cleaning, appointments). For each family, declines in health and physical functioning were accompanied by challenges in caregiving relationships and ostomy care competence. In three families, ostomy problems became acute during downward transitions in health, whereas one family did not experience such ostomy problems. **CONCLUSIONS:** In this analysis, in-depth examination of each family's situation highlights the range of medical and sociocultural factors that can worsen or stabilize treatment-related disabilities among aging cancer survivors during periods of health decline. **RESEARCH IMPLICATIONS:** Social ecology theory provides an apt framework for studying the dynamic treatment-related disabilities of cancer survivors. **CLINICAL IMPLICATIONS:** Social, physical and medical contexts interact to produce a cancer survivor's disabilities. Interventions, risks, or existing resources may be highlighted by reviewing complex cases according to a social ecology model. **FUNDING:** Grant No. 1R21 CA129887 from the National Cancer Institute.

P1-34**The Relationship Between Distress and Parental Concerns in Cancer Patients With Minor Children**

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PURPOSE: It is well known that a diagnosis of cancer may have a negative effect on a patient's emotional well-being. Cancer patients with a minor child may experience unique challenges, such as having to discuss their diagnosis and other cancer-related issues with their children. This pilot study proposed to examine the relationship between distress and parent concerns about discussing cancer with a child. **METHODS:** Participants ($N = 27$, mean age = 43 years), who were primarily Caucasian (81%) and female (67%), completed a self-report questionnaire prior to attending a peer support program for parents diagnosed with cancer. Depressive symptoms were assessed with the Center for Epidemiologic Studies – Depression scale, short form (CES-D 10). Distress about discussing cancer with a child was assessed with the intrusion and avoidance subscales of the Impact of Events Scale. Parent concerns about discussing their cancer with their children were assessed using a newly developed scale consisting of 8 items (e.g., how concerned are you that you won't be able to answer your child's questions about cancer?). Cronbach's alpha for this new scale was 0.89. **RESULTS:** Parents with more depressive symptoms ($r = 0.45$, $p = 0.02$) reported more concerns about discussing their cancer with their children, more intrusive thoughts about discussing their cancer with their children ($r = 0.39$, $p = 0.04$), and more avoidance about discussing their cancer with their children ($r = 0.48$, $p = 0.01$). In multivariate analyses, parent concerns, intrusive thoughts, and avoidance together accounted for 52% of the variance in depression. **CONCLUSIONS:** These findings suggest that, among parents with minor children, those who report more depressive symptoms have more cancer-specific distress and more concerns about discussing cancer-related issues with their children. **RESEARCH IMPLICATIONS:** This pilot study supports the need for additional research with larger samples of parents with cancer. Future research should also focus on developing interventions to address parent concerns about communication with their children. **CLINICAL IMPLICATIONS:** Parents with cancer who have young children may benefit from screening to identify distress and parenting concerns and from referral for supportive services. **FUNDING:** None.

P1-35**Mental and Physical Health Outcomes in Parents of Children With Cancer: Are They Related to Resilience and Self-Transcendence?**

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PURPOSE: This study will examine the levels of resilience and self-transcendence in relation to physical (general health perception) and mental health (depression, posttraumatic stress) outcomes in a sample of 100 parents of children with cancer. This poster will present the proposed study. Childhood cancer affects parents' well-being worldwide (Bensink et al., 2007; Jones, 2007); each year the parents of 160,000 children learn their child has cancer with 90,000 parents experiencing the death of their child from cancer (World Health Organization & International Union Against Cancer [WHO & IUAC], 2005). Studies of childhood cancer effects on parents are contradictory. Much of the existing literature reports multiple negative parental impacts that include: depression (Barrera et al., 2004; Dolgin et al., 2007; Elkin, Jensen, McNeil, Gilbert, Pullen, & McComb, 2007; Greening & Stoppelbein, 2007); psychological adjustment difficulties (Barrera et al., 2004); post-traumatic stress and anxiety (Dolgin et al., 2007; Greening & Stoppelbein, 2007), and reduced parental quality of life (Goldbeck, 2006). Also, parental distress is positively correlated with child hopelessness (Blotcky, Rczynski, Gurwitch, & Smith, 1984) and distress (Robinson, Gerhardt, Vannatta, & Noll, 2007). Few studies reported no differences in frequency or use of coping strategies (Norberg, Lindblad, & Boman, 2005) and similar posttraumatic stress symptoms (PTSS) between parents of children with cancer and their controls (Jurbergs, Long, Ticona, & Phipps, 2009). This contradiction highlights the need to better understand the processes by which parents handle the adversities associated with their children's cancer. Concepts that denote such processes are resilience (Richardson, 2002) and self-transcendence (Reed, 1991a). To-date, no studies have examined the relationship between such processes and health outcomes in this population. **METHODS:** This descriptive correlational study will examine resilience and self-transcendence levels in relation to physical (general health perception) and mental health (depression, posttraumatic stress) outcomes in a sample of 100 parents of children with any type of cancer, whose children were diagnosed since at least 3 months, and are in active treatment phase. Parents of children in end-of-life stages will be excluded. **RESULTS:** This poster will present the proposed study. **CONCLUSIONS:** This poster will present the proposed study. **RESEARCH IMPLICATIONS:** Future plans to replicate this study in other cul-

tures and compare the results with this study. **CLINICAL IMPLICATIONS:** Future plans are to use the results of this study to develop and test nursing interventions to promote physical and mental health outcomes in parents of children. **FUNDING:** None.

P1-36 was withdrawn.

P1-37

Using Social Networks to Improve Patient Care

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PURPOSE: When facing a cancer diagnosis, an individual's reliance on the support of his or her close personal circle for emotional, and sometimes physical, strength becomes extremely important. The use of online personal health social networks provides patients a way to maintain the support they need. The act of journaling one's experiences, as on a social networking site, carries proven benefits to the well-being of the patient as well. **METHODS:** The presentation draws on the results from an independently conducted market survey of 2,000 recent CaringBridge users. The survey measured the both the reported physical and psychosocial benefits realized by patients, their immediate caregivers and their broader communities. Aggregate and normalized usage data of CaringBridge communities that have been in existence as far back as 1997 will also be presented to illustrate the type and quantity of support that come from personal health social networks such as CaringBridge. **RESULTS:** Results showed CaringBridge users found value in the CaringBridge resource and felt CaringBridge has helped a great deal in the healing process. **CONCLUSIONS:** Providing patients with access to personal health social networks can improve a patient's quality of life and healing process by widening their support network. **RESEARCH IMPLICATIONS:** The use of CaringBridge and other personal health social networks will enable psychosocial benefits for patients and caregivers experiencing a significant health challenge. **CLINICAL IMPLICATIONS:** The use of CaringBridge and other personal health social networks will enable psychosocial benefits for patients and caregivers experiencing a significant health challenge. **FUNDING:** CaringBridge.

P1-38

Developing Respectful and Effective Communication Within Clinician-Client Relationship as Well as the Family to Patients' Meet Their Need for Healthy Support System

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PURPOSE: The purpose is on uncovering the characteristics of health professional-client relationships that could help or hinder the development of respectful relationships during the patients' illness experiences given the socially constructed context of an interpersonal relationship within the clinical settings. **METHODS:** A qualitative approach employed focused ethnographic informed by feminist standpoint perspective addressing South Asian immigrant women's meanings of respect in relationships with health professionals in the social setting of a cancer clinic. Constant comparative analysis identified recurring themes. **RESULTS:** Health professionals' type of communication style and information delivery respected and helped put patients' at ease during vulnerable times. Respect was experienced in light of patients' heritage, underlying assumptions, cultural and societal structures, and frame of reference for relationships. **CONCLUSIONS:** Consequences of respect bestowed by health professionals' during clinical visits were that women felt safe and comfortable, regardless of the ambiguity of the cancer condition. Most women felt "at home" in the clinical environment regardless of their ability to speak English because of the way health professionals "talked to them." Respecting a fellow human being through recognition and greeting the other regardless of his or her position in society, religion, gender, age, culture or health status is an inherent quality that values the other's social identity. **RESEARCH IMPLICATIONS:** Under Ideal Conditions, All Clinician-Client Relationships, Including Those With English Or Non-English Patients Would Illustrate Respect Marked By Satisfied Interpersonal Relationships, An Understanding Of The Illness Experience From The Patient's Perspective, And Knowledge Of Their Health Care Needs. However, The Reality Is We Have To Constantly Hold The Macro And Micro Levels Of The Health Care System Up For Scrutiny, Researchers Must Be Critical In Their Approach To The Shifting, Contradictory, And Ambivalent Nature Of Clinician-Client Relationships. **CLINICAL IMPLICATIONS:** Cancer Survivors Have To Adapt To A New Physical, Social, And Work-Related Environment As They Transition To Their New Life. The Duality Of The Diagnosis And The New Normal Life Renders Patients' Vulnerable Through The Illness Journey And

Experience. To Reduce Negative Impacts Of These Dual Experiences, Clinicians Need To Cultivate Relationships That Create And Sustain Respect Within Clinician–Client Relationships While Providing Health Care. If It Is True That Respectful Relationships Reduce Differences Between Individuals And Shape The Way In Which People Engage With Each Other, Then Respect Might Play A Major Role In Promoting Health And Well-Being, Along With The Individual's Attaining And Retaining An Optimum Level Of Health, Regardless Of Ethnicity Or Gender. FUNDING: None.

P1-39

Primary Care Physicians' Perspective of Survivorship Care for Breast Cancer Patients

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PURPOSE: The purpose of this study was to assess primary care physician (PCP) perspectives regarding follow-up care of patients with breast cancer. **METHODS:** PCPs of patients with breast cancer who had been discharged from a provincial cancer centre were surveyed using a mail-out questionnaire. Survey questions were designed to assess PCP perceptions and preferences regarding the transition of care of breast cancer survivors to their care after completion of active treatment. **RESULTS:** A total of 587 PCPs returned completed surveys 80% indicated they always received a letter from the oncologist when a patient was discharged to their care. 92% found the letters "useful" and 8% "somewhat useful". The most useful discharge information to assist them in managing SBCs was: diagnosis/treatment summary, recommended follow-up protocol and recommended hormonal therapy. Discharge information was preferred in point form by 43%, as detailed description by 19%, and 38% preferred both formats. PCPs who follow more SBCs were more likely to prefer point form. PCPs were most confident screening for recurrence and managing patient anxiety and were least confident managing lymphedema and providing counseling on sex, body image or for family concerns. **CONCLUSIONS:** PCPs who provide follow-up care for survivors of breast cancer are confident managing most aspects of care. Important discharge information includes a record of diagnosis and care, surveillance recommendations and recommended hormonal therapy. **RESEARCH IMPLICATIONS:** This is important research that informs existing research about the survivorship care from the primary care physicians' perspectives of caring for breast cancer survivors. This research provides

the view of the PCP who is the other piece of the triangle in providing quality cancer care to cancer survivors. **CLINICAL IMPLICATIONS:** This research informs oncologists on what primary care physicians need in order to provide effective cancer care so that patients are able to lead a life good quality of life. Evidence from this study will also help the patient and primary care physician relationship. **FUNDING:** None.

P1-40 and P1-41 were withdrawn.

P1-42

A Survey of Cancer Patients Attitude on Informed Consent of Anti-cancer Drug Therapy

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PURPOSE: Anti-cancer drug therapy is common treatment of cancer. The patient's expectations of the treatment are extremely high, but the psychological and physical burden for patients is quite large. In this pilot study, we investigated the cancer patient's attitude on informed consent before starting anti-cancer drug therapy by questionnaire form and revealed the appropriate way of obtaining informed consent. **METHODS:** A survey was conducted in 60 cancer patients undergoing anti-cancer drug therapy. The purpose of this study was explained to all patients, and consent was obtained from all of them (questionnaire forms were retrieved by post). This study was approved by the IRB of Kitasato Institute Hospital. **RESULTS:** Finally 50 cancer patients responded the questionnaire (response rate: 83.3%, 22 males, 28 females, average age: 61.2 years). Upon asking the degree of understanding the explanation by healthcare professional before anti-cancer drug therapy, 82% of all subjects responded as "Understood" or "Reasonably Understood", and 8% of all subjects responded with "Did Not Understand" or "Did Not Understand Sufficiently". Upon asking the reason for "Did Not Understand", responses included "As the patient went into the treatment with absolutely no knowledge of it, there were many parts which could not be understood no matter how much explanation was given", suggesting a gap in knowledge between the healthcare professional and patients. Upon being asked about their feelings after the explanation, 45% answered "Less Worried" or "Felt Relieved", while 11% answered "More Worried". Looking at the correlation with the degree of understanding of the explanation, people who answered "Understood" were more likely to have answered "Felt relieved" by the explanation than those who answered as "Did Not Understand". **CONCLUSIONS:** It has been

suggested that patients' degree of understanding regarding the informed consent contributed to the lessening of worries, indicating the importance of providing comprehensible explanations to patients. **RESEARCH IMPLICATIONS:** Our results suggested that the depth of understanding about informed consent relates to the lessening of patient's worries. **CLINICAL IMPLICATIONS:** Healthcare professionals should disseminate comprehensible information about anti-cancer drug therapy to patients. **FUNDING:** None.

P1-43

To Tell or Not to Tell: Diagnosed Women's Selective Disclosures About Breast Cancer Stressors When Coping in the Mother-Daughter Relationship Across the Life Span

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PURPOSE: Families affect patients' disease adjustment. For breast cancer patients, their mothers and daughters often share the disease experience psychologically and physiologically but less is known about how they communicatively cope. This study examined cancer-related stress diagnosed women openly share or avoid talking about in an effort to cope in this bond and their reasons for sharing or avoiding. A secondary goal was to highlight developmental diversity in coping preferences and needs when diagnosed in young, middle, or later adulthood. **METHODS:** The study incorporated a multiple-method interpretive design and triangulation of cross-sectional and longitudinal data. Forty women diagnosed in young, middle, or later adulthood and 38 of their mothers and daughters ($N = 78$, 35 dyads) participated in individual in-depth interviews about how they adjusted to cancer through open communication and avoidance. A subsample participated in longitudinal diaries recording their interactions and follow-up diary-interviews. Grounded theory was used to examine more than 2,500 pages of data and develop a thematic presentation of mother-daughter coping in each age group. **RESULTS:** Across age, women share physical aspects of cancer (e.g., treatment side effects) with their mother/daughter but avoid topics viewed as negative (e.g., death, future uncertainty). Across age, women avoid topics to protect one's mother/daughter. However, behavior and motivation was also diverse according to age and relational role. **CONCLUSIONS:** Findings show diagnosed women selectively disclose stress when coping in the mother-daughter bond in an effort to collectively cope or protect their mother/daughter. Age at diagnosis is a factor in women's communicative coping needs and should be considered in patients' and families' psychosocial care needs.

RESEARCH IMPLICATIONS: The typologies can be used to further explore open and closed communication of patients in each age group and better understand the diverse functioning of family communication in cancer adjustment across the life span. **CLINICAL IMPLICATIONS:** The authentic stories captured in this study can be used to construct a psychosocial intervention aimed at teaching mothers and daughters healthy communicative behavior when coping. The intervention can attend to the unique coping needs of developmentally diverse women. **FUNDING:** National Institute on Aging Training Grant; Joseph M. Juran Center

P1-44

BRCA1/2 Positive Parents' Disclosure of Cancer Risk to Offspring: A "Teachable Moment"?

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PURPOSE: Little is known of what parents undergoing BRCA1/2 testing share with offspring younger than guidelines recommend medical intervention, or offspring's reactions. We describe content and mediators of BRCA mutation carriers' (BRCA+) disclosure of their genetic test results to offspring <25 YO. **METHODS:** 108 BRCA+ parents (215 parent-offspring pairs) completed semi-structured interviews of communication of genetic risk to offspring (111 female; 104 male). Parents reported disclosure (DIS/NONDIS) of BRCA1/2 results and specific content. Response proportions describe content disclosed. Regression analyses identified predictors of disclosed content. **RESULTS:** Of 134 (59%) offspring learning of parents' BRCA+ status (DIS), offspring learned of parental cancer risk (97%), own chance of inheriting BRCA+ cancer risk (82%), parent risk reduction strategies (76%), and own risk reduction options (63%). Among 55 (41%) offspring not learning of parent BRCA+ status (NONDIS), offspring learned of parent BRCA+ cancer risk (31%), offspring BRCA+ cancer risk (9%), parent (36%) and offspring (35%), risk reduction options. Older offspring age (OOA) predicted DIS ($p < 0.01$). OOA ($p < 0.01$), female parent gender (FPG $p = 0.01$), parent cancer diagnosis (CADX $p = 0.02$) and >education ($p = 0.03$) predicted of parental cancer risk disclosure. OOA and CADX predicted disclosure of offspring's BRCA+ associated cancer risk. OOA ($p = 0.003$), female offspring gender (FOG $p = 0.01$) and FPG ($p = 0.007$) predicted communication of parent risk reduction strategies; OOA ($p = 0.03$), FOG ($p = 0.06$), and CADX ($p = 0.06$) predicted

communication of offspring risk reduction options. **CONCLUSIONS:** Information BRCA + parents share with offspring < 25YO varies considerably. Parents who report sharing BRCA1/2 test results frequently share child's cancer risk, but less frequently, risk reduction options. Some parents who don't disclose BRCA1/2 results do share parent and offspring cancer risk reduction strategies. **RESEARCH IMPLICATIONS:** Ongoing interview of parents and offspring will provide analyses of parent and offspring mediators/moderators of disclosure content and offspring responses. **CLINICAL IMPLICATIONS:** Findings are expected to guide development of parent interventions that capitalize on the "teachable moment" provided by parental BRCA1/2 testing to communicate to offspring risk reduction options that will optimize adaptive psychosocial and behavioral responses and ultimately reduce BRCA1/2 associated cancer risk. **FUNDING:** American Cancer Society (#MRSG 07-014-01-CPPB). ASCO Foundation, Young Investigator Award.

P1-45

Goals and Goal Attainment in Inpatient Rehabilitation for Prostate Cancer Patients: Are Doctors in Accordance With Patients?

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PURPOSE: In addition to somatic and educative objectives, the definition of goals in terms of psychosocial adaptation is necessary and agreement between doctors and patients on rehabilitation goals is considered to be crucial. Main objective of the study was assessing rehabilitation goals at the beginning of the inpatient stay and investigating whether these goals were attained at the end. Patients' and doctors' perception of goals and goal attainment was also compared. **METHODS:** 174 prostate cancer patients (age 42–74, no metastases) were examined during their three-week inpatient rehabilitation stay. The patients received a 20-item list of possible goals. They rated their relevance at the beginning of their stay, and their attainment at the end of rehabilitation (3-point scale each). The spectrum included somatic, informational and psychosocial goals. For every single patient, the doctors gave a rating with respect to relevance and attainment of each goal at the beginning and end of rehabilitation, respectively. **RESULTS:** On average, the patients rated 8 of the 21 goals to be relevant at the beginning and attained at the end (lower ratings by the doctors with respect to relevance and attainment). The most important goals from the patients' perspective were to become continent again (85%), "reducing somatic symptoms and restrictions" (73%), "getting more energy" (54%) and "understanding the relationship between somatic and mental processes" (45%).

The highest correlation between doctors' and patients' ratings was found with respect to the relevance of the goal "getting continent again" ($r = 0.57$), "reducing sexual problems" ($r = 0.32$), "achieving return to work" ($r = 0.28$) and the attainment of "better physical fitness" ($r = 0.14$). The average goal attainment shows substantial correlations with anxiety ($r = -0.35$) and depression ($r = -0.52$). **CONCLUSIONS:** The limited correlation between doctors' and patients' ratings of the relevance and attainment of goals speaks in favor of a greater exchange and common definition of goals by doctors and cancer patients in rehabilitation. **RESEARCH IMPLICATIONS:** Future research should focus on the process of defining rehabilitation goals by doctors and patients. **CLINICAL IMPLICATIONS:** The process of goal attainment should receive much more attention in the course of rehabilitation and play a more important role in doctor-patient communication. **FUNDING:** ARGE Bochum Germany.

P1-46

Dimensions and Adaptivity of Coping With Cancer: Results From a New Multidimensional Approach

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PURPOSE: Empirical findings show that coping processes have an important influence on quality of life achieved and probably also on survival times. Although some assessment instruments exist, there is still an ongoing discussion, how many and which coping dimensions should be assessed in research and clinical practice, respectively. **METHODS:** A pool of coping items, including all important coping dimensions in psycho-oncology (and integrating spiritual coping), was empirically reduced to 87 items and 13 dimensions. 399 cancer patients in inpatient rehabilitation (39% breast cancer, 20% prostate cancer, 11% gut cancer) anonymously filled out the questionnaire and gave the data base for the analyses. Coping focus was the reaction to the communication of the cancer diagnosis. **RESULTS:** Single items, the patients most often agreed upon, referred to placing trust in the doctors, compliance-related strategies, fighting spirit and self-encouragement (each item with more than 80% of the patients who markedly confirmed). The factor analysis (principal components, varimax rotation) yielded a 13-factor solution, exhausting 64% of the variance. Scales were developed from 11 factors with at least 5 items with high loadings: depressive coping, self-encouragement, religious-spiritual support, seeking hedonism and awareness, placing trust in doctors, problem oriented coping, using social support, avoiding confrontation, construction of meaning, information seeking, and social comparison. The psychosocial health status

(SF-12) in multiple regression analyses (stepwise) was best predicted by the coping modes withdrawal, avoidance of confrontation, self encouragement, problem focused coping and placing trust in the doctors (28% of the variance exhausted). **CONCLUSIONS:** Coping with cancer is a complex construct with various dimensions, many of them have close relations to psychosocial outcome criteria. But still it is not easy to say by empirical results, which ways are in general adaptive or maladaptive. **RESEARCH IMPLICATIONS:** Further studies are needed, which focus on the adaptivity of coping modes during the course of the disease, and on the possibilities to systematically support favorable coping modes by patient education and psychotherapy. **CLINICAL IMPLICATIONS:** Explicit communication about the strong and weak aspects of individual coping might improve the approach to the patient and contribute to more effective support. **FUNDING:** None.

P1-47

An Exploratory Factor Analysis and Validation Study of the Lung Cancer Self-Blame and Guilt Scale

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PURPOSE: This study was conducted to develop and validate a brief measure of self-blame/guilt in lung cancer patients. **METHODS:** 197 lung cancer patients were recruited from Loma Linda University Medical Center and City of Hope National Medical Center. Participants completed questionnaires containing the Lung Cancer Self-Blame and Guilt Scale (LCBGS) and other measures of mood, coping strategies, and psychological functioning. Cronbach's alpha was used to assess the internal consistency of the scale, and principal axis factoring was employed to evaluate construct validity. Discriminant validity was assessed by evaluating differences in self-blame/guilt between never smokers and current/former smokers. Attribution theory guided hypotheses about the relationship between self-blame/guilt and other markers of psychological functioning. **RESULTS:** One factor containing sixteen items was extracted (all loadings > 0.35), and internal consistency for the factor was good, $\alpha = 0.84$. The LCSBGS successfully discriminated between never smokers ($n = 32$, $M = 33.78$, $SD = 14.53$) and both current ($n = 32$, $M = 59.81$, $SD = 13.83$) and former smokers ($n = 127$, $M = 59.01$, $SD = 16.13$), $ps < 0.001$. Within current and former smokers, the LCSBGS demonstrated good convergent and divergent validity with markers of psychological functioning,

$ps < 0.03$. Self-blame/guilt was significantly related to younger age ($r = -0.29$, $p < 0.001$), more pack years ($r = 0.22$, $p < 0.007$) and more time since diagnosis ($r = 0.20$, $p = 0.01$) but did not significantly correlate with general health ($r = -0.13$, $p = 0.06$) or stage of cancer ($r = -0.16$, $p = 0.10$). **CONCLUSIONS:** The results demonstrate that the LCSBGS is an internally consistent measure of self-blame and guilt in lung cancer patients, with promising evidence of validity. **RESEARCH IMPLICATIONS:** The availability of a brief measure of lung cancer-specific self-blame and guilt allows researchers to begin evaluating how self-blame and guilt influence psychological adjustment and symptom management. **CLINICAL IMPLICATIONS:** Future studies are needed to develop normative data for self-blame/guilt. The LCSBGS may be useful to clinicians to identify feelings of self-blame or guilt and to intervene to improve communication with healthcare staff, friends, and family members. **FUNDING:** Lance Armstrong Foundation (PI: Thornton).

P1-48

Utility of Online Distress Screening Among Women Attending a Breast Clinic

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PURPOSE: Given the prevalence of distress in cancer patients, the need for readily accessible, user-friendly screening tools, and the growing use of computer-based assessments, we sought to examine the utility of the single item Distress Thermometer (DT) in screening for depression and anxiety among women both with and without a breast cancer diagnosis being seen in a breast care clinic. **METHODS:** Participants ($n = 421$) were drawn from women scheduled as new patients in the UCSF Breast Care Center or a first appointment in the UCSF Breast Cancer Survivorship Program who completed an online comprehensive health survey as part of their clinical care. Using ROC analysis, we examined the optimal cutpoints on the DT where sensitivity and specificity for case identification for clinically significant depression (PHQ-9) and anxiety (GAD-7) were maximized. **RESULTS:** Mean age for participants was 55.4 ($SD = 11.98$), over 25% were of non-white ethnicity (including 11% Asian and 7.4% Latino/Hispanic). Breast cancer had been diagnosed in 66% of participants, with 50% of those >12 months out from diagnosis. Using the suggested cutpoint of 10, 9.3% and 6.7% of participants had elevated scores on the PHQ9 and the GAD7, respectively, while 38.7% scored ≥ 5 on the DT. The area under the curve (AUC) for the DT relative to the PHQ-9 was 0.84. A visual

analysis of the ROC curve indicates a cutpoint of 5 on the DT to maximize sensitivity (0.87) and specificity (0.74) relative to the PHQ-9. The AUC for the DT relative to the GAD-7 was 0.92. The optimal cutpoint for the DT was also 5 in order to maximize sensitivity (0.96) and specificity (0.82) for the GAD-7. **CONCLUSIONS:** The DT showed strong discriminatory power to detect both depression and generalized anxiety when compared to the criterion measures with an optimal cutpoint of 5. **RESEARCH IMPLICATIONS:** These results may help researchers better understand how the DT operates compared to validated measures of anxiety and depression in a clinical population. **CLINICAL IMPLICATIONS:** These results may help clinicians utilize screening tools such as the DT. **FUNDING:** Funding: Safeway Foundation.

P1-49

Validation of the Memorial Anxiety Scale for Prostate Cancer in African-American Men With Prostate Cancer

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PURPOSE: The National Cancer Institute has highlighted the need for psychosocial research to focus on African-American cancer patients. This may be specifically true for African-American men with prostate cancer, since African-American men have a 60% higher incidence rate of prostate cancer than Caucasian men. Many men with prostate cancer experience anxiety and distress, yet there is little systematic research concerning psychological distress in African-American men with prostate cancer. This study was designed to validate the Memorial Anxiety Scale for Prostate Cancer (MAX-PC) in African-American men to facilitate psychosocial research within this group. **METHODS:** African-American men with prostate cancer completed the MAX-PC, the Hospital Anxiety and Depression Scale (HADS), the FACT Quality of Life Questionnaire, and the Distress Thermometer. **RESULTS:** The average age of the 150 men was 63 (+10) and 51% had late-stage disease. The average time since diagnosis was 4.8 years (+4.3). The coefficient alpha for the total 18-item MAX-PC was 0.90, the coefficient alphas for the Prostate Cancer Anxiety subscale and the Fear of recurrence subscale were 0.91 and 0.89, respectively. The MAX-PC also demonstrated strong concurrent and discriminant validity. MAX-PC total scores correlated highly with total HADS scores ($r = 0.52, p < 0.01$), scores on the Anxiety sub-

scale of the HADS ($r = 0.47, p < 0.01$), and the Distress Thermometer ($r = 0.53, p < 0.01$). Demonstrating discriminant validity, the correlation with the HADS Depression Subscale ($r = 0.39, p < 0.01$) was lower compared to the HADS Anxiety subscale. A significant negative association was also observed with overall quality of life ($r = -0.33, p < 0.05$). Analysis of the subscales demonstrated a similar pattern. **CONCLUSIONS:** The MAX-PC is valid and reliable in African-American men with prostate cancer. These data are some of the first to focus on psychological aspects of African-American men with prostate cancer, and establishing valid and reliable measures in this population will be essential to move psychosocial research in this area forward. **RESEARCH IMPLICATIONS:** Gold standard measures and future research directions will be presented. **CLINICAL IMPLICATIONS:** Unique issues for African-American men with prostate cancer will be discussed. **FUNDING:** The T.J. Martell Foundation.

P1-50

A Systematic Review of Behavioral Engagement in Internet-Based Interventions for Cancer

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PURPOSE: Previous studies have suggested that there is likely to be a dose-response relationship in psychosocial interventions for cancer, such that higher levels of engagement are associated with greater benefit. Although Internet-based interventions can reach survivors who might otherwise be unable to access care, little is known about the level of behavioral engagement these types of treatments elicit in cancer survivors. **METHODS:** Internet-based interventions for adult cancer survivors were identified through a systematic search of PubMed. **RESULTS:** Twenty-eight eligible studies were identified representing 8 unique trials. 46.4% were randomized, and 85.7% were facilitated with a mean of 151 participants per study. Participants were primarily female (85.0%), White, and young (51.4 years). Fewer than one in three studies reported the number of participants who made any use of the intervention. The most common treatment elements were: discussion board (78.6%, $n = 22$), frequently asked questions/links (35.7%, $n = 10$), information (25.0%, $n = 7$), technical support (17.9%, $n = 5$), and written exercises (17.9%, $n = 5$). 53.6% of studies measured overall engagement (e.g. mouse clicks, time spent on site, or logins), 17.9% measured specific components (e.g. number of message posts, participants writing in journal, and messages sent to facilitator) and 10.7% measured both. 82.1% reported at least one engagement

measure, with little overlap among reported measures: message posts (28.6%), time spent on the website (17.9%), logins (14.3%), words written (10.7%), and number of visits (10.7%). Means could not be calculated for engagement measures due to inconsistencies in reporting. Four (14.3%) studies evaluated the association between engagement and outcome. Three found positive associations with health care participation, and 1 reported no effect on depression. **CONCLUSIONS:** Inconsistencies in reporting make it difficult to characterize engagement in Internet-based interventions. **RESEARCH IMPLICATIONS:** Published statistics were either specific to the intervention or characterized differently across studies. We suggest consistent reporting standards that would include number of message posts, logins, and total time on website per participant. **CLINICAL IMPLICATIONS:** Studies suggest that behavioral engagement may be positively linked with outcomes. Better measurement of engagement in Internet-based interventions could improve understanding of mechanisms of action and facilitate development of more effective interventions. **FUNDING:** None.

P1-51

Adapting the Personality/Stress Inventory as an Important Methods in Predictors and Cancer Care Patients

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PURPOSE: There has recently been increased interest in the role that personality, stress and coping strategies play, as one part of a multifactorial model, in the aetiology and onset of physical disease. In the field of cancer research, this area is difficult and beset with methodological problems (Fox, 1978). Eysenck (1990,1991,1995), suggest "we cannot reasonably count studies which are not based on good theoretical foundation, which do not use appropriate methods of investigation, and which do not use relevant inventories" (1993c). Grossarth-Maticek and Eysenck constructed and described validated of a new Personality/Stress Inventory. Then next tested the method and followed the prospective and longitudinal study for periods from 10 to over 20 years. Grossarth-Maticek also attempted a more typological approach, in which subjects were classified into one of four personality/stress "types", namely (Type 1-understimulation) a cancer prone type; (Type 2-overarousal) coronary heart disease-prone, an intermediate type (Type 3- ambivalence), and a healthy type (Type 4-personal autonomy). **METHODS:** A healthy probands was used The Personality/Stress Inventory, 37 ACL and Cattell The Ipat Anxiety Scale. The measuring Personality/Stress Inventory used in this study has been translated

from English into Polish and adopted into Polish circumstances. Repeated measures ANOVA and MANOVA were computed and the rank correlation R-Spearman within the scales 37 ACL (The 37 ACL was a factor analyzed) of the questionnaire and The Ipat Anxiety Scale. **STATISTICA PL** was used for analysis. **RESULTS:** The mean age of the sample ($N = 131$) was 45.5. The majority of men and women were employed and well educated. The means scores for Personality/Stress Inventory was for Type 1 (Means = 3.78; SD = 2.12; $p = 0.001$) for Type 2 (Means = 2.98; SD = 2.25; $p = 0.000$), for Type 3 (Means = 3; SD = 1.69; $p = 0.001$), for Type 4 (Means = 6.62; SD = 2.48; $p = 0.001$). R-Spearman for Type 1 with The Ipat Anxiety Scale (General Anxiety, was 0.26; $p = 0.00$), for Type 2 ($R = 0.38$; $p = 0.00$), for Type 3 ($R = 0.27$; $p = .000$), for Type 4 ($R = -0.34$; $p = 0.00$). In 37 ACL, for example negative correlation was in the TYPE 1(cancer prone) -for DOM scale. $R = -0.21$; $p = 0.001$). **CONCLUSIONS:** The findings suggest that the Personality/Stress Inventory is an appropriate and effective method for eliciting peoples for coping strategies and personality. Furthermore will additional items examining within group with cancer in all stages diseases. The healthy probands from Poland am best characterized by Type 2 (over arousal), The Type 1-cancer prone (under stimulation) took the second place. **RESEARCH IMPLICATIONS:** We are present these preliminary results of the Personality/Stress Inventory, because we would like to used these results in a prospective and longitudinal studies. The scales may be used for research, i.e. in comparing cancer and coronary heart disease and other groups, in advance cancer and in prophylactic treatment. And finally The Personality/Stress Inventory will be used in predicting cancer-prone and coronary heart disease-prone. **CLINICAL IMPLICATIONS:** The novel method can be used of behavior therapy applied to cancer-prone, in prophylactic therapy, to reduce the probability of their dying of cancer. The novel method can also be applied to patients already suffering from cancer in order prolong their lives (Eysenck, 1991). **FUNDING:** None.

P1-52

Defining Cut-Points for Mild, Moderate and Severe Distress Using Daily Functioning: Empirical Study Using the Distress Thermometer

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PURPOSE: There has been much research on the DT but current cut-offs are somewhat arbitrary. In 2007 the NCCN suggested a cut-point of 4v5 for significant distress; in 2008 this was revised to 3v4. We wished to clarify appropriate thresholds for significant distress as well as defining minimal,

	Unimpaired	Mild	Moderate	Severe
Mean DT Score	2.1	4.1	5.9	6.5
Std Deviation	2.54	3.0	2.56	3.59
Sample Size	296	182	39	14
Simple DT Range	0–3	4–5	6–7	8–10

mild, moderate and severe distress using the Distress Thermometer and an empirical measure of function (activities of daily living). **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data on function in 531 people. We examined daily function using the question “How difficult have these problems made it for you to do your work, take care of things at home, or get along with other people?” We used a scale “Not difficult at all = 0; Somewhat Difficult = 1; Very Difficult = 2; and Extremely Difficult = 3.” **RESULTS:** The mean DT score was 3.2 across all patients. We stratified DT scores by severity of functional impairment. Relatively few people had moderately severe impairment ($n = 39$; 7%) or severe impairment ($n = 14$; 2%). The mean DT score for unimpaired was 2.1, for mildly impaired 4.1, moderately impaired 5.9 and severely impaired 6.5. However there were wide standard deviations in all cases. This suggests that a simplified scoring system that we previously suggested* might work well in clinical practice. **CONCLUSIONS:** Using an assessment of function, we found that DT scores for mild (4–5), moderate (6–7) and severe (8–10) might be clinically appropriate. **RESEARCH IMPLICATIONS:** Cut-offs on the DT can be further stratified into those with distress and mild, moderate and severe impaired function. Suggested cut-points at 3v4 5v6 and 7v8. **CLINICAL IMPLICATIONS:** Distress on the DT encompasses individuals with no impaired function through to severely impaired function. **FUNDING:** Hope against cancer.

P1-53

Distress Thermometer Versus Emotion Thermometer in the Diagnosis of DSMIV Defined Depression in Cancer Settings: A Large Scale United Kingdom Validation Study
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PURPOSE: There has been much research on the value of the DT in screening for distress or depression in cancer settings. A meta-analysis suggested that the DT may lack specificity. We recently

developed the Emotion Thermometer (ET) which builds on the success of the DT including distress, anxiety, depression and anger domains. Here we analyzed the depression thermometer (DepT) and the DT against DSMIV Depression. **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data regarding depression in 447 people. Of these 48 (10.7%) had major depression and 121 (27.1%) had any depression (defined as major or minor combined). **RESULTS:** Initial logistic regression suggested that the DepT was most closely related to the diagnosis of any depression as well as major depression.

LOGISTIC REGRESSION - ANY DEPRESSION:

Distress Thermometer Scale $b1 = -0.579159$

$z = -1.153228$ $p = 0.2488$

Distress Thermometer $b2 = 0.17135$ $z = 1.623426$
 $p = 0.1045$

Anxiety thermometer $b3 = -0.006785$

$z = -0.092616$ $p = 0.9262$

Depression Thermometer $b4 = 0.234806$

$z = 3.590917$ $p = 0.0003$

Anger Thermometer $b5 = -0.013928$

$z = -0.242433$ $p = 0.8084$

Help Thermometer $b6 = 0.108087$ $z = 1.893974$
 $p = 0.0582$

MAJOR DEPRESSION:

Distress Thermometer $b1 = 0.228411$

$z = 1.798076$ $p = 0.0722$

Anxiety thermometer $b2 = -0.082886$

$z = -0.708566$ $p = 0.4786$

Depression Thermometer $b3 = 0.278939$

$z = 3.287982$ $p = 0.001$

Anger Thermometer $b4 = 0.009553$ $z = 0.129032$
 $p = 0.8973$

Help Thermometer $b5 = 0.116773$ $z = 1.522663$
 $p = 0.1278$

Diagnostic validity testing suggested a slightly superior AUC for DepT vs. DT against major depression but equivalent accuracy against any depression. Sensitivity of the DepT was significantly higher than the DT in the diagnosis of MDD. **CONCLUSIONS:** The DepT outperforms the DT against DSMIV major depression with better sensitivity, although the DT performs comparably against “any depression”. **RESEARCH IMPLICATIONS:** The DT is only one possible thermometer format, others are worth investigating. **CLINICAL IMPLICATIONS:** The Emotion Thermometers can be used to screen for depression, with more accuracy than the DT alone. **FUNDING:** Hope Against Cancer.

P1-54**How Many People With Distress or Depression Want Professional Help for Their Condition? Results From an Ethnically Diverse United Kingdom Sample**

Mitchell A, Lord K, Symonds P

University of Leicester, Leicester, United Kingdom

PURPOSE: The rates of people wanting clinical help for psychosocial problems is much debated. Most studies suggest only the minority want formal help. **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data on 580 presentations (431 British White vs. 149 British South Asian). We examined the following factors: treatment intent (radical vs. palliative), gender, ethnicity, cancer type, cancer duration. We examined desire for help using the Help Thermometer where a cut-off of 3v4 indicated desire for clinical help. **RESULTS:** Most people with distress or depression wanted professional help. The minority of those with minor depression wanted help. More patients who rated their ethnicity as British South Asian wanted help compared with those who were British White.

WHOLE GROUP:

161 people had major or minor depression. Of these 90 wanted help (55.9%)
 72 people had major depression. Of these 52 wanted help (72.2%)
 96 people had minor depression. Of these 38 wanted help (39.6%)
 231 people had distress on the DT. Of these 163 wanted help (70.6%)
 331 had no depression and of these 61 wanted help (18%).

BRITISH WHITE:

111 people had major or minor depression. Of these 50 wanted help (45%)
 41 people had major depression. Of these 26 wanted help (63.4%)
 70 people had minor depression. Of these 24 wanted help (34.2%)
 141 people had distress on the DT. Of these 90 wanted help (63.8%)

BRITISH SOUTH ASIAN:

50 people had major or minor depression. Of these 40 wanted help (80%)
 29 people had major depression. Of these 26 wanted help (89.6%)
 21 people had minor depression. Of these 14 wanted help (66.67%)

90 people had distress on the DT. Of these 73 wanted help (81.1%)

CONCLUSIONS: In our clinically representative diverse sample, 56% with any depression and 71% with distress were willing to consider help for their condition. However in Asian patients with major depression nearly 90% wanted help. More BSA patients wanted help even with comparable levels of depression. **RESEARCH IMPLICATIONS:** Desire for help may vary by ethnicity. **CLINICAL IMPLICATIONS:** Not all patients was help for their condition. In this diverse sample, requested help rates varied from 35% to 90% depending on the underlying condition. **FUNDING:** None.

P1-55**How Many People With Cancer Related Distress or Depression Have Suicidal Thoughts? A Clinically Representative Ethnically Diverse Sample**

Mitchell A, Lord K, Symonds P

University of Leicester, Leicester, United Kingdom

PURPOSE: Recently there has been more attention on people with suicidal thoughts who suffer distress or depression in the context of cancer. We aimed to study the frequency of suicidal thoughts in an ethnically diverse UK sample. **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data regarding suicidality on 554 (411 BW 143 BSA). We examined the following factors: treatment intent (radical vs. palliative), gender, ethnicity, cancer type, cancer duration. We measured suicidal thoughts using the PHQ9 using the scale: not at all 0; several days 1; more than half the days 2; nearly every day 3. We report here, the proportion of people with any suicidal thoughts (non zero scores). **RESULTS:** Of all patients 510 had no suicidal thoughts, 44 (8%) had some thoughts and 12 had thoughts on "more than half days".

ALL:

143 people had major or minor depression. 32 had suicidal thoughts (22.4%)
 Of 69 people with major depression, 25 had suicidal thoughts (36.2%)
 95 people had minor depression 7 had suicidal thoughts (7.4%)
 205 people had distress on the DT. 37 had suicidal thoughts (18.0%)

BW:

113 people had major or minor depression. 24 had suicidal thoughts (21.2%)

Of 40 people with major depression, 18 had suicidal thoughts (45%)
 73 people had minor depression 6 had suicidal thoughts (8.2%)
 127 people had distress on the DT. 24 had suicidal thoughts (18.9%)

BSA:

52 people had major or minor depression. 8 had suicidal thoughts (15.4%)
 Of 30 people with major depression, 7 had suicidal thoughts (23.3%)
 23 people had minor depression 1 had suicidal thoughts (4.3%)
 78 people had distress on the DT, 13 had suicidal thoughts (16.6%)

CONCLUSIONS: In our clinically representative diverse sample, suicidal thoughts were uncommon present in only 8%. However in British White patients with major depression suicidal thoughts were a high risk group with suicidal ideation seen in up to 45%. Suicidal thoughts were less common in BSA but this was not statistically significant. **RESEARCH IMPLICATIONS:** Further research is recommended on suicidal thoughts and actions in cancer settings. **CLINICAL IMPLICATIONS:** Although suicidal thoughts in cancer are uncommon, rates are higher than expected in some subgroups reaching almost 50%. **FUNDING:** Hope Against Cancer.

P1-56

Learning From the Experiences of Health Care Providers Who Work With Immigrant Young Adults With Cancer

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PURPOSE: A qualitative, ethnographic study was conducted to better understand the experiences of health care providers (HCP) of immigrant young adults (IYA) with cancer. Our aim is to shed light on the practices of and challenges experienced by HCP's in order to more effectively inform other medical professionals and informal caregivers in supporting this often misunderstood population. **METHODS:** Ethnography is a multimodal approach to research based on the premise that human experiences are only properly understood within their cultural contexts. Over a period of many months, the first author conducted interviews with seven HCPs who work with IYA with cancer. He also volunteered within a cancer care setting, observing patient-care provider interactions; as well as psychosocial oncology coursework. Field notes and transcripts were iteratively reflected upon and thematically analyzed. This informed subsequent inquiry in a continuously

self-refining way. **RESULTS:** Our experiences and reflections in the field produced a rich description of the practices and challenges of HCPs that takes into account multiple perspectives. Participants pointed to the primacy of their role as a facilitator in strengthening patients' own social support. Other themes included: ongoing struggles with bridging multiple ethnic cultures; locating the patient within their family system; and frustrations with being unable to express themselves. **CONCLUSIONS:** The unique lives of IYA with cancer are complex and culturally-situated. At the interface of some major life transitions, their struggles are often best supported through their existing social systems, rather than centered upon the cancer care institution. **RESEARCH IMPLICATIONS:** Given the scarcity of research amongst immigrants and young adults with cancer, this ethnographic study forms the groundwork for further exploration into best practices in supporting an often misunderstood group in cancer care. **CLINICAL IMPLICATIONS:** Our findings serve to shed light on the diverse experiences HCPs who work with IYA with cancer, and in turn, increase care providers' capacity to provide care in the most effective and culturally-sensitive manner possible. **FUNDING:** None.

P1-57

The Influence of Body Image Perceptions on Breast Cancer Treatment: A Qualitative Study of Women With Physical Disabilities

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PURPOSE: Research indicates that patients who experience cancer or physical disability may hold negative body perceptions, yet little is known about body image in women affected by both cancer and disability. Body image perceptions were explored among women with pre-existing chronic physical disabilities who developed early stage breast cancer. **METHODS:** Qualitative interviews were conducted between 12/07 and 10/08 with 20 female survivors (M age = 59.8) who were physically disabled when diagnosed with early-stage breast cancer (M time since diagnosis = 11.4 years). Various conditions caused women's disabilities (e.g., polio, cerebral palsy). 13 women received lumpectomy, 3 received mastectomy, and 4 received both. Interview thematic content analysis was conducted by two independent coders (Kappa = 0.98). **RESULTS:** Body image appeared to influence both treatment decision-making and patient-physician relationships. Disability did not, however, appear

to influence body image perceptions during and following breast cancer treatment. With regard to cancer treatment decisions, almost half reported that appearance concerns and/or feeling attachment to their breasts influenced such decisions. Two women reported that disability made treatment-related appearance change less significant, whereas one reported that such change was made more significant. Approximately one-quarter of the women had negative reactions to physician recommendations regarding potential appearance-altering treatments. However, only a few perceived that their physicians treated body image as unimportant to women with physical disabilities, and only a few reported a dearth of information regarding the effect of treatment on appearance. While some women reported dissatisfaction with their appearance during and following treatment, slightly more reported neutral or accepting views. **CONCLUSIONS:** Body image appears to play a role in the breast cancer-related experiences of some women with disability. Most women did not report that disability influenced their treatment decisions, physician relationships or body image during and following treatment. **RESEARCH IMPLICATIONS:** Further research is needed to understand risk factors for reduced body image among women affected by breast cancer and physical disability. **CLINICAL IMPLICATIONS:** Results could be used to educate patients about outcomes related to body image following breast cancer treatment. They may also increase provider awareness regarding the importance of body image to some women affected by breast cancer and physical disability. **FUNDING:** NCI-R21.

P1-58

Recruitment and Retention of African-American and Latina-American Breast Cancer Survivors into a Psychoeducation Trial

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PURPOSE: Research participation is crucial for accessing data and scientific knowledge to advance medical care and reduce health disparities. However, ethnic minorities are not equally represented in interventional studies. The authors present the recruitment and retention outcomes of an interventional study designed to improve the HRQOL of African-American and Latina-American breast cancer survivors (BCS). **METHODS:** The study was guided by the contextual model of Health Related Quality of Life and the Culturally Responsive Model of Research Design. BCS were recruited from California Cancer Surveillance Program, hospital registries, and community agencies. Eligible BCS who agreed to participate and completed the baseline measure were assigned to either the

low-intensity (LiTx) (survivorship materials only) or the high-intensity intervention condition (HiTx) (survivorship materials plus 8 telephone psychoeducational sessions). **RESULTS:** In total 587 BCS comprised the available population, including 162 (28%) African-American, 416 (71%) Latina-American, and for 18 (3%) BCS ethnicity was unknown. 83% of BCS in the available population were recruited and 55% completed the study. Among the available population ($n = 587$), Latina-Americans were more likely to agree but not complete the study compared to African-American BCS. **CONCLUSIONS:** While this study encountered several recruitment challenges, we obtained an acceptable recruitment rate and retention rate. The retention strategies included ongoing protocol and cultural competency training; linguistically, ethnically and socio-ecologically matched interventionist; and flexible hours for the protocol implementation. **RESEARCH IMPLICATIONS:** In order to disseminate interventions broadly to the larger population of survivors, we need to continue our efforts to recruit representative populations and develop interventions that overcome recruitment barriers. **CLINICAL IMPLICATIONS:** The inclusion of ethnic minorities in research is crucial towards conducting population-based research and for the attainment of equitable health outcomes for all. **FUNDING:** DOD.

P1-59

Examining Depressive Symptoms in a Sample of Latina-American Breast Cancer Survivors

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PURPOSE: The incidence and prevalence of breast cancer among Latina-Americans are increasing. However, their representation in survivorship research including psychological outcomes is not adequately studied. Further, several studies document poorer survivorship and health related quality of life (HRQOL) outcomes among Latina-American breast cancer survivors (BCS). This study describes depressive symptoms among a sample of Latina-American BCS and examines predictors of depressive symptomatology based on the Contextual Model of HRQOL. The Contextual Model was developed to further expand the multi-dimensional HRQOL framework to include cultural and socio-ecologic (e.g., socio-economic, neighborhood) components. The study details the contributions of cancer-related medical factors, physical functioning, demographic variables, socio-ecological burden, and socio-cultural displacement on depressive symptoms. **METHODS:** This study included 232 English-speaking ($n = 95$) and Spanish-speaking ($n = 137$) Latina-American women diagnosed with breast cancer. Survivors

were recruited via mixed methods sampling that included cases ascertained from the California Cancer Registry, City of Hope and other hospital registries. Chi square and t-test analyses were used to compare differences on predictor and outcomes variables by language and CES-D scores. Hierarchical multiple regression analyses assessed the effects of demographic variables, cancer-related medical factors, physical functioning, socio-ecological burden, and socio-cultural displacement on depressive symptoms as measured by the CES-D. **RESULTS:** Findings demonstrated significant differences by language. Spanish-speakers were more likely to be foreign born, have lower education level, lower household income, less likely to receive breast conserving surgery, and had elevated depressive symptoms. The final predictive model examining the impact of demographic, medical, physical and social determinants of HRQOL on depressive symptomatology explained 66% of the variance. **CONCLUSIONS:** Findings suggest that Latina-American BCS experience unfavorable psychological outcomes, ethnic variability in depressive symptoms based on language differences exist, and that broader ecological and social components influence depressive symptomatology. **RESEARCH IMPLICATIONS:** Given the unequal burden of cancer and the need to better address cancer care for the whole person, psychological and supportive care research and practices should consider both clinical and socio-ecological contexts to equalize and improve cancer outcomes. **CLINICAL IMPLICATIONS:** This study can inform future research and clinical practice aiming to decrease disparities in psychosocial outcomes, symptom management, and improve supportive care. **FUNDING:** DOD.

P1-60

“Chasing Rainbows: Young Adults Living With Cancer” A Multilingual Resource Film (English with Spanish subtitles)

Taylor P

Chasing Rainbows Production, Vancouver, British Columbia, Canada

PURPOSE: To raise awareness and address the need for multi-lingual resources specifically targeted at *young adult* cancer patients, to improve quality and accessibility of care for this age group all over the world. “Chasing Rainbows: Young Adults Living with Cancer” is an upbeat 43-minute documentary built around a living-room conversation between six young adults: four women and two men. With passion and humor, they discuss hope, fear, faith, sexuality, infertility, family relationships, finances, the future and more. Their stories are an invaluable source of information, inspiration and hope – both for other young adults facing life-threatening illness,

and for their families, friends, caregivers and medical support teams. In the course of the film’s travels across Canada and throughout the world, it has become abundantly clear that there is a great need for multilingual resources targeted specifically at young adults in the cancer community. Director/producer Pat Taylor has made Chasing Rainbows available with Spanish subtitles, and has also completed a French-language versioning of the film. She is in the process of translating the film into Chinese, Arabic, Malay, Hindi, Portuguese and Italian. **METHODS:** The presentation will include a screening of the film, and a discussion/Q&A session with director/producer Pat Taylor, a bilingual young adult cancer survivor and a professional representative of the psychosocial oncology field. Pat has hosted many successful public events and conference sessions using this format across Canada, in Los Angeles, Mumbai (India) and London (UK); she has also had requests for screenings in Italy, Egypt, the Netherlands and Australia. www.chasingrainbowsproduction.com **RESULTS:** The film and accompanying discussion give a voice to young adults living with/surviving cancer, and serve to educate medical professionals and the general public about the issues and resources that are specific to this age group. **CONCLUSIONS:** APOS professionals will be able to add Chasing Rainbows (in English, Spanish and French) to their “toolkit” of resources that offer emotional and practical support, hope and meaning to young adult cancer patients, their families, caregivers and medical support teams. **RESEARCH IMPLICATIONS:** APOS professionals will be able to add Chasing Rainbows (in English, Spanish and French) to their “toolkit” of resources that offer emotional and practical support, hope and meaning to young adult cancer patients, their families, caregivers and medical support teams. **CLINICAL IMPLICATIONS:** APOS professionals will be able to add Chasing Rainbows (in English, Spanish and French) to their “toolkit” of resources that offer emotional and practical support, hope and meaning to young adult cancer patients, their families, caregivers and medical support teams. **FUNDING:** None.

P1-61

Multimedia Resources for Young Adults Living With Cancer

Taylor P

Chasing Rainbows Production, Vancouver, British Columbia, Canada

PURPOSE: Presenter Pat Taylor is the director/producer of “Chasing Rainbows: Young Adults Living With Cancer”, an upbeat 43-minute documentary designed to provide information, inspiration and hope to young adults facing cancer, as well as their families, friends, caregivers and medical

support teams. While screening “Chasing Rainbows” across Canada and all over the world, Pat has met an emerging group of young adult cancer survivors who are telling their own stories from their own unique perspective. They are making films, writing books, hosting radio shows, creating retreats and adventure programs designed specifically for their own age group. Psychosocial oncologists and their support staff need to be aware of these resources and share them with their young adult patients, but keeping up with all the new material is a challenge. This presentation will act as a “one-stop shop”, providing an overview of resources currently available in a variety of media. **METHODS:** The presentation will offer a sampling of film clips, books, brochures, CDs, links to online resources, information on retreats and exciting new adventure opportunities, all targeted specifically at young adults living with cancer (from diagnosis through to survivorship and beyond). www.chasingrainbowsproduction.com **RESULTS:** Promoting awareness of these multimedia resources created by and for young adults gives a voice to young adults living with/surviving cancer, and educates medical professionals and the general public about the issues that are specific to this age group. **CONCLUSIONS:** APOS professionals will have an up-to-date and wide-ranging list of young adult-focused resources to share with their patients, support staff and others. **RESEARCH IMPLICATIONS:** APOS professionals will have an up-to-date and wide-ranging list of young adult-focused resources to share with their patients, support staff and others. **CLINICAL IMPLICATIONS:** APOS professionals will have an up-to-date and wide-ranging list of young adult-focused resources to share with their patients, support staff and others. **FUNDING:** None.

P1-62

Developing a Peer Support Program for Chinese Immigrant Women Breast Cancer Patients

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PURPOSE: Little research has been done that explores how cancer peer support programs are developed in immigrant communities. Past research has show that Chinese immigrant women newly diagnosed with cancer rely more on their immediate families for support than those outside their family. **METHODS:** In the last 12 months, Chinatown Public Health Center and San Francisco State University have trained and worked with three bilingual Chinese immigrant breast cancer survivors who have counseled 10 women this year. An evaluation was conducted with

trained peer counselors and counsees ($n = 13$) to determine the effectiveness of this program and included questions around feeling supported, supportive communication, benefits in participating, strengths of the program and areas for improvement. **RESULTS:** The evaluation conducted with peer counselors and peer counsees found that personally tailoring peer counseling sessions to peer counselee's circumstances, needs and preferences were crucial to peer support. Matching between peer counselor and peer counselee according to similar age, diagnosis, and treatments enhanced the supportive nature of peer counseling sessions. Also, face to face meetings, rather than telephone meetings, enhanced the supportive relationship between peer counsees and peer counselors. Weekly check-ins with project staff with peer counselors were helpful to peer counselors. Ongoing meetings between peer counselors and peer counsees built up trust and opened up conversations to talking about sensitive issues that they needed support on. After the 2 month peer support sessions, peer counselors expressed the need for a lengthier peer counseling relationship that could help women get through treatment and post-treatment issues. **CONCLUSIONS:** Chinese immigrant peer support program for newly diagnosed cancer patients must be culturally tailored but also personally tailored to each woman's needs and preferences. **RESEARCH IMPLICATIONS:** Further research is necessary to examine whether access to peer support for Chinese immigrant women can reduce psychological distress at diagnosis and during treatment. **CLINICAL IMPLICATIONS:** When faced with a breast cancer diagnosis, Chinese immigrant breast cancer patients are faced with an array of issues and needs. Having access to bilingual peer support can help women cope with their diagnosis, and can also assist them with making treatment decisions. **FUNDING:** Acknowledgement of Funded by a grant (2P20MD000544-06) from the NATIONAL CENTER ON MINORITY HEALTH AND HEALTH DISPARITIES NIH from the National Center for Minority Health and Health Disparities, NIH.

P1-63

Cancer Under the Radar: A Book Project to Raise Awareness About Young Adult Cancer

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PURPOSE: Young adults are a minority population within the adult oncology world, therefore having their voices heard is paramount to them feeling a sense of hope with regards to increasing the resources available to them while in treatment. In response to this need a two part project was initiated, to first produce a book, then to publicly launch it. **METHODS:** This book is a

collection of art, photos, poetry and prose submitted by 15 young adult oncology patients as a method of communicating in a creative way about the impact of cancer at this stage in their lives. The coordination of a book launch not only promoted the book itself but also provided a platform for raising awareness regarding the unique psychosocial needs of young adult oncology patients. Attendees, who included multidisciplinary medical professionals and the Montreal community, were asked to complete a questionnaire. Personal interviews were conducted with the young adult authors. **RESULTS:** Both qualitative and quantitative data will be provided to highlight the impact of this process for the contributing young adult authors but also to discover in what way this process increased awareness within the medical and public communities. **CONCLUSIONS:** Delegates will have an opportunity to view this creative resource and gain information about an effective medium for connecting the medical community and altering public perceptions about young adult cancer. Ultimately this will work towards providing a more tailor-made approach when working with this population. **RESEARCH IMPLICATIONS:** There is a great need to increase the knowledge base and the field of research regarding the young adult oncology population. This project can be considered a preliminary step towards informing a variety of significant research questions regarding effectively addressing the needs of this population. **CLINICAL IMPLICATIONS:** Many clinicians do not realize the specific and unique impact a cancer diagnosis has on the young adult population. Other clinicians are already in the process of providing this specialized care. The goal is not just to raise awareness, but to create a dialogue to improve care, educate and fill the gap in services we (professionals) can provide. **FUNDING:** None.

P1-64

Predictors of Quality of Life Among Breast Cancer Survivors From Different Ethnic Groups

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PURPOSE: Some data exist that suggest that minorities with cancer tend to have poorer quality of life than Caucasians. However, it is not what predictors of quality of life are for cancer survivors from different racial/ethnic groups. Therefore, the purpose of this study was to determine predictors of quality of life of breast cancer survivors from different ethnic groups. **METHODS:**

Forty-five African American, 52 Asian/Pacific Islander, 54 Caucasian, and 25 Latina breast cancer survivors (mean age overall 57, 2 years post treatment) completed questionnaires about quality of life, social support, mood, and spirituality. **RESULTS:** Social support, anxiety, fatigue, anger, meaning/peace, and age accounted for 63% of the variance in quality of life overall ($F = 31.67$, $p = 0.000$). For African Americans a combination of appraisal, emotional/informational support, and fatigue accounted for 69% of the variance in quality of life ($F = 23.40$, $p = 0.000$). For Asians fatigue and positive social interactions accounted for 82% of the variance ($F = 46.22$, $p = 0.000$). Meaning/Peace, anxiety, and anger accounted for 67% of the variance for Caucasians ($F = 24.23$, $p = 0.000$), and for Latinas only confusion predicted a significant amount of variance ($r^2 = 0.99$, $F = 273.45$, $p = 0.004$). **CONCLUSIONS:** The findings indicate that there are different factors that predict quality of life among breast cancer survivors from different ethnic groups. However, for three of the groups fatigue was a significant factor. Social support was a predictive factor for African Americans and Asians only and these types were different. Interestingly, spirituality was only a predictive factor for the Caucasian women. **RESEARCH IMPLICATIONS:** The role of social support and spirituality in quality of life should be further studied among cancer survivors, particularly for those from racial/ethnic minorities. Previous research has shown that spirituality is a significant factor in coping with cancer for racial/ethnic minorities. Perhaps larger sample sizes might produce more significant relationships. **CLINICAL IMPLICATIONS:** Practitioners should be aware of and assess the factors influencing quality of life among survivors and that the factors are different for women from different racial/ethnic backgrounds. **FUNDING:** Acknowledgement of Funding: Research Infrastructure in Minority Institutions grant 5 P20 MD000544-02 from the National Center for Minority Health and Health Disparities, NIH.

P1-65

A Qualitative Exploration of the Meaning of Spirituality to Underserved Ethnically Diverse Advanced Cancer Patients

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PURPOSE: This study aims to investigate the meaning, experience, and role of spirituality in the lives of advanced cancer patients from an underserved, ethnically-diverse population. Differences in the ways that individuals conceptualize this multifaceted construct will be explored.

METHODS: Qualitative semi-structured interviews were conducted with patients who had participated in a study on a “mind-body” support group for patients with all cancer types. Interview questions focused on the needs and coping techniques of this population and their interest in various types of psychosocial support, with a particular focus on spiritual and emotional needs and concerns. Eight patients have already been interviewed, and the researchers aim to conduct 12 to 15 interviews total, until saturation is reached. Results using content analysis to identify themes verified by inter-rater reliability and arbitration will be presented. **RESULTS:** All patients interviewed thus far described the centrality of spirituality to their experiences of cancer. Common themes of the role of spirituality include providing comfort, maintaining hope, and finding meaning. Many patients cited religion and spirituality as their most valuable tool for coping. Patients differed as to how they conceptualized spirituality. For some, spirituality is intertwined with organized religion. The value of spirituality for these individuals is largely found through belief in a specific deity, communal religious services, and the support of a religious community. For others, the concept of spirituality is more universal and is independent of organized religion. These individuals take an individualistic stance toward spirituality, finding meaning through a personal connection with the divine or with nature. **CONCLUSIONS:** Spirituality plays a central role in the cancer experience of this underserved ethnically-diverse population. While spirituality seems to be a universal concern in advanced cancer patients, the meaning of spirituality differs across individuals, with some equating it with organized religion while others take a more individualized approach. This is in line with the current debate in the literature over whether religion and spirituality are interchangeable or whether they are two distinct constructs. **RESEARCH IMPLICATIONS:** Spirituality is a central concern for this population, and it is important that psychosocial interventions are developed to address this concern. Future research is needed to further explore the different ways that patients conceptualize spirituality and to develop spiritually-based treatments that are not “one size fits all.” **CLINICAL IMPLICATIONS:** In light of the different meanings of spirituality to different patients, it is essential that clinicians adequately assess patients’ spiritual identities so that interventions can be tailored to patient need. Interventions must maintain flexibility and openness to the variety of extant conceptualizations of the term. **FUNDING:** None.

P1-66

Culturally Relevant Cancer Risk Counseling for Underserved Latinas

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PURPOSE: The purpose of this study was to evaluate the effects of a culturally relevant Genetic Cancer Risk Assessment (GCRA) intervention for Latinas. **METHODS:** Four focus groups were conducted consisting of Latinas that have undergone GCRA. Participants completed a demographic questionnaire that included items assessing perceived cancer risk and satisfaction with GCRA. The focus groups entailed a facilitated discussion of the key study variables and other culturally relevant issues that may impact the GCRA intervention. Descriptive statistics and thematic analysis were used. **RESULTS:** Perceived sense of lack of information and uncertainty about what to expect appeared to play a key role in distress. Most women initially had negative expectations (expecting the worse or bad outcome), but ultimately felt hopeful that they could learn more about the GCRA process and what it meant for them. Information was cited as the primary contributor to positive psychosocial outcomes specifically increased locus of control and self-efficacy. The major cultural themes identified were destino, religious and spiritual coping, how cultural attitudes and belief influence lack of information, community awareness, and public health issues. **CONCLUSIONS:** Findings indicate that the pre-GCRA window may be most distressing for this population indicating that this may be the most appropriate time for psychological intervention. **RESEARCH IMPLICATIONS:** This study helps address gaps in applied cultural and behavioral cancer genetics research on Latinas at risk for hereditary breast cancer and ovarian cancer. **CLINICAL IMPLICATIONS:** Findings will assist in the design of culturally-relevant interventional studies for this rapidly growing population. **FUNDING:** Redes en Accion.

P1-67

Impact of Nueva Vida’s Service Model on Self-efficacy in Latinas With Breast Cancer

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PURPOSE: Breast Cancer is the most common cancer diagnosis among Latina women in the US and Latinas have a higher mortality rate than their white non-Hispanic counterparts (American Cancer Society, 2009). Based on this data and the lived experiences of Latina’s with breast cancer, Nueva

Vida (NV) was founded in 1996 in efforts to address the lack of culturally sensitive cancer support services for Latinas in the Washington, DC area. NV's comprehensive cancer care service model includes patient navigation, various types of support groups, individual counseling, peer support, and education. This community based organization-academic partnership project aims to evaluate the impact of NVs service model on participants' levels of self-efficacy, psychological distress, and quality of life. **METHODS:** A time-series design with data collection on the day of initial contact with NV, within 3–10 days of initial contact, as well as 4 and 12 months after receiving NV services. Sample includes between 60 and 90 Latina women diagnosed with breast cancer who contacted NV. Instruments used in this study include: Cancer Behavior Inventory (CBI) version 2 measuring self-efficacy (Merluzzi et al., 2001), the Brief Symptom Inventory-18 (BSI-18) measuring psychological distress (Zabora et al., 2001), and the Satisfaction with Life Domains Scale- Breast Cancer (SLDS-BC) measuring quality of life (Spagnola et al., 2003). **RESULTS:** Data collection took place between March 2008 to December 2010. Preliminary data indicate a statistically significant decrease in psychological distress ($p < 0.05$) and increased levels in quality of life ($p < 0.05$). The self-efficacy did not change over the course of the year. The final findings will be presented in regards to variations in levels of self-efficacy, psychological distress, and quality of life over this time period. **CONCLUSIONS:** Participants will have an increased awareness of the impact of breast cancer on Latinas and the impact of a targeted program for Latinas has on the study participants. Further, the organization will learn the ups and downs of collaboration between a community-based organization and a university in developing and undertaking a research project. **RESEARCH IMPLICATIONS:** Better culturally and linguistically appropriate instrumentation is needed. Better conceptualization is needed on defining self efficacy among the Latino community. **CLINICAL IMPLICATIONS:** NV's intervention is effective and positive. NV's model can be replicated in other non-profit agencies. **FUNDING:** Susan G. Komen for the Cure - National Capital Area.

P1-68

Breast Cancer Screening Adherence and Risk Associations in Four Bemidji Area Tribes

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PURPOSE: A pilot study of American Indian/Alaska Native (AI/AN) women's breast cancer

screening patterns and risk factors was conducted in four tribal and Indian Health Service (IHS) clinics to ascertain whether risk influenced adherence to their clinics' screening guidelines. **METHODS:** We hypothesized that women at greater breast cancer risk would be more likely to seek an annual mammogram. We reviewed medical records for nine risk factors and screening adherence data on 20% of AI/AN women age 40 or older who resided in four tribal communities across two states. Included women had at least one documented mammogram and no prior history of breast cancer. Screening adherence was defined as 1.5 years or less between mammograms. As appropriate, t-tests and chi-square tests were used to assess associations between risk factor values and a women's level of screening adherence. **RESULTS:** Generally, risk was not associated with women's pursuit of an annual mammogram. Only older age at menopause ($p = 0.01$) and older chronological age ($p = 0.005$) were significantly associated with screening adherence. There was no significant difference between adherent and non-adherent screeners and family history of breast cancer, biopsy history, age at menarche and first live birth. Neither was there a significant difference in adherence and Gail Model 5-year and lifetime risk scores. An incidental finding showed that women in our study entered menopause an average of 6–7 years earlier than the U.S. average. **CONCLUSIONS:** Results indicate that breast cancer risk factors do not appear to play a role in women's screening decisions. **RESEARCH IMPLICATIONS:** Future studies will explore women's understanding and valuing of risk factors as mediators of screening decisions. Other potential mediators of screening behavior also will be examined preparatory to designing interventions to improve screening adherence in a geographic area where only 44% of Native women currently report having a mammogram within the last 2 years. **CLINICAL IMPLICATIONS:** Tribal and IHS clinics need to review how risk data are presented to women and how clinicians assess women's understanding of the information they receive. **FUNDING:** Great Lakes Inter-Tribal Council NARCH (NCI/NIGMS), Grant number 3X1219.

P1-69

Colorectal Cancer Screening Behaviors Among Korean Americans

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PURPOSE: Despite the effectiveness of colorectal cancer (CRC) screening, screening utilization is low and disparities in CRC screening prevalence exist in minority populations. Cancer is the second leading

cause of death among Korean Americans. The incidence of CRC has been rising in Korean Americans and studies have continuously reported the low rates of cancer screening in this group; however, there is little known about Korean Americans' CRC screening practices and factors that may predict screening among them. The purpose of this systematic review is to examine CRC screening behaviors among Korean Americans. **METHODS:** The Health Belief Model (HBM) was used as a guideline to identify factors. MEDLINE, CINAHL, and PsycInfo databases were searched to explore the cancer screening behaviors among Korean Americans from 2000 to 2010. The following keywords were used in different combinations: cancer screening, CRC screening, Korean Americans, and Health Belief Model. Thirty six studies were identified cancer screening for Korean Americans, and CRC screening studies were only 4 among them. One hundred seventy five cancer screening studies using HBM were identified and 3 studies for Korean Americans. **RESULTS:** The main findings of this review demonstrate that factors identified as influencing cancer screening behaviors among Korean Americans are: 1) cultural beliefs, 2) perception for the cancer screening, 3) fatalism, 4) knowledge deficit, 5) healthcare access, 6) health literacy, (7) gender differences, 8) physician's recommendation, and 9) acculturation. Most Korean American cancer screening studies focused on breast and cervical cancers; therefore, there is limited knowledge of screening behaviors, specifically CRC screening behaviors of Korean American men or the gender differences in screening behaviors between Korean American men and women. **CONCLUSIONS:** Barriers and factors that influenced cancer screening for Korean Americans were examined. This review paper identified knowledge gap for understudied Korean Americans' cancer health. **RESEARCH IMPLICATIONS:** This paper will provide a rationale for developing culturally tailored strategies to increase the rates of CRC screening and reduce cancer health disparities among Korean Americans. **CLINICAL IMPLICATIONS:** The potential impact of this paper is to enhance healthcare professionals' understanding of Korean Americans' cancer health behaviors and increase awareness of cancer health disparities in practice. **FUNDING:** None.

P1-70

Distinctive Manifestation of Depressive Disorders in African American Patients With Cancer

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PURPOSE: This study examines distinctive manifestations of depressive disorders experienced by African American (AA) cancer patients. **METH-**

ODS: 73 breast and prostate cancer survivors (33 men and 40 women) that had completed cancer treatment for six to 36 months were recruited as a convenience sample and interviewed face to face. Using the mixed methods design, the interviews were audiotaped, transcribed, coded and quantified. Triangulation analysis was conducted to compare 34 depressed AA with 16 depressed Caucasian and 23 non-depressed AA participants on self-reported distressing symptoms, using qualitative and quantitative data analysis. **RESULTS:** A wide range of distressing symptoms was reported. More of the depressed AA participants reported the following experiences than the depressed Caucasian and non-depressed AA participants: denial of depression (by 11–15%), loneliness (10–31%), isolation (19–46%), feeling frustrated (23–30%), irritable (10–45%), anger (11–15%), worried about cancer recurrence (22%), feeling depressed about sexual function (9–15%), and insomnia (28–48%). When recalling their experience during the time of cancer treatment, more of the depressed AA participants reported the following experiences than the depressed Caucasian and non-depressed AA participants: fear (by 17%), crying (15–36%), fatigue (27%), suicidal (20%), isolation (12–20%), self-pity (11–13%), worry about cancer recurrence (20%), and weight gain and loss (21–33%). **CONCLUSIONS:** Depressed AA participants reported elevated stressful experiences during the cancer treatment that appeared to be characteristics of depression and its affective domain. At the time of interview, their elevated, stressful experiences were clustered around three domains: anger/irritable; isolation/loneliness; and worries of cancer recurrence. Anger and irritability have been reported in the literature as a feature of depression in African Americans. These findings suggest that intrusive thoughts of cancer recurrence and a feeling of isolation are distinctive manifestations of depression in AA cancer patients. **RESEARCH IMPLICATIONS:** Further research is needed to unravel the nature and extent of the distinctive manifestation of depression in AA cancer patients; the accurate identification of depression in this underserved population would be a significant contribution. **CLINICAL IMPLICATIONS:** Clinicians need to be aware of distinctive manifestation of depression experienced by AA cancer patients. Improved and prompt detection are essential elements in quality treatment. **FUNDING:** The study was supported by National Institutes of Health / National Cancer Institute (R03 CA115191).

P1-71**Taking Healing of Cancer One Step Further — Integration of 'Healing Touch' Into a Cancer Center**

Crone T

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PURPOSE: How much impact does an abstract energy work like Healing Touch have on patients and their perception of healing from their disease? **METHODS:** From the first week of integrating the 18 freshly-trained Healing Touch practitioners into the Cancer Center, a ledger has been kept noting patients' complaint/pain level, practitioner's name, and response of patient as per their report to the Healing Touch experience. **RESULTS:** For the first 6 months I have compiled this information; the overall response shows improvement nearing 100% in pain and discomfort as reported by the patient before versus after the Healing Touch experience. **CONCLUSIONS:** The introduction of Healing Touch into our Complementary Medicine pool has been a positive experience for both patients and providers. **RESEARCH IMPLICATIONS:** There is an excellent venue for the exploration of the mind/body connection; it can be expanded upon with future research. **CLINICAL IMPLICATIONS:** Clinicians may find this a useful tool for stress reduction and pain control. **FUNDING:** The Christ Hospital.

P1-72**Self-Reported Use of Complementary and Alternative Medicine Therapies While Participating in a Reflexology Longitudinal Randomized Clinical Trial**

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PURPOSE: To assess the self-reported use of complementary and alternative medicine (CAM) therapies while participating in a reflexology randomized clinical trial (RCT) involving women with advanced breast cancer undergoing chemotherapy. The hypothesis of increased CAM use due to exposure to the reflexology trial was tested. **METHODS:** Data on the use of 25 common CAM therapies were obtained while conducting a three group RCT of reflexology ($N = 385$ randomized): reflexology, foot manipulation control, and standard care control. Telephone interviews were used at baseline, 5 weeks later (post-intervention), and week 11 to control for CAM use during the trial. The number of CAM therapies used at baseline, 5 weeks, and 11 weeks was analyzed using a linear mixed effects model. Analysis of variance was employed to compare CAM use

for those who were randomized into active arms versus standard care control, and those who dropped out of the study versus those who completed. **RESULTS:** No differences in CAM use over time were found overall, in active or control groups of the RCT, or among those who stayed in the study versus those who dropped out, with an average of 2–3 therapies used at each time point. Thus exposure to a CAM intervention had no effect on CAM use, and measuring patient use of CAM at later time points in addition to baseline in a RCT may not be necessary. Consistently across three time points, vitamin use (other than daily multivitamin) was the most prevalent CAM therapy (38%). Second most prevalent was spiritual healing (27.6%), next was music therapy (19.7%), special cancer diet (16.6%), massage (14.3%). **CONCLUSIONS:** Measuring CAM use at baseline may be sufficient to control for confounding in a RCT. Women who complete a CAM RCT are no different on CAM use from those who attrite, thus supporting feasibility of rigorous testing of CAM therapies via RCT design. **RESEARCH IMPLICATIONS:** Collection of data on CAM use at only one time in a longitudinal RCT will reduce respondent burden. **CLINICAL IMPLICATIONS:** Women with advanced breast cancer undergoing chemotherapy widely use CAM, and clinicians can rely on an initial assessment to be informed on their therapy use. **FUNDING:** NCI RO1 CA104883-01A1.

P1-73**Massage Provides Relief for Symptoms in Pediatric Hematopoietic Transplant Patients**Lown A^{1,2}, Dvorak C², Acree M², Dunn E², Abrahms D², Horn B², Degelman M², Cowan M², Mehling W²¹*Public Health Institute, Emeryville, California, United States*, ²*University of California, San Francisco, California, United States*

PURPOSE: Hematopoietic stem cell transplant (HSCT) can be a lifesaving treatment but children suffer considerable physical and psychological discomfort during their hospitalization. While advances in supportive care have been made, non-pharmacological means of symptom management need further exploration. Massage, borrowing from both Western and Eastern traditions, is a non-invasive modality to reduce symptom burden including pain, nausea, and anxiety. This pilot study tested the feasibility and efficacy of a massage intervention to decrease symptoms among children undergoing HSCT. **METHODS:** Over 11 months 23 children (age 5–18) and their parents were enrolled in a 2:1 randomized controlled trial of combined Swedish/acupressure massage versus usual care for children undergoing HSCT. Two experienced massage practitioners provided

20–30 minutes of semi-standardized massage three times/week and instructed parents on massage for their child. Data collection included patient and parent questionnaires, post-discharge phone interviews and clinical data. Overall symptom burden was assessed by summing symptoms related to nausea, mouth sores, fatigue, anxiety, restlessness and pain. **RESULTS:** Feasibility was established. We enrolled, consented and randomized 23 of 25 (92% response) eligible patients, collected 100% of survey data and 13 out of 15 parents in the intervention group learned and performed massage on their child. Children in the massage group had less self-reported overall symptoms (2.4 vs. 2.7 symptoms on a 0–4 scale during the 3 weeks after HSCT, $p = 0.27$) compared to controls. According to nurses' daily reports, children receiving massage had less days with severe symptoms (8 vs. 12.1 $p = 0.06$). The intervention group had lower self-reported pain (1.1 vs. 1.8 on 0–4 scale, $p = 0.15$), fewer vomiting episodes (8 vs. 14, $p = 0.16$), and less child reported nausea (1.8 vs. 2.6 on a 0–4 scale, $p = 0.14$) compared to the control group. Children in the massage group had significantly fewer days with mucositis compared to children in the control group (10.6 days vs. 19.4 days; $p = 0.04$). **CONCLUSIONS:** Use of practitioner and parent-provided massage in a HSCT setting is both feasible and potentially efficacious. Children receiving massage reported trends for improved symptom control compared to controls. **RESEARCH IMPLICATIONS:** Future work should include larger numbers to confirm the trends seen in this pilot trial. **CLINICAL IMPLICATIONS:** Massage may help reduce symptoms in pediatric HSCT recipients. **FUNDING:** Sonoma County Foundation, Santa Rosa, CA.

P1-74

Adaptation Status and Response to a Booklet Providing Cancer-Related Knowledge to Postoperative Cancer Patients

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PURPOSE: The aim of this study was to assess the responses of postsurgical cancer patients to a booklet developed to help them understand their cancer experience. Furthermore, this study assessed the relationship between reading the booklet and the impact of cancer and the patients' adaptation status. **METHODS:** We distributed the booklet and questionnaires to 120 postoperative cancer patients at the time of discharge from the hospital. The questionnaires asked about the patients'

responses to the booklet and anxiety, fatigue, demands related to illness (demands), attributional questions, quality of life (QOL), and resilience as indices of the impact of cancer and the patients' adaptation status. A total of 69 questionnaires were returned anonymously by mail within 1 week and were statistically analyzed. **RESULTS:** The average age of the respondents was 63.1 (SD = 11.5) years. Eight patients had not read the booklet. Of those who read the booklet, 25 patients agreed with: "I understood the content", 27 agreed with: "The content definitely reflected my experience," and 6 agreed with: "The content gave me the will to face my own illness-related problems." Fatigue and attributional questions were significantly higher among patients who had not read the booklet compared to those who had. Based on the three reactions to the booklet, a significant difference was also observed among the groups for the value of resilience; however, almost no difference was observed for QOL or demands. On multiple regression analysis, presence of anxiety, fatigue, resilience, and attributional questions were indicators of QOL, and QOL was an indicator of demands. **CONCLUSIONS:** Fatigue and attributional questions for patients who had not read the booklet were significantly higher than those who had read it. The factor related to a significant difference among types of reactions to the booklet was resilience. QOL and demands were not related to differences between the groups. **RESEARCH IMPLICATIONS:** The present study was cross-sectional. A longitudinal study design is necessary to elucidate the relationship between the use of the booklet and patients' adaptation status. **CLINICAL IMPLICATIONS:** Patients who did not experience fatigue or have many attributional questions, in general, found the booklet helpful. **FUNDING:** Grant-in-Aid for Scientific Research (B) from the JSPS.

P1-75

The Whole Cancer Patient: Addressing the Legal Concerns Surrounding Cancer Diagnoses

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PURPOSE: The cancer community and healthcare professionals have focused on the need to provide cancer care for the whole patient. This means that care should focus not just on medical needs, but also on other needs such as psychological and social concerns of an individual, including legal concerns. The Cancer Legal Resource Center addresses this by providing free information and resources on cancer-related legal issues to people with cancer, healthcare professionals, and others coping with cancer. **METHODS:** In 2009, we surveyed 102 healthcare professionals about the legal

issues facing their patients. The survey collected information about the demographics of the patients and the types of legal issues they faced. In addition to the survey, we analyzed data from the 4,075 calls that we received to our Telephone Assistance Line (TAL) in 2009. **RESULTS:** In the survey, the five most common legal questions the professionals received were about financial assistance, treatment assistance, getting and keeping health insurance, health insurance provider issues, and disability insurance. These common areas closely mirror the calls that we received through our TAL. In 2009, employment was the top issue area, followed by the same top five issues that the healthcare professionals mentioned. This poster includes graphs depicting the major legal issue areas and the frequency that both professionals and the CLRC were asked about them. The vast majority of healthcare professionals (93.9%) felt that both an individual's socio-economic status and his or her insurance status created disparities in treatment once there was a diagnosis of cancer. These professionals also felt, on average, that better information, on 16 out of 19 issue areas we asked about, would contribute to fewer disparities in care after a diagnosis. **CONCLUSIONS:** To successfully care for the whole cancer patient, there is a need to provide legal information and education for patients, caregivers, and healthcare professionals. Furthermore, access to this information may help to decrease disparities arising from socio-economic and insurance status. **RESEARCH IMPLICATIONS:** Further research is needed on the quality of life and survivorship impact of providing legal services to cancer patients. **CLINICAL IMPLICATIONS:** Teaching healthcare professionals to identify cancer-related legal issues in clinical settings may improve survivorship outcomes. **FUNDING:** None.

P1-76

Art Therapy: A Cancer Care in the Waiting Room

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PURPOSE: The following study has the aim to present a differentiated way of carrying out a psychological intervention with patients and followers at the waiting room of an Oncology ambulatory care center. Through Art-therapy of phenomenological fundamentals and expressive artistic materials, provides that the patient uses another form of expression of feelings, it attempts to provide a moment of re-signification, while through the artistic production allows, bringing together author and art, as one. **METHODS:** This project took place at the waiting room of Dr. Mario Gatti Municipal Hospital Oncology ambulatory care unit, in Campinas-SP, Brazil.

Despite being held in the waiting room, everyone present at the hospital could participate. With materials placed on a table (color paintings, canvas, paper, color pens, clay, scrap iron), patients and their followers could use the materials that they wished to produce artistic expressions, without esthetic pre-judgments or directions about what or how to do. Oral interventions were made along with the conversations arisen during the process, correlating them with what was being produced, attempting the self-recognition of each participant in their production as well as the appropriation of the senses present in them. **RESULTS:** This project was carried out for 3 months on a weekly basis, reaching an average of 10 participants per session. According to the participants, the recourses used provided moments of reflection, well-being, integration and possibilities to rescue values and feelings. The use of Art therapy and expressive plastic materials allowed a new way of exploring subjective contents unreachable at first. The activities allowed the participants to recognize themselves in their productions, favoring the unveiling of their self-essence. **CONCLUSIONS:** The use of art-therapy as a tool used in psychological care for oncology patients as well as to their followers allowed a new way of accessing emotional contents that often are not reachable in traditional frames of psychological work. Once the material is given to the participant art, this may unintentionally conduct a production that brings content and meaning related to their life experience, feelings, frustrations, desires, among others, therefore facilitating the elaboration of possible existential conflicts. **RESEARCH IMPLICATIONS:** A full attention to patients with cancer involves caring also for their followers and the difficulties encountered when facing the sickness and its treatments, demanding new means of intervention that are not limited to the psychological assistance in traditional frames. We hope that this project may subside new studies and researches involving the use of art-therapy in the waiting room, attempting to broaden the perspectives of this practice. **CLINICAL IMPLICATIONS:** We believe that the use of Art-therapy as a psychotherapeutic assistance in the waiting room may extend to its participants an improvement in their psychological and existential condition, with the certainty that the production of an artistic work will enable a better self-knowledge and perception of feelings, fears, anguishes, joys, dreams, while opening new possibilities of personal significations. **FUNDING:** None.

P1-77**Designing for Healthcare: How the Power of the Story Guides Design**

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PURPOSE: Architects and designers consider many variables in designing healthcare environments for people living with serious illness throughout the lifespan, the most basic of which include patient safety, comfort, and infection control, but which should also encompass broader notions of healing, well-being, support, and quality-of-life. Multiple methods for achieving good design exist, among which are: sustainability, evidence based design, healthy buildings, patient and family-centered design, and access to nature. This presentation focuses on one case study that begins with a visioning event as a means of gathering ideas to create a story to foster consensus from early design through project completion. **METHODS:** Well-documented methods exist for determining programmatic requirements and developing buy-in for functional solutions in architecture. Achieving consensus on aesthetics and architectural vision for projects can be challenging. Since design features are mostly subjective, the journey can be difficult without an appropriate process. In children's healthcare environments, an imaginative design capable of delighting and distracting young patients is a top priority. The Power of the Story is about a collaborative process resulting in a layered design vision capable of engaging diverse interests, promoting understanding of the overall design intent, inviting philanthropic support, and extending design participation and ownership of all project constituents, including staff, physicians, patients and families, and the larger community. The story imparts meaning to design and promote enthusiasm. **RESULTS:** Each team member has a clear understanding of the process of Story development, which enables many different people with diverse roles, to tell the Story. The hospital community and the public engage on many levels, allowing all ages and cultures to relate to and interact with the design. **CONCLUSIONS:** The Story creates a basis by which design decisions can be measured. The design team should be skilled at controlling design expectations and communicating design limitations while maintaining enthusiasm among the extended project team. **RESEARCH IMPLICATIONS:** Visioning success can continually be tracked for success in long term maintenance and sustainability of projects. This knowledge should be shared through professional conferences and the research literature. **CLINICAL IMPLICATIONS:** Clinicians' participation in visioning is a key part of

successful design solutions, to attune designers to specific health and psychosocial needs of patients, families, and staff. **FUNDING:** None.

P2-1**Pre and Post Diagnosis Parenting Style Shifts in Parents of Adolescent Cancer Patients**

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PURPOSE: To examine changes in parenting style that may occur following an adolescent child's diagnosis of cancer. **METHODS:** This study used a mixed methods design to assess pre- and post-cancer diagnosis parenting style. Parents of pediatric cancer patients were recruited from a pediatric oncology clinic where their child was undergoing cancer treatment. Parents (21 mothers, 3 fathers) were surveyed regarding their current and past parenting style using an 81-item true/false parenting style questionnaire which measures levels of parental awareness and coaching (Gottman, 1997). Additionally, parents also completed a series of qualitative questions about their reaction to their child's different emotions (anger, sadness etc.) before and after their child's cancer diagnosis. Both the quantitative and qualitative information was used to categorize participants into four parenting types: dismissing, disapproving, laissez-faire and emotion-coaching (Gottman, 2006). Each style correlates with the level of the parent's awareness and tolerance of their children's emotions. Parents show a low level of awareness and tolerance of their children's emotions in dismissing and disapproving parenting styles, but higher levels in emotion-coaching and laissez-faire parenting styles. **RESULTS:** Prior to their child's diagnosis of cancer, parents were found to utilize the following parenting style: 46% were dismissing, 42% used emotion-coaching and 3% were disapproving. None of the parents utilized a laissez-faire parenting style prior to their child's diagnosis of cancer. Interestingly, 30% of parents' reported utilizing a laissez-faire parenting style following their child's cancer diagnosis. **CONCLUSIONS:** Although more parents responded to the pre-diagnosis survey questions with either dismissing or emotion-coaching styles, there was a shift in a proportion of the participant's parenting style following their child's diagnosis with cancer to a laissez-faire parenting style. Laissez-faire parenting involves an increase in an awareness and tolerance of emotion, but a decrease in the amount of direction parents provide their children regarding acceptable emotional expression and behavior. These findings indicate that a subset of parents became more aware of their children's emotions after their children were diagnosed with cancer. It also

indicates higher levels of tolerance for negative emotions in their children while their children are going through treatment for cancer. However, this subset of parents may have felt uncomfortable placing boundaries on emotional expression or behavior following their child's cancer diagnosis. **RESEARCH IMPLICATIONS:** The findings from this pilot support suggest that many parents of pediatric cancer patients experience a shift in parenting style which may impact the child's physical, emotional and social well-being. There is a need for additional research examining social interactions in the families of pediatric cancer patients. **CLINICAL IMPLICATIONS:** It is hypothesized that parents who are more aware and more tolerant of their child's negative emotions during cancer treatment may be better prepared to help their child work through these emotions as they arise. This may contribute to better overall adjustment during the cancer treatment process. **FUNDING:** None.

P2-2

Social Support During Pediatric Cancer Treatment Procedures

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PURPOSE: Childhood cancer is one of modern medicine's greatest success stories, with children surviving the disease at unprecedented rates. While treatment is often successful at eradicating the disease, diagnosis and on-going treatment of pediatric cancer continue to be major stressors for children and their parents. One potential way to buffer the distress of childhood cancer is through the provision of social support. Abundant evidence exists pointing to the benefits of social support in alleviating stress, facilitating coping, and enhancing health and medical outcomes. In this study we identified social support behaviors for parents, children and medical staff during clinical interactions, in which the child undergoes a medical procedure (lumbar puncture, bone marrow aspiration, port access, etc.). We examined videotapes of pediatric cancer treatments to identify social support behavior of parents and staff. **METHODS:** Participants were 30 children receiving cancer-related medical procedures, their adult caregivers and medical staff administering the procedures. Participants were video-recorded. The behaviors of the participants were coded into various social support categories by trained judges. **RESULTS:** Initial results indicate that caregivers and staff engage in a variety of verbal and nonverbal social support behaviors before and during painful and distressing procedures.

Verbal social support consisted of encouragement, expressions of empathy, and providing resources, information or assistance. Nonverbal social support consisted of the use of touch and maintaining a close proximal distance. These behaviors appear to support both the children and their parents during cancer-related medical procedures. That is, staff behaviors provide support to both the parent and child; parents provide support to their children. **CONCLUSIONS:** These behaviors appear to support both the children and their parents during cancer-related medical procedures. That is, staff behaviors provide support to both the parent and child; parents provide support to their children. The broader impact of this study lies in benefits for children and parents undergoing treatments for cancer, and other chronic diseases. **RESEARCH IMPLICATIONS:** Results may inform further research into other aspects of childhood cancer treatment that are distressing for parents and children. **CLINICAL IMPLICATIONS:** Results may determine what behaviors help children and their parents cope with treatment procedures, reduce treatment-related distress and increase child cooperation during procedures. Results could inform interventions to assist families in which the children are subjected to frequent and distressing medical procedures. **FUNDING:** This study is part of a larger National Cancer Institute Funded study "Resources, Parent-Child Communication and Adjustment to Pediatric Cancer" (NCI, R01 CA138981, Penner: PI).

P2-3

Investigating Adaptation Problems in Long-Term Pediatric Leukemia Patients: Using Longitudinal Design Study to Predict Individual Outcomes

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PURPOSE: Understand adaptation problems trajectories in cancer pediatric patients from diagnosis to 4 years later, and identify risk factors. **METHODS:** Acute lymphoblastic leukemia (ALL) pediatric patients ($n = 138$) were diagnosed between 1993 and 1999. Mother fulfilled the Child Behavior Checklist (CBCL) questionnaire (5 times) to obtain an adaptation problems measure for their child. Mothers' perceived stress level was evaluated at diagnosis and 3 months later using the Familial Well-Being Assessment (FWA) instrument. Data analysis was done through multilevel analyses. **RESULTS:** Percentage of patients suffering from adaptation problems is higher than norm at diagnosis and 4 years later. Difference in problems prevalence is highest between norm and patients for internalized problems, at diagnosis (16% vs. 42%; $p < 0.001$).

Internalized and externalized problems average trajectories show distinct patterns and associated predictive factors. Internalized problems are highly prevalent at diagnosis, but decrease markedly during the following 4 years ($p < 0.001$), suggesting important while transient problems. Hospitalization duration and diagnosis (standard- or high relapse risk) modulate the normalization rate ($p < 0.001$). Externalized problems are more stable in time in average, but treatment protocol differences significantly alter this apparent stability ($p < 0.01$). Mothers' perceived familial stress at diagnosis is positively correlated with patient's initial level of externalized problems ($p < 0.01$), while 3 months later the correlation is with internalized problems initial level ($p < 0.001$). **CONCLUSIONS:** These findings indicate the need to assess internalized and externalized problems separately in this population. They support an association between stress-related factors and internalized problems, and between pharmacological variables and externalized problems. **RESEARCH IMPLICATIONS:** Longitudinal studies uniquely allow change processes and the impact of risk factors understanding on individual trajectories; such knowledge is critical in the field of psycho-oncology. **CLINICAL IMPLICATIONS:** Distinct, targeted interventions should be developed and evaluated for highly distress mothers and patients presenting elevated internalized adaptation problems in the first year of treatments. Further studies investigating the impact of different corticosteroids on externalized problems in this population are also required. **FUNDING:** SM: Foundation des Étoiles/Hôpital Ste-Justine, and Banting-Best CIHR doctoral studentships.

P2-4

Neurocognitive Late Effects: The Need for Greater Outreach to the Schools

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PURPOSE: Research has identified changes or "late effects" which occur after treatment for cancer, which may increase school-related difficulties. Specifically, 50% to 60% of childhood cancer survivors are at risk for neurocognitive impairment. Little research, however, has focused on school personnel's training and expertise in dealing with neurocognitive late effects (NCLE). **METHODS:** An anonymous survey of members of the National Association of School Psychologists was conducted, focusing on issues related to their knowledge, training, and experience in dealing with NCLE. The response rate was 25% ($N = 73$), spanning 27 states. Respondents were mostly female (80.8%), Caucasian (90.4%), and working in a suburban setting (35.6%). **RESULTS:** In gen-

eral, school psychologists reported having very low levels of knowledge of NCLE. In particular, 38.4% reported feeling "not at all" knowledgeable about cognitive issues related to leukemia. They also reported having very limited formal training about NCLE, with most of the school psychologists (50.7%) saying they have had no formal training related to NCLE of leukemia and 19.2% having no training related to NCLE of brain tumors. The Internet was rated as being the most frequently used source of information about NCLE, whereas physicians and nurses in medical centers were rated as being the least often used. Information gained from the Internet was rated to be more easily accessed, generally more helpful, and equally as reliable as information gained from physicians and nurses. Despite having worked on average 14.1 years in the field, most reported never having worked with a childhood cancer survivor throughout their career (Leukemia: 57.5%; Brain tumor 50.7%). **CONCLUSIONS:** This preliminary survey highlights the need for greater understanding about the needs of school practitioners related to NCLE and the importance of strengthening the relationship between medical centers and schools to provide long-term follow-up care for childhood cancer survivors. **RESEARCH IMPLICATIONS:** Future research should focus on the efficacy of different outreach programs, including guided workshops or web-based learning, to increase school psychologists' knowledge of and awareness of NCLE. **CLINICAL IMPLICATIONS:** For clinicians working with survivors of pediatric cancer, it is important to reach out to school personnel, providing guidance and education about the likely impact of NCLE in the school setting. **FUNDING:** None.

P2-5

Hope's Potential in Promoting Psychological Adjustment and Quality of Life in a Pediatric Cancer Population

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PURPOSE: To investigate the relationship between hope and co-morbidities of depression, anxiety and quality of life (QoL) in pediatric cancer patients. Hope, defined as goal-directed thinking involving the identification of multiples routes to a goal as well as motivation to pursue these routes, may be a promising target for intervention to promote adjustment in children with cancer. **METHODS:** Newly diagnosed cancer patients (8–17 years of age, 37% Hispanic, 9% Black) were enrolled onto a continuing prospective observational study examining the prevalence of depression and anxiety at diagnosis and 3 month intervals for 1 year. 35

families thus far have completed Snyder's Hope Scales (child and adult), Children's Depression Inventory, State-Trait Anxiety Inventory, and Pediatric QoL Cancer Module (parent and child) at diagnosis. **RESULTS:** Preliminary results indicate that at diagnosis, there were no differences in parent or child hope ratings by gender, ethnicity, insurance status, or oncologic diagnosis; hope was positively correlated with age ($r = 0.572$, $p < 0.01$). Average item ratings for children administered the Children's Hope Scale was 4.2, which corresponds to feeling hopeful "a lot of the time" and is consistent with validation samples. At diagnosis, higher child hope correlated with lower depressive symptoms (subscales of Total ($r = -0.472$, $p < 0.01$), Ineffectiveness ($r = -0.639$, $p < 0.01$), and Anhedonia ($r = -0.509$, $p < 0.01$)). Higher hope was also associated with lower state ($r = -0.496$, $p < 0.01$) and trait anxiety ($r = -0.604$, $p < 0.01$), and higher self-rated ($r = 0.595$, $p < 0.01$) and parent-rated QoL ($r = 0.365$, $p < 0.05$). Higher initial parent hope was also associated with higher parent ratings of their child's QoL ($r = 0.397$, $p < 0.05$). **CONCLUSIONS:** Preliminary results suggest an association between hope and psychological adjustment at diagnosis. Screening may identify those who would benefit from interventions focused on hope to promote adjustment. **RESEARCH IMPLICATIONS:** In order to examine hope as a predictor of long-term adjustment, further assessment of the impact of hope on coping with pediatric cancer over the long-term with larger samples is warranted. **CLINICAL IMPLICATIONS:** If hope is predictive of adjustment, the development of a brief hope intervention (including problem-solving, motivational interviewing, and narratives) would be useful to translate research findings into evidence-based practice. **FUNDING:** Children's Medical Center Foundation.

P2-6

Evaluating the Family Burden of the Cognitive Late Effects of a Childhood Cancer Diagnosis

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PURPOSE: To examine the differential impact on families of neurocognitive late effects (NCLE). **METHODS:** Parents of children treated for cancer completed surveys related to demographic, school, and family environment. Family burden, defined as increased time, effort, and emotional resources devoted to a particular issue, was assessed by the Family Impact of Late Effects. **RESULTS:** A total of 48 parents participated. They were, on average, 41.6 years old (SD = 6.6), primarily female

(93.8%), and well-educated. Their children were, on average, 10.8 years old (SD = 3.5) and 5.9 years (SD = 2.5) from diagnosis. The majority of participants had a child who had been treated for a cancer with risks for NCLE (high risk: brain tumor, 14.6%; lymphoblastic leukemia/lymphoma, 60.4%; "low risk:" Wilm's, 8.3%, osteosarcoma, 6.3%; other, 10.4%). There was a high percentage of children receiving special education services (44% in the high risk, 25% in the low risk group). Children treated for a brain tumor received more special education services than children treated for other cancers, but the high and low risk groups did not significantly differ in the child's reported academic functioning or the reported level of family burden related to school issues. Using stepwise linear regression to examine the impact of disease, treatment, and demographic variables, lower academic skills were related to increased time since diagnosis ($F[1.19] = 7.01$, $p = 0.02$; $\beta = -0.52$). The perceived family burden related to school issues was associated with the intensity of special education services ($F[2.18] = 5.8$, $p = 0.01$; $\beta = 0.45$) and lower parental education level [$\beta = -0.39$]. **CONCLUSIONS:** There are high rates of special education for childhood cancer survivors and academic difficulties are a significant stress for families. Families of children requiring multiple services, as well as parents with lower educational levels, experience a greater impact from academic difficulties. **RESEARCH IMPLICATIONS:** Further exploration of contributors to family burden, the progression of NCLE, and the high rate of special education services in the "low risk" group is important. **CLINICAL IMPLICATIONS:** Academic difficulties are a significant source of stress for families and they may be common for childhood cancer survivors, even if they have not received CNS directed therapies. **FUNDING:** Institutional.

P2-7

Knowledge and Perceptions of Breast Cancer Risk in Adolescent Girls at High Risk and Population Risk for Breast Cancer

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PURPOSE: Little is known about how adolescents from hereditary breast cancer families understand and respond to hereditary risk.

METHODS: 11-19 YO girls at high risk (HR) or population risk (PR) for breast cancer completed semi-structured interviews evaluating knowledge and perceptions of BC risk and health behaviors. **RESULTS:** The mean age of girls ($n = 50$) was 15.2 (SD2.1). 18 PR and 32 HR girls participated. 22% had a mother with BC; 6 had BRCA1/2 mutation in their family. Participants most frequently reported genetic predisposition/family history (70%) as the reason women develop BC. 58% of girls reported self-perceived risk for adult BC to be higher than their peers (81% of HR girls v. 17% of PR girls). 60% of girls felt that breast cancer could occur in their family <40YO; 18% reported that BC could occur <18 YO. 69% of girls reported that there are things women (67% HR v. 72% PR) and girls their age (60% HR v. 83% PR) can do to prevent BC. Girls reported learning of BC from their mother ($n = 45$), media ($n = 30$), school ($n = 26$), other family ($n = 24$), health care professionals ($n = 23$), internet ($n = 17$), breast cancer awareness activities ($n = 11$) and friends ($n = 10$). Girls reported hearing about risks for BC from their mother ($n = 37$), school ($n = 14$), media ($n = 9$), and the internet ($n = 7$). **CONCLUSIONS:** Many HR girls, and some PR girls, perceive themselves to be at increased risk for adult BC and believe that breast cancer can occur in their family <40YO. Most girls believe there are things that women and girls can do to prevent breast cancer and mothers are a primary source of information regarding BC and risks for BC. **RESEARCH IMPLICATIONS:** Further research evaluating knowledge and perceptions of BC risk throughout adolescent development and their impact on psychosocial adaptation and performance of health behaviors could inform strategies to optimize adolescent psychosocial responses to hereditary cancer risk and promote preventive health behaviors. **CLINICAL IMPLICATIONS:** These findings suggest that provider facilitation of open and accurate communication about BC between mothers and daughters in HR families might promote healthy adaptation and adoption of preventive health behaviors in adolescent girls. **FUNDING:** None.

P2-8

Physical Activity and Quality of Life in Long-Term Lung Cancer Survivors

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PURPOSE: Not only is lung cancer the leading cause of cancer mortality in the US today, lung cancer survivors also report overwhelmingly lower

quality of life (QOL) than survivors of other cancer types. The American College of Sports Medicine recently reported that physical activity may improve physical functioning, decrease physical fatigue, and improve QOL in cancer patients, both during and after treatment. Despite the potentially positive impact of physical activity, very few studies have explored associations between exercise and QOL in long term lung cancer survivors. The current study examined the relationship between motivational readiness for physical activity and QOL in a large sample of lung cancer survivors ($N = 1937$). **METHODS:** Of the sample, 714 were short term (<3 years from diagnosis), 426 were midterm (3–5 years from diagnosis), and 797 were long term (>5 years since diagnosis) lung cancer survivors. Participants were 92 % Caucasian, 51 % male, 79 % married and average age at diagnosis was 65 years old. Diagnoses were small cell lung cancer (6 %), and non-small cell lung cancer stage I (49 %), II (9%), III (24 %), or stage IV (15 %). Survey measures for this dataset were completed an average of 2.7 (SD 2.4) years after lung cancer diagnosis and included the stage of change for physical activity, and QOL (SF-8) and symptom control scales (LCSS). **RESULTS:** Of the participants, 41 % reported currently engaging in regular physical activity (30 minutes or more per day, at least 5 days per week). Compared with less active long term lung cancer survivors, those engaging in regular physical activity reported significantly better mental, physical, emotional, social, spiritual, and over all QOL (all $ps < 0.001$), and also reported better symptom control related to pain, fatigue, dry cough, cough with phlegm, and shortness of breath (all $p's < 0.0001$). **CONCLUSIONS:** These findings suggest that physical activity may have significant QOL and physical health benefits for lung cancer survivors, and research exploring interventions designed to improve the activity level of long term lung cancer survivors is warranted. **RESEARCH IMPLICATIONS:** This is one of the first studies to show how physical activity may impact QOL in long term lung cancer survivors. **CLINICAL IMPLICATIONS:** Interventions aiming to improve physical activity in lung cancer survivors may be of essence. **FUNDING:** None.

P2-9

Conceptualizing Hope in the Presence of Terminal Illness

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PURPOSE: Hope is associated with increased psychological and physical well-being. Likewise, researchers have found that hope is negatively associated with depression. Conversely, hope has

been associated with adaptive coping in the elderly and a positive appraisal of stressful events. Despite the apparent value in hope, definitions of hope have remained inconsistent across disciplines and few theories have been able to account for the changes in hope over the trajectory of illness for patients receiving hospice care. Little research utilizes Snyder's hope theory in understanding the concept of hope within terminally ill hospice population. The study sought to begin to expand hope theory to the terminally ill hospice population. The study offered an understanding of how individuals conceptualize hope and how the content of hope changes within the terminally ill hospice population. **METHODS:** The study used a basic interpretive qualitative design to explore how hope changes throughout illness. The convenience sample ($N = 5$) was drawn from patients receiving community hospice care facility. Through constant comparative analysis, semi-structured interviews were analyzed and categorized into patterns and properties which lead to five themes. **RESULTS:** Five broad themes emerged from the data: hope for the dying process, hopes for day-to-day life, family-related hopes, hopes regarding spirituality, and hope of leaving a legacy. **CONCLUSIONS:** Through gaining an understanding of how terminally ill hospice patients conceptualize hope, mental health providers can explore hope content areas in assessments and develop ways in which to assist patients in continuing to foster hope throughout the dying process. Furthermore, the data in the present study reflect a consistency with Snyder's basic tenets of hope theory, which include a cyclical relationship between goals, pathway thinking, and agency thinking. **RESEARCH IMPLICATIONS:** The themes that emerged from this data help to inform researchers and clinicians alike of the direct that hope research can continue in. Give the importance of fostering hope on psychological well-being, further research is needed to develop and assess hope-fostering interventions. Likewise, further research should examine the break-down of the basic tenants of Hope theory (pathway and agency thinking) to develop targeted interventions to strengthen the cycle of hope. **CLINICAL IMPLICATIONS:** The data collected offer insight into the role of clinicians in fostering hope within the terminally ill hospice patients. The data suggest three potentially important interventions for mental health professionals: assessing hope content areas, developing problem-solving strategies to support goal achievement, and facilitating communication **FUNDING:** None.

P2-10

Gynecologic and Breast Cancer Peer Mentors: Interpreting Program Impact

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PURPOSE: Introduction: The purpose of this study was to evaluate the existing Peer Mentor (PM) Cancer Survivors Programs at an urban Southern California Cancer Institute. An evaluation of the existing program provided evidence as to the effectiveness of this program and the impact on quality of life. Objectives: 1. Examine differences between gynecologic (GC) and breast cancer (BC) experiences of PMs, 2. Examine and identify themes to be used for the development of surveys, 3. Analyze surveys to evaluate the effectiveness of the peer mentor program. **METHODS:** Qualitative methodology used in the first phase utilized two semi-structured focus group interviews; GC ($n = 4$) and BC ($n = 10$). Thematic Analysis was used to clarify key phrases and recurrent themes. Constant comparison of the incoming data provided themes which were used to develop an eight question, on-line survey (second phase) that will be instrumental in eliciting data that will be reflective of mentors' experiences. 100 surveys have been sent out to the rest of the PM groups ($n = 100$). **RESULTS:** Thematic analysis revealed 15 themes and four major categories. The major categories were consistent between groups, however themes differed in relation to; reoccurrence, experience of being a mentor, perceived availability of resources. **CONCLUSIONS:** Differences in perceptions between the groups may be explained by the nature of gynecologic cancer disease process. There is a high rate of recurrence especially with ovarian and less availability of dedicated resources for GC in comparison to BC. As a result of the differences two survey instruments were developed and sent to the remaining PMs from the group. **RESEARCH IMPLICATIONS:** Noted difference in between gynecologic and breast cancer survivors with regard to reoccurrence and the availability of resources that directly address their needs. Further research needs to be conducted to determine how best to serve the gynecologic cancer community. **CLINICAL IMPLICATIONS:** Program development to address the unique needs of breast and gynecologic cancer patients, survivors and their families. **FUNDING:** None.

P2-11**Gynecologic and Breast Cancer Peer Mentors: Curriculum, Training and Participant Satisfaction**

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PURPOSE: Gynecologic cancers affect approximately 1 in 20 and lifetime risk of developing breast cancer is 1 in 8. Nearly ten percent of the cancers diagnosed and treated at our facility are gynecologic cancer and breast cancer continues to be the leading type of cancer diagnosed at our facility. To address significant support needs, curricula were designed for peer mentoring programs for women with breast or gynecologic cancer. **METHODS:** Curricula were developed to educate survivors of gynecologic and breast cancers to be peer mentors and create a network of volunteers to assist others either over the phone or in person. Designed as a 6 module course the methods of instruction including; didactic lecture, multimedia presentations, group discussion, self-study, experiential learning and role play. A pre and post-test is used to evaluate participant knowledge gains, satisfaction and readiness to be a peer mentor. Curricula theoretical foundations blend the recognition of the realities of a cancer diagnosis with the concepts of survivorship. This provides the mentors an opportunity to learn and confront the psychosocial aspects of the disease process. Coping mechanisms and tools to address the psychosocial aspects are facilitated. **RESULTS:** Developed curriculum includes: Lectures with PowerPoint slides, Audiocasts and webcasts, Guest Speakers – content experts, Role Play, Discussion groups, Formative and summative evaluation tools. Comparison of pretest and posttest data measured the knowledge gain of the participants. The pretest mean for knowledge assessment was 3.85 (on a five-point Likert scale) and the posttest following the completion of the mentor training curriculum mean was 4.6. **CONCLUSIONS:** A need for psychosocial oncology support extending beyond the traditional support group for gynecologic and breast cancer patients was identified. To address this need and a growing population of survivors, two peer mentor programs were designed to train breast and gynecologic cancer survivors for their role of one-on-one support offered over the phone to newly diagnosed patients. Women trained as peer mentors are committed volunteers who are prepared to assist women through active peer support, compassionate understanding, information support, and guidance. **RESEARCH IMPLICATIONS:** Other avenues of patient support outside of the mainstream support group concept have value to provide care for the whole patient. **CLINICAL IMPLICATIONS:** Development of disease specific peer counseling or mentor programs have a

value to support the psychosocial needs of patients, survivors and their families. **FUNDING:** None.

P2-12**Quality of Life and Sleep Quality of Long-Term Survivors of Cytoreductive Surgery Plus Hyperthermic Intraperitoneal Chemotherapy**Duckworth K¹, McQuellon R¹, Russell G¹, Levine E¹, Shen P¹, Stewart J¹, Cromer M¹, Cashwell C²¹*Wake Forest University Baptist Medical Center, Winston-Salem, North Carolina, United States,*²*The University of North Carolina at Greensboro, Greensboro, North Carolina, United States*

PURPOSE: Health related quality of life (HRQOL) and sleep quality were examined in survivors following Cytoreductive Surgery Plus Hyperthermic Intraperitoneal Chemotherapy (CS+HIPEC), an extreme treatment offered to select candidates with metastatic disease. **METHODS:** Individuals who received CS+HIPEC 12+ months post treatment were evaluated for this cross-sectional study. Questionnaires mailed to participants included the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36), Pittsburgh Sleep Quality Index (PSQI), and sociodemographic items. **RESULTS:** A total of 649 individuals received CS+HIPEC 12+ months prior to the study; 425 were deceased. Of 224 eligible survivors, 102 [53% female, 70% Caucasian, mean age 58.5 (SD 12.6), mean years post-procedure: 4.2 (SD 3.5; range 1.1–16.5), resection status: R0/1 (62%), R2a (27%), R2b (10%), and R2c (1%); primary disease sites: appendix (62%), colon (14%), mesothelioma (6%), ovary (6%), and other (12%)] participated. Mean HRQOL (SF-36) Physical Functioning (46.0; $p < 0.001$), Role Physical (46.6; $p = 0.005$) and Physical Component scores (PCS; 46.7; $p = 0.003$) were significantly lower than general population norms. Bodily Pain (52.2; $p = 0.037$), Mental Health (53.6; $p < 0.001$), and Mental Component scores (MCS; 53.6; $p < 0.001$) were significantly higher. Utilizing a standard cutoff, 56% reported poor sleep quality (mean: 6.8; range 0.0–19.6). Sleep quality was related to physical (0.514; $p < 0.001$) and mental (0.43; $p < 0.001$) HRQOL, with numerous components of sleep moderately related to facets of HRQOL (e.g. sleep disturbances and bodily pain: 0.539; $p < 0.001$). **CONCLUSIONS:** Relative to population norms, long-term HRQOL deficits in physical and role functioning remain, yet mental health scores are higher. Sleep quality impairments exist in a large percentage of recipients. **RESEARCH IMPLICATIONS:** The mixed HRQOL picture with impaired physical functioning, yet improved mental functioning relative to norms may represent an attitudinal shift of participants following the extreme demands of

CS+HIPEC. Given the extent of sleep disturbance, future researchers should examine the nature of sleep impairments over time and their relationship to physical and mental functioning. **CLINICAL IMPLICATIONS:** Given the persistence of long-term physical deficits in HRQOL and sleep quality, treatment preparation programs may be of utility in order to help patients know what to expect during post-treatment survivorship. Sleep quality interventions may improve HRQOL. **FUNDING:** Kulynych Family Foundation; Claude Higginbotham Memorial Fund for the CPSP.

P2-13

Identifying Gaps in Quality of Life Measurement for Young Adult Survivors of Childhood Cancer

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PURPOSE: The occurrence of late effects, combined with young adult's growth and developmental issues, can significantly impact health-related quality of life (HRQOL) of young adult survivors of childhood cancer (YASCC). However, limited HRQOL measures have been specifically developed and/or evaluated for the YASCC population. The purpose of this study was to identify domains of HRQOL unique to YASCC by conducting a systematic review of qualitative studies focused on cancer survivorship issues of YASCC. Additionally, this study compares the findings to the classical framework of HRQOL developed by Ferrell et al. (1995; 1992a, 1992b) initially for measuring HRQOL of adult-onset cancer survivors rather than YASCC. We aim to expand the classical framework of HRQOL in a way that is appropriate for this population. **METHODS:** We searched the articles which were published between 2000 and 2010 and hosted by the PsychINFO, PubMed, and EBSCOhost databases. A set of keywords and inclusion/exclusion criteria were utilized to identify eligible qualitative studies with a focus on survivorship issues of YASCC. Findings from the studies are presented and compared with the existing framework by Ferrell and colleagues. **RESULTS:** Sixteen studies met the inclusion/exclusion criteria and are investigated in this study. Resilience was overwhelmingly evident in the YASCC population. Six important domains of HRQOL were identified (i.e., physical, social, psychological, spiritual, fertility/sexual, resilience, and body appearance) with several sub-domains. **CONCLUSIONS:** Our findings suggest the use of the classical HRQOL framework for YASCC is problematic. We propose a new framework that can be useful in guiding the development of new HRQOL measures for YASCC. **RESEARCH IMPLICATIONS:** Our study makes a unique

contribution to the literature because to our knowledge, limited studies suggest a HRQOL framework specific to the YASCC population. **CLINICAL IMPLICATIONS:** Our proposed framework can be utilized to develop or refine a HRQOL measure to be used in the YASCC population. Such a measure can allow clinicians to prospectively assess functioning and identify if and when interventions are needed. **FUNDING:** University of Florida and Moffitt Cancer Center, NIH.

P2-14 was withdrawn.

P2-15

The Voices of Women: Spousal Perspectives on Surviving Prostate Cancer

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PURPOSE: Limited research has examined the psychosocial issues encountered by the spouses of African American prostate cancer survivors. Spouses play a critical role in the quality of life for prostate cancer survivors; however, minimal investigation has been conducted to understand and improve their experiences during cancer diagnosis and treatment. The primary goal of this study is to give voice to the women who are affected by prostate cancer by identifying the most salient psychosocial factors, as self-reported by spouses of African American prostate cancer survivors. **METHODS:** Twelve females were recruited to participate in an in-depth, face-to-face, individual interview. Participants were recruited from a National Cancer Institute Comprehensive Cancer Center cancer registry and a state based nonprofit organization, based on their husband's diagnosis and treatment with prostate cancer. The interview guide was structured according to Betty Ferrell's Quality of Life Conceptual Model. The interview transcripts were analyzed using a combination of hand coding and Atlas.ti software. **RESULTS:** Generally, spouses of prostate cancer survivors prioritized their husband's needs, as they felt that their survival was the utmost concern. However, the spouses frequently reported difficulties in sexual functioning, challenges in spousal communication, feelings of depression and isolation, and fears regarding the recurrence and metastasis of cancer. Social support, spirituality, and efforts to maintain healthier lifestyles were identified as coping strategies. **CONCLUSIONS:** Despite the importance of the spouses of prostate cancer patients in cancer survivorship and quality of life, this group is often neglected in research and interventions. This study of the

spouses of African American prostate cancer survivors highlights the need for more in-depth investigations of psychosocial issues, as well as more holistic interventions, which move beyond the individual level to the interpersonal and community levels, engaging both the cancer survivor and his spouse. **RESEARCH IMPLICATIONS:** The findings of this study will assist in the development and testing of culturally-appropriate community education resources and interventions to minimize the effects of prostate cancer diagnosis and treatment among African Americans. **CLINICAL IMPLICATIONS:** The results of this study will aid in the development and implementation of culturally-appropriate and relevant patient education materials and resources for clinicians working in prostate cancer diagnosis and treatment. **FUNDING:** This research was supported in part by funding from the American Cancer Society, Institutional Research Grant # 60132530120.

P2-16

Health Related Quality of Life, Depressive Symptoms and Distress Before and After Hematopoietic Cell Transplantation

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PURPOSE: Hematopoietic cell transplantation (HCT) recipients experience significant health related quality of life (HRQOL) impairments during and following inpatient HCT treatment. The purpose of this study was to monitor HRQOL and psychological functioning over the 12 months post-transplant. **METHODS:** Patients were administered questionnaires at hospital admission (T1, $n = 173$), discharge (T2, $n = 121$), three (T3, $n = 98$), six (T4, $n = 72$), and 12 months (T5, $n = 43$). Instruments included the Center for Epidemiologic Studies Depression Scale (CES-D), the Distress Thermometer (DT) and the Medical Outcomes Study 36-item Short-Form Health Survey (SF-36). Changes over time were assessed using mixed repeated measures models (SAS PROC MIXED). **RESULTS:** 173 patients [mean age = 53(SD = 14); 35% F; 88% white; 66% married; $n = 56$ lymphoma, 54 multiple myeloma, 45 leukemia, 18 other; 64% autologous] completed T1 questionnaires. CES-D mean scores (SD) at each time point were: 10.1 (8.7), 12.8 (9), 11 (9.2), 10.7 (9.1), 9.3 (8.8), $p = 0.002$. The percentage of patients with significant depressive symptoms was: 23, 37, 27, 26, 23. DT mean scores (SD) were: 3.3 (2.5), 4.0 (2.7), 2.7 (2.7), 2.5 (2.5), 2.6 (2.6), $p = 0.001$. The percentage of patients endorsing significant distress (DT ≥ 4) was: 43, 53, 34, 25, 23. With the exception of Mental Health (MH) scores,

T1 HRQOL scores (SF-36) were significantly below general population norms. Physical Functioning (PF; 38.3) and Role Physical (RP; 34.9) mean scores were greater than one SD below norms at T1. Significant improvement was noted between T1 and T5 PF (41.7; $p = 0.024$), RP (40.6; $p = 0.009$), and Social Functioning scores (48.1; $p < 0.001$), however, T5 scores continued to demonstrate deficits relative to general population functioning. MH remained above general population norms at T1 (51.4) and T5 (52.3). **CONCLUSIONS:** Despite advances in supportive measures and selection criteria, the preparatory treatment regimen produces significant HRQOL impairment and distress for HCT recipients at T2 and up to T3. Improvement is noted by T5, yet deficits remain. **RESEARCH IMPLICATIONS:** More investigation is needed to clarify the relationship between overall HRQOL, physical and psychological symptoms and to help patients develop adaptive strategies that could improve HRQOL and psychological functioning immediately post-HCT. **CLINICAL IMPLICATIONS:** Systematic post-HCT survivorship counseling, psychosocial and physical rehabilitation could improve patient functioning and accelerate recovery. **FUNDING:** Higginbotham Memorial Cancer Patient Support Fund & the Brenner Fund for Cancer Patients.

P2-17

Temporal Interrelationships Between Symptoms During Chemotherapy for Gynecologic Cancer

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PURPOSE: A growing body of research suggests that fatigue, insomnia, pain, and depression form a symptom cluster in cancer patients treated with chemotherapy. Nevertheless, data are sparse regarding whether these symptoms change together over time. To address this issue, the current study examined relationships among changes in these symptoms in women undergoing chemotherapy for gynecologic cancer. **METHODS:** Participants were 78 women (mean age = 63, range 33–87) diagnosed with gynecologic cancer recruited prior to the start of platinum-based chemotherapy. Symptoms were assessed via self-report before (T1) and after (T2) the first infusion and before the second infusion (T3). Mixed models were used to analyze correlations among symptom slopes. **RESULTS:** Fatigue, insomnia, and pain, depression increased significantly from T1 to T2. Increases in fatigue were significantly correlated with increases in depression, insomnia, and pain ($r_s > 0.28$). Increases in insomnia were

significantly correlated with increases in fatigue and depression ($r_s > 0.27$) but not pain ($r = 0.17$). Increases in pain were significantly correlated with increases in depression and fatigue ($r_s > 0.33$) but not insomnia ($r = 0.17$). Increases in depression were significantly correlated with increases in fatigue, insomnia, and pain ($r_s > 0.27$). Fatigue, insomnia, pain, and depression decreased significantly from T2 to T3. Decreases in fatigue were significantly correlated with decreases in depression, insomnia, and pain ($r_s > 0.28$). Decreases in insomnia were significantly correlated with decreases in fatigue ($r = 0.28$) but not depression or pain ($r_s < 0.05$). Decreases in pain were significantly correlated with decreases in fatigue ($r = 0.39$) but not insomnia or depression ($r_s < 0.22$). Decreases in depression were significantly correlated with decreases in fatigue ($r = 0.64$) but not pain or insomnia ($r_s < 0.22$). Levels of fatigue, insomnia, pain, and depression at T3 did not significantly differ from those at T1 ($p_s > 0.05$). **CONCLUSIONS:** Data from the current study suggest that fatigue, insomnia, pain, and depression peak after the first chemotherapy infusion, then return to levels comparable to baseline prior to the second infusion. Changes in fatigue, insomnia, pain, and depression tended to be correlated. **RESEARCH IMPLICATIONS:** Future research should examine potential biobehavioral mechanisms that contribute to multiple symptoms simultaneously. **CLINICAL IMPLICATIONS:** Clinicians should educate gynecologic cancer patients regarding transient increases in fatigue, insomnia, pain, and depression after the first infusion of chemotherapy. **FUNDING:** NCI R03 CA126775.

P2-18

Physical Function and Fatigue in Older Chemotherapy Patients: Gender Differences

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PURPOSE: Fatigue is the most common side effect of chemotherapy treatment in cancer patients. Physical function is associated with older adults' ability to maintain independence. We were interested in the association of these variables to see whether physical function was associated with reported fatigue in older patients undergoing chemotherapy. **METHODS:** Our sample consisted of 94 patients (34 male; 60 female) aged 65–88 years who were older adults participating in a study to examine quality of life in older patients undergoing chemotherapy at an NCI-designated comprehensive care center. Research has identified

cancer-related fatigue, differentiated from fatigue healthy individuals may experience, as more severe, more distressing, and less likely to be relieved by rest, and numerous studies have identified a high prevalence of fatigue in patients receiving chemotherapy. We hypothesized that physical function would be positively associated with fatigue as reported by the Fatigue Symptom Inventory (FSI), a 14-item self-report measure designed to assess the severity, frequency, and daily pattern of fatigue as well as its perceived interference with quality of life. **RESULTS:** In males, our results showed no correlation between lower or upper body performance and fatigue measures during chemotherapy. However, in females, lower-body performance, as measured by the get-up-and-go test was associated with several items on the FSI. Gender differences in longitudinal trends in fatigue during chemotherapy were also observed. **CONCLUSIONS:** We believe that further study of the correlation of reported fatigue and physical function performance measures is warranted to improve quality of care in older cancer patients. **RESEARCH IMPLICATIONS:** We believe that further study of the correlation of reported fatigue and physical function performance measures is warranted to improve quality of care in older cancer patients. **CLINICAL IMPLICATIONS:** We believe that further study of the correlation of reported fatigue and physical function performance measures is warranted to improve quality of care in older cancer patients. **FUNDING:** Health and personal resources in older cancer patients undergoing chemotherapy, Award # NIH 1 R03 CA126376-01, September, 2006, by the National Cancer Institute.

P2-19

Hispanic Adolescents Coping With Parental Cancer

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PURPOSE: The aim of this study was to identify the coping strategies of Hispanic adolescents dealing with parental cancer, to explore the relationship between gender, depression and anxiety with adolescents' coping strategies. Research has consistently established the role of coping strategies as a factor that have a substantial impact on the psychological adjustment of adolescents. Unfortunately, despite the acknowledge link between psychological symptoms and coping strategies, little is known about how adolescents cope with parental cancer. Children of cancer patients report using more emotion-focused coping than problem-focused coping, and those avoiding thoughts about their parent's cancer, show more symptoms of anxiety and depression. **METHODS:** Participants were 51 Puerto Rican Adolescents who

have a parent diagnosed with cancer. Adolescents completed a structured questionnaire with scales measuring depression (CES-D), anxiety (STAI) and coping strategies (COPE). Adolescents were recruited after contacting their parents in social activities sponsored by the American Cancer Society in Puerto Rico. **RESULTS:** The strategies used with the highest frequency were those generally viewed as positive and emotion-focused: use of emotional support, acceptance and religion. These coping strategies occurred with high frequency. The findings revealed no differences between girls and boys in terms of their coping strategies. Depression was related to two maladaptive coping strategies: denial and behavioral disengagement; and one emotion-focused strategy: acceptance. Anxiety had significant correlations with one emotion-focused strategy: acceptance; and two dysfunctional strategies: substance use and behavioral disengagement. The best predictors of adolescents' depression and anxiety were dysfunctional coping and problem-focused strategies. **CONCLUSIONS:** The study contributes to the knowledge about the coping strategies of Hispanic adolescents experiencing parental cancer and the importance of taking individual coping strategies into account when evaluating the impact of parental cancer on psychological well-being. This is especially true for adolescents who are likely to use dysfunctional strategies such as denial, substance use and behavioral disengagement. **RESEARCH IMPLICATIONS:** Integrative research, that takes into account cultural values and ethnic backgrounds, in which coping strategies and psychological symptoms are examined together will be especially important in advancing our knowledge in this area. **CLINICAL IMPLICATIONS:** Through psychosocial interventions, professionals need to assist these adolescents to improve and learn better coping strategies. **FUNDING:** None.

P2-20

Content for a Survivorship Care Plan for Breast Cancer Survivors — What Are the Preferences?

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PURPOSE: The purpose of this study is to explore experiences and concerns of breast cancer survivors (BCS). Results of this inquiry will provide information about the impact of breast cancer in the period after completion of active treatment, within the socio-ecological (life stress, neighborhood, social support) context and cultural influences. **METHODS:** 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 (SCP).

For the first phase, focus group and face-face interviews were audio-recorded and transcribed with women who had non-metastatic breast cancer, 3–48 months post-treatment and were 18–75 years of age. Groups were stratified by age into <44, 45–54, 55–64, and >65. Transcripts were subjected to thematic and content analysis by age group (life stage). For the second phase surveys are being developed to be sent other breast cancer survivors to explore the impact of treatments and to examine their perceptions of the content of the SCP. **RESULTS:** The impacts of breast cancer were broad and varied by age group for the 16 women in the study. 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. Preferred format for SCP is similar for all groups. Women preferred oncology nurses to provide the SCP at the beginning or at the end of the treatment and preferred written materials in lay language, telephone follow-up resource person and electronic bulletins for communicating updates. **CONCLUSIONS:** Studies show that breast cancer survivors (BCS) 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 can encounter is broad and can include physical, psychological, social and spiritual aspects. Although, Institute of Medicine's report on cancer survivorship recommends that cancer patients completing treatment should be provided with a comprehensive care summary and follow up plan that is clearly and effectively explained, it is not always practiced in oncology care. **RESEARCH IMPLICATIONS:** Breast cancer survivors are diversely impacted by the breast cancer experience. Effects vary by life stage, which impacts preferred content of SCP, but not format. Qualitative information on the impact of breast cancer at different life stages can be used to help customize content of SCPs. **CLINICAL IMPLICATIONS:** The information from this study will help to identify what breast cancer survivors think is important to address post treatment in order to enhance their quality of life. Studies show the survivorship care plan will make it easier for transition both for the patient and physician. **FUNDING:** California State University Long Beach.

P2-21**Gynecologic and Breast Cancer Peer Mentors: Interpreting Program Impact**

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PURPOSE: The purpose of this study was to evaluate the existing Peer Mentor (PM) Cancer Survivors Programs at an urban Southern California Cancer Institute. An evaluation of the existing program provided evidence as to the effectiveness of this program. Objectives included the following: 1. Examine differences between gynecologic (GC) and breast cancer (BC) experiences of PMs, 2. Examine and identify themes to be used for the development of surveys, 3. Analyze surveys to evaluate the effectiveness of the peer mentor program. **METHODS:** Qualitative methodology used in the first phase utilized two semi-structured focus group interviews; GC ($n = 4$) and BC ($n = 10$). Thematic Analysis was used to clarify key phrases and recurrent themes. Constant comparison of the incoming data provided themes which were used to develop an eight question, on-line survey (second phase) that will be instrumental in eliciting data that will be reflective of mentors' experiences. 100 surveys have been sent out to the rest of the PM groups ($n = 100$). **RESULTS:** Thematic analysis revealed 15 themes and four major categories. The major categories were consistent between groups, however themes differed in relation to; recurrence, experience of being a mentor, perceived availability of resources. Differences in perceptions between the groups may be explained by the nature of gynecologic cancer disease process. There is a high rate of recurrence especially with ovarian and less availability of dedicated resources for GC in comparison to BC. As a result of the differences two survey instruments were developed and sent to the remaining PMs from the group. **CONCLUSIONS:** Oncology nurses who are in direct contact with women going through cancer related treatments are in a position to refer cancer survivors to the peer mentor programs. This knowledge builds on existing knowledge on psychosocial oncology and as nurses we need to enhance our roles with the interdisciplinary team. **RESEARCH IMPLICATIONS:** This information will add to the existing knowledge on survivorship care that addresses navigation issues that people need. Data from this research will provide researchers with an understanding that they may need to examine similar factors as they conduct research with differing ethnicities. **CLINICAL IMPLICATIONS:** This study will provide health care providers with some information regarding the provision of quality and informed care to this and other population who may share similar

experiences as a breast cancer survivor who needs information on how to navigate the cancer journey **FUNDING:** None.

P2-22**Breast Survivorship Follow-Up Care Plan for Post Treatment Care**Singh-Carlson S¹, Smith S^{1,2}, Wai E^{1,2}¹*California State University Long Beach, Long Beach, California, United States,* ²*British Columbia Cancer Agency, Victoria, British Columbia, Canada*

PURPOSE: **OBJECTIVES:** 1. To develop the optimal format and content of a SCP for the breast cancer patient. 2. To develop the optimal template/format of SCP communication with the FP. **METHODS:** Surveys were sent to 1000 women who were breast cancer post-treatment to explore breast cancer survivors' experiences since completion of treatment and preferences for survivorship care. Inclusion criteria was were women with non-metastatic breast cancer, 3–12 months post-completion of last surgery, chemotherapy or radiation. Groups were stratified by age. Data was subjected to descriptive analysis by age group (life stage). **RESULTS:** The impacts of breast cancer after completion of treatment are broad and vary by age group. Physical, emotional and social effects are more intense in younger patients. Older patients experience consistent, positive social support and develop closer relationships after breast cancer. Preferred content of survivorship care plans echoes the wide variation in impacts of breast cancer. Patients want individualized, yet comprehensive, information. While preferred content varies by life stage, preferred format is similar. Organized transition from specialist to primary care is emphasized. The ideal time for information is upon completion of treatment, or shortly after. **CONCLUSIONS:** Detailed information from this research shows the differences between and among groups of breast cancer survivors who have differing needs depending on age. This evidence will provide insight into the development of survivorship care plans for those who are discharged from the agency into the community and have individual needs. **RESEARCH IMPLICATIONS:** This evidence will provide other researchers with information on the breast cancer survivors' needs that adds to the existing knowledge of the expanding number of breast cancer survivors. Other breast cancer survivors in other similar settings may have differing as well as similar needs depending on their personal experiences and the health care system, therefore this research will shed light on researchers who are preparing to plan research projects. **CLINICAL IMPLICATIONS:** This is vital information for health care providers who provide cancer care for

those who are vulnerable and need some guidance and information as they transition into the community. FUNDING: None.

P2-23

Addressing Vulnerable Women's Preferences for Breast Survivorship Care Plan Post Treatment

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PURPOSE: This study will explore experiences and concerns of South Asian (SA) breast cancer survivors (BCS) at different life stages in order to determine their understanding of follow-up cancer care. **METHODS:** A qualitative approach was the most effective methodology in order to explore South Asian (SA) women breast cancer survivors (BCS) experiences after completion of active treatment and their understanding of follow-up care. Focus group and face-face interviews were audio-recorded and transcribed with SA women who were 3–60 months post-treatment, had non-metastatic breast cancer, and discharged from oncologist care. Groups were stratified by age into <44, 45–54, 55–64, and >65. Transcripts were subjected to thematic and content analysis by age group (life stage). **RESULTS:** A total of 24 women participated in the study with 1 second interview to confirm data. Age ranged from 30–72 years. Impacts of breast cancer were broad and varied by age group. Preliminary findings suggest that physical, emotional and social effects are more intense in younger patients with older patients experiencing more consistent positive social and spiritual support with cultural nuances. Fatigue, fear of the unknown, and women's inability to normalize post treatment were the most universal effects experienced by women. Emphasis on generalized survivorship care plan (SCP) with individualized content echoes the wide variation in breast cancer impact. Important elements include: treatment summary, information on exercise, expected side effects, follow-up schedule, and knowledge of information sent to family physician. Preferred media is a written booklet format for SCP and is similar for all groups. Consultation at beginning of treatment with an oncology nurse is ideal. **CONCLUSIONS:** Findings indicate that SA women BCSs experience similar impacts of breast cancer, however cultural nuances need to be addressed in SCP's that will enhance quality of life. Effects vary by life stage, which impacts preferred content of SCP, but not format. Qualitative information on the impact of breast cancer at different life stages in this study will be used to help customize content of SCPs. **RESEARCH IMPLICATIONS:** This information

will add to the existing knowledge on survivorship care that needs to address the diversity among people's needs. Data from this research will provide researchers with an understanding that they may need to examine similar factors as they conduct research with differing ethnicities. **CLINICAL IMPLICATIONS:** This study will provide health care providers with some information regarding the provision of quality and informed care to this and other population who may share similar experiences as a breast cancer survivor. **FUNDING:** British Columbia Cancer Foundation.

P2-24 and P2-25 were withdrawn.

P2-26

Couples' Adaptation to Testicular Cancer in the Adolescent and Young Adult Years

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PURPOSE: A preliminary qualitative study was conducted to examine couples' adaptation to testicular cancer in the adolescent and young adult (AYA) years. **METHODS:** Six couples consisting of AYA testicular cancer survivors aged 18–34 years, and their partners, were recruited from outpatient testicular cancer follow-up clinics. Each member of the couple completed an individual semi-structured qualitative interview designed to assess the couples' adaptation to testicular cancer. **RESULTS:** Inductive thematic analysis resulted in 14 categories which were subsequently grouped into 8 key themes, 3 of which were labeled "positive relational attributes" (i.e., similar future fertility desires, indicators of commitment, and concordant view of impact of testicular cancer) and 5 of which were labeled "negative relational attributes" (i.e., testicular cancer as a relational stressor, impaired sexuality, discordant view of impact of testicular cancer, dissimilar wants and needs, and dissimilar relationship outlooks). **CONCLUSIONS:** There are both positive and negative relational attributes that contribute to how a given couple views the impact of AYA testicular cancer on their relationship. Such attributes fit into a larger working model of couples' adaptation to AYA testicular cancer where a given couples' view of the impact of testicular cancer proximally affects their overall relationship satisfaction and, ultimately, their relationship stability and survival. **RESEARCH IMPLICATIONS:** The findings of this qualitative study indicate preliminary support for our working model of couples' adaptation to AYA testicular cancer. This model should be further examined with larger samples of AYA testicu-

lar cancer survivors and their partners, using both qualitative and quantitative methods, to determine its utility with this particular population of cancer survivors. **CLINICAL IMPLICATIONS:** The current findings have identified a specific set of relationship attributes and processes that should be targeted in clinical interventions with AYA testicular cancer survivors and their partners. Such targeted intervention is critical in improving couples' adaptation, relationship satisfaction and stability/survival. **FUNDING:** National Cancer Institute (K07CA140159); Indiana Clinical and Translational Sciences Institute (KL2RR025760-02); Walther Oncology Foundation.

P2-27

The Experience of Canadian Childhood Cancer Survivors Transferring to the Adult Healthcare System

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PURPOSE: The purpose of this study was to determine how the pediatric healthcare system could better prepare childhood survivors of cancer to transfer to the adult healthcare system. **METHODS:** A purposive sample of volunteer participants were recruited from an existing list of cancer survivors in the Long Term Follow-Up Clinic at the IWK Healthcare Centre in Halifax, Nova Scotia, Canada. Eligibility to participate included: English speaking individuals between the ages of 18 and 29 who had been treated for cancer in the pediatric oncology system. They had to have been off therapy for at least a year and in the adult system when recruited. Data were collected through semi-structured interviews. Transcribed interviews were entered into qualitative analysis software and then analyzed using the constant comparative technique. **RESULTS:** Preliminary results show that pediatric cancer survivors are indeed not being involved in their care at the pediatric centre and being lost in the adult system. Cancer survivors demonstrated a lack of information concerning their late effects and the treatment they received. None of the participants referred to having any appropriate resources to address their knowledge deficits. It appeared that nobody seemed to be advocating for them and they were not advocating for a legitimate source of information for themselves, demonstrating a lack of empowerment. They also did not understand that they were transferred from pediatric to adult care, and felt that they could visit their pediatric team whenever necessary. **CONCLUSIONS:** Based on the preliminary results, survivors

of childhood cancer do not have a good understanding of what the late effects of their treatments are and the importance of advocating for better healthcare for themselves. **RESEARCH IMPLICATIONS:** Findings from this research study will contribute to the growing body of literature on young adult cancer survivors, in particular in the area of survivors' experience of transferring from pediatric to adult healthcare. **CLINICAL IMPLICATIONS:** Learning how to empower survivors to take charge of their own health in conjunction with support from a family physician knowledgeable in late effects of pediatric cancer treatment may allow for better risk-based survivorship care. **FUNDING:** Cancer Care Nova Scotia.

P2-28

Predictors of Suicidal Thoughts After Cancer: Which Items Are Influential in Clinically Representative Ethnically Diverse United Kingdom Sample

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PURPOSE: Recently there has been more attention on people with suicidal thoughts who suffer distress or depression in the context of cancer. However predictors of suicidal thoughts in cancer have not been previously described. **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data regarding suicidality on 554 (411 BW 143 BSA). We examined the following factors: treatment intent (radical vs. palliative), gender, ethnicity, cancer type, cancer duration. We measured suicidal thoughts using the PHQ9 using the scale: not at all 0; several days 1; more than half the days 2; nearly every day 3. We report here, the proportion of people with any suicidal thoughts (non zero scores). **RESULTS:** Of all patients 510 had no suicidal thoughts, 44 (8%) had some thoughts and 12 had thoughts on "more than half days". We found the following predictors of suicidal ideation, examined cross-sectionally in the whole sample. Depression thermometer ($p = 0.0002$); helplessness hopelessness ($p = 0.0021$); anxious preoccupation ($p < 0.0001$), low fighting spirit ($p < 0.0001$); HADS-D, PHQ9. In addition the following problem list concerns were associated with suicidal thoughts: Insurance problems, Transportation problems, Partner problems, Bathing dressing problems, Eating problems, Diarrhea, Urination problems. **CONCLUSIONS:** In our clinically representative diverse sample, we found

depression and coping style (lack of fighting spirit) to be the strongest predictor of suicidal ideation. Anxious preoccupation was also predictive. Several problem list items were also influential. **RESEARCH IMPLICATIONS:** Predictors of suicidal ideation are diverse and include items not directly related to mood. **CLINICAL IMPLICATIONS:** Clinicians should be aware that some everyday issues can influence distress and suicidal ideation in a minority of patients. **FUNDING:** Hope Against Cancer.

P2-29

Temporal Trends in Suicidal Thoughts After Cancer: Prospective Examination in a Clinically Representative Ethnically Diverse United Kingdom Sample

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PURPOSE: Recently there has been more attention on people with suicidal thoughts who suffer distress or depression in the context of cancer. However temporal trends have not been previously studied. **METHODS:** We analyzed data collected from Leicester Cancer Centre from 2008 to 2009 involving approximately 1000 people approached by a research nurse and two therapeutic radiographers. Of those approached we collected data on 738 presentations, that is people seen up to three times over 9 months during treatment for cancer. We had complete data regarding suicidality on 554 (411 BW 143 BSA). We examined the following factors: treatment intent (radical vs. palliative), gender, ethnicity, cancer type, cancer duration. We measured suicidal thoughts using the PHQ9 using the scale: not at all 0; several days 1; more than half the days 2; nearly every day 3. We report here, the proportion of people with any suicidal thoughts (non zero scores). **RESULTS:** Of all patients 510 had no suicidal thoughts, 44 (8%) had some thoughts and 12 had thoughts on "more than half days". We found a slight rise in suicidal thoughts at 3 months but overall at 9 months no consistent fall (or increase) in suicidal thoughts. There was no clear trend in ethnic minority population. Total sample: At baseline 16 of 254 had suicidal thoughts (6.3%). At 3 months 21 of 181 had suicidal thoughts (11.6%). At 9 months 9 of 119 had suicidal thoughts (7.5%). British White: At baseline 8 of 170 had suicidal thoughts. At interview 2 17 of 137 had suicidal thoughts. At interview 3 6 of 104 had suicidal thoughts. British South Asian: At baseline 8 of 85 had suicidal thoughts. At interview 2 4 of 44 had suicidal thoughts. At interview 3 3 of 15 had suicidal thoughts. **CONCLUSIONS:** In our clinically representative diverse sample, we found no consistent fall (or increase) in suicidal thoughts. **RESEARCH**

IMPLICATIONS: Further attention should be given to research on suicidal ideation **CLINICAL IMPLICATIONS:** Suicidal thoughts can occur at any time and should be examined clinically. **FUNDING:** Hope Against Cancer.

P2-30

Survivorship Perspectives From Young Adult Cancer Patients

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PURPOSE: Adolescent and young adult (AYA) cancer survivors (ages 15 to 39 at diagnosis) face unique challenges that until recently were not being systematically addressed by the cancer care community. Approximately 68,000 AYAs are diagnosed with cancer in the United States every year. Patient-centered needs assessments in AYAs are lacking, mainly because population-based surveys suffer from recruitment challenges as AYAs are spread out across cancer registries and are highly mobile. **METHODS:** In order to profile the experiences of recently diagnosed AYA survivors, four focus groups and three individual interviews were conducted with 20 young adult cancer survivors to establish issues that future research and intervention efforts should target. **RESULTS:** Broad themes that came up from the discussions included subjective variations in attitude toward the cancer experience, the importance of social support, treatment-related challenges, financial challenges, and AYA-specific concerns. **CONCLUSIONS:** The current study represents one of the few qualitative approaches to documenting cancer experiences in young adults. Future research involving direct contact with young adult cancer patients and survivors should include narratives from young adults who are all too often under-represented in research. **RESEARCH IMPLICATIONS:** Four patient needs emerged from content analysis of the focus groups: timely, straightforward, and respectful communication of medical information from providers; continued access to age-appropriate quality medical care and counseling; an emphasis on comprehensive cancer care, which should include counseling on family and social relationship issues; and affordable health insurance and healthcare financing options. Future research should investigate policies and interventions to help AYAs meet these needs. **CLINICAL IMPLICATIONS:** Focus groups are a useful method for helping providers understand and address AYA cancer survivors unique concerns. **FUNDING:** Support for this work was provided by a UC MEXUS dissertation

grant and a Centers for Disease Control and Prevention R36 Public Health Dissertation Grant to Erin E. Kent.

P2-31

Fear of Cancer Recurrence: Where Did This Construct Come From? A Historical Literature Review

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PURPOSE: The purpose of this research was to trace historically where the construct 'fear of recurrence', in breast cancer patients, originated and where it is today with regard to current research in nursing. **METHODS:** Through the use of online nursing and medical indexes, an extensive review of the literature was conducted from 1970 to present. Key words, alone and in combination, such as breast cancer, psychosocial, psychological, distress, fear, uncertainty, concern, worry, and recurrence were used to locate literature to produce a clear historical picture of where the construct originated from. Lastly the review uncovered trends in and suggestions for future research on this construct. **RESULTS:** The construct of fear of recurrence (FOR) has been investigated for over four decades in the literature under a variety of terms, by a multitude of disciplines. It has emerged as an ongoing issue for cancer survivors yet we continue to struggle with how to define, measure and intervene with it. This review found that FOR is an ongoing non-relenting issue for many breast cancer survivors. It suggests that FOR may be contributing to a clinically evident, yet unidentifiable level of distress that is impacting negatively on quality of life in the survivorship phase for breast cancer patients. **CONCLUSIONS:** Fear that cancer may return, recur or progress is thought to be associated with a decrease in quality of life of breast cancer survivors but the exact extent of its impact remains unknown. Future research needs to focus on developing a clear inclusive theoretical definition of fear of recurrence and its multi-dimensional nature. Evaluation of current instruments being developed and used to measure this construct need to be assessed to ensure that factors included in their design most adequately reflect the true nature of this phenomena. Nurses and other clinicians must be able to clearly identify when the level of fear is elevated and then develop interventions to assist women in distress during the survivorship phase of breast cancer. **RESEARCH IMPLICATIONS:** Nursing researchers have the opportunity to impact greatly on the quality of life of breast cancer survivors by ensuring that

this known issue is adequately defined, measured, and evaluated so that interventions can be targeted to those in need of aid in the growing health care sector of breast cancer survivors. **CLINICAL IMPLICATIONS:** Clinicians can use this information to better focus new research on fear of recurrence. By thoroughly understanding the history of fear of recurrence we will become more prepared to identify and intervene with breast cancer survivors suffering from its untoward effects. **FUNDING:** None.

P2-32

Healing With Basketball: Psychosocial Support Combined With Physical Activity for the Rehabilitation of Breast Cancer Survivors

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PURPOSE: The George Washington University Cancer Institute hypothesized that an intervention that incorporates psychosocial support and physical activity would improve quality of life for breast cancer survivors. Psychosocial support focused on wellness goals may help breast cancer patients survive longer than those who do not receive such support. The incorporation of vigorous, continual exercise may improve breast cancer survival and reduce recurrence rates. Healing with Basketball (HWB) combines an accessible, familiar sport with the invaluable opportunity for survivors to relate to their peers in a uplifting environment. **METHODS:** Each clinic is comprised of four basic concepts: sharing and bonding, improving overall strength and endurance, relating to others via peak performance, and emphasis on play and team work. These concepts are supplemented by several different thematic lessons including confidence, endurance, teamwork, and motivation. Before and after each clinic, participants complete a five item survey. The survey measures the participant's perception of the following quality of life outcomes: level of energy, strength, well-being, physical flexibility, and support. **RESULTS:** Preliminary analysis reveals that HWB clinics improved four of the five measured quality of life outcomes. Participants' perceived level of energy, strength, well being, and physical flexibility consistently improved over the course of the 6 months. Participants' perception of how supported they felt in their recovery was consistently rated at the highest level over the course of the program. **CONCLUSIONS:** This program assists participants in achieving a higher quality of life by using fundamentals of psychology, sociology, and physiology to increase psychosocial support and improve strength and endurance. **RESEARCH IMPLICATIONS:** With sufficient

enrollment in the program, participants could be stratified to analyze differences in pre- and post-test ratings between subsets of breast cancer survivors (age, ethnicity, socioeconomic status, etc.). More rigorous research designs with a comparison arm could verify preliminary conclusions of the pilot program. **CLINICAL IMPLICATIONS:** HWB can complement clinical care by providing psychosocial support and exercise options for breast cancer survivors. HWB can be implemented in any population of breast cancer survivors using a multi-disciplinary approach. **FUNDING:** This program was funded in part by the George Washington Cancer Institute, The EagleBank Foundation, and The George Washington University Women's Athletic Department.

P2-33

Thriving After Cancer: A Sustainable Long-Term Multidisciplinary Survivorship Clinic for Adult Survivors of Pediatric Cancer

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PURPOSE: The unique health risks of adult survivors of pediatric cancer require access to appropriate long-term health care that can prevent, detect and provide early interventions for physical, psychosocial and economic consequences of cancer treatment. In 2010, the Thriving After Cancer (TAC) program, part of the GW Cancer Survivorship Center, will transition 100–150 adult survivors of pediatric cancer to age-appropriate primary and specialty care. **METHODS:** A TAC clinic visit includes a review of past medical history and physical examination; identification and management of late effects of cancer and its treatment; health promotion recommendations; and a Survivorship Care Plan. The program provides free psychiatric counseling, medication management, and nutrition consultation. The clinical team includes a nurse practitioner, four rotating internists, one psychiatrist and two psychiatry residents, a pediatric oncologist, a dietician and a social work-credentialed patient navigator. **RESULTS:** The program has been exceptionally well-received by survivors and families. TAC has educated survivors about their past treatment and individual risk profile for late effects and empowered patients to optimize their health through

behavior changes. **CONCLUSIONS:** With 77% of pediatric cancer survivors living 10+ years after treatment and 75% experiencing long-term and late effects of treatment, it is critical to establish effective models of survivorship care. The TAC program pilots and evaluates a long-term, multi-disciplinary approach to care for a high-risk population of survivors. The financial model is being piloted for sustainability and includes billing for physician time, utilization of medical residents to provide free counseling, and grant support. **RESEARCH IMPLICATIONS:** Program evaluation assesses impact of the clinic on patient adherence to follow-up recommendations; access to appropriate care; QOL; self-efficacy in negotiating the adult health care system; activation of healthy living; and fiscal sustainability. The PHQ assesses clinical progress. Pilot data will inform a longitudinal research plan with multiple health outcome data points in the post-pilot phase. **CLINICAL IMPLICATIONS:** TAC provides a model for other institutions to establish a clinical program that supports survivors' long-term medical care needs affordably. **FUNDING:** DC Department of Health and DC Cancer Consortium; GW Cancer Institute; GW Medical Faculty Associates.

P2-34

"Just This Moment," A Qualitative Study of a Mindfulness-Based Stress Reduction Course for Cancer Survivors and Carepartners

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PURPOSE: Mindfulness is paying attention without judgment to what is happening in the moment with a sense of openness, curiosity, and hospitality. Research indicates that patients receiving cancer treatment benefit both psychologically and physically as a result of Mindfulness Based Stress Reduction (MBSR). However, little is known about the benefit of MBSR for those who have completed cancer treatment and/or their carepartners. The purpose of this pilot program was to provide MBSR training to cancer survivors and their carepartners and to evaluate their experience. **METHODS:** These classes were co-taught by an interdisciplinary team of mindfulness practitioners trained in MBSR (oncology social worker, integrative therapies nurse practitioner, oncology nutritionist). Classes met ninety minutes on eight consecutive weeks focusing on experiential learning curriculum adapted from University of Massachusetts (Worcester) Center for Mindfulness MBSR program. Mindfulness skills taught included: sitting meditation, yoga, body scan, mindful eating, walking meditation, mindful communication,

and loving-kindness. **RESULTS:** Participants completed an evaluation at the end of the course. In addition, 3 months later, they completed a questionnaire designed to elicit qualitative information about their experience of the course and what skills (if any) they continued to use. Feedback was also requested on the impact of including carepartners in what was previously a patient only program. Responses indicated 100% of the participants continued to use skills learned in the course. All participants reported daily or frequent use of breath awareness and mindful awareness in life activities. **CONCLUSIONS:** Feedback about the MBSR program from the cancer survivors and their carepartners was overwhelming positive. Responses indicate that skills taught during the course continued to be effectively utilized by both survivors and carepartners. Furthermore, participants reported that inclusion of carepartners in the group enhanced their experience and did not detract from group cohesiveness. **RESEARCH IMPLICATIONS:** This project indicates a need for further research exploring the similarities and differences in effectiveness of MBSR training for cancer survivors and carepartners. **CLINICAL IMPLICATIONS:** The majority of participants strongly agreed that the skills they learned in the MBSR program helped them increase concentration, reduce stress, and cope more effectively with pain, anxiety, and depression. **FUNDING:** None.

P2-35 was withdrawn.

P2-36

Characterizing Sleep Disturbance in Long-Term Disease Free Survivors of Breast Cancer

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PURPOSE: This study characterized sleep quality of long-term, disease free breast cancer survivors. We examined several dimensions of sleep quality and determined demographic, medical, psychological and physical correlates. **METHODS:** Global sleep quality and seven component dimensions of sleep, including subjective sleep quality and efficiency, use of sleep medication, daytime dysfunction and sleep latency, duration, and disturbances were assessed along with mental and physical QOL. 92 breast cancer survivors completed the Pittsburgh Sleep Quality Index, MOS SF-36, demographic, and disease and treatment questionnaires. Participant were a mean age of 55.35 years

(SD = 10.75, range = 36–83) and a mean 5.17 years post-treatment (SD = 4.08, range = .75–25). Participants were primarily stage II or less at diagnosis (91%) and treated with lumpectomy (58%), chemotherapy (64%), and radiation (63%). **RESULTS:** Reports of sleep disturbance were high, with an average sleep disturbance score of 9.52 (SD = 3.09) and 91% of participants exceeded the cut-off score of 5 (poor sleep) and 8 (poor sleep and fatigue). The most severe difficulty was reported in sleep efficiency (M = 2.93, SD = 0.45, with a possible range of 0–3 for all domain scales), while the least difficulty was in sleep medication (M = 0.76, SD = 1.15), sleep duration (M = 0.87, SD = 0.71) and daytime disturbances (M = 0.89, SD = 0.67). 46% reported taking sleep medication within the last month. Demographic characteristics did not correlate with sleep disturbances. Comorbid diagnoses and time since chemotherapy were consistent correlates of sleep disturbance. Sleep disturbances were associated with psychological and physical QOL, after controlling for comorbid diagnoses and chemotherapy. Physical QOL was associated with the greatest number of sleep quality dimensions. **CONCLUSIONS:** Sleep disturbances in breast cancer survivors exceeded normative averages. Sleep efficiency appears significantly impaired and sleep disturbance is associated with reduced physical and psychological QOL. **RESEARCH IMPLICATIONS:** Sleep disturbance is a serious, persistent problem for survivors. Some dimensions of sleep are more impaired than others. Interventional studies targeting the most severely disturbed dimensions of sleep need tested. **CLINICAL IMPLICATIONS:** Assessing various facets of sleep disturbance could aid clinicians in suggesting more targeted interventions. **FUNDING:** None.

P2-37

Sexual Health Concerns Among Breast and Prostate Cancer Survivors

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PURPOSE: It is unclear how much information patients receive regarding sexual health concerns after cancer treatment, and if such concerns persist over time. The purpose of this study was to identify the sexual health concerns and information needs of patients after a diagnosis of breast or prostate cancer. **METHODS:** This pilot study surveyed breast and prostate cancer survivors regarding their specific sexual health concerns.

Study participants completed the 12-item Information on Sexual Health: Your Needs After Cancer (InSYNC) measure developed for the project by a multidisciplinary team of experts with survivors input. Questions included physical changes, sexual function, fertility, intimate relationships, sexual satisfaction and pleasure. Quality of life (QOL) was measured using the FACT-G. Participants were stratified by early (<2 years post-treatment) and late (>2 years post-treatment) survivors. **RESULTS:** 114 survivors (58 breast, 56 prostate) were enrolled, with a median age of 52 for breast (range 29–86 years) and 64 for prostate survivors (range 46–76 years). The number of sexual concerns reported by survivors was negatively correlated with QOL ($r = -0.21$, $p = 0.02$). Breast and prostate survivors had a similar number of concerns overall (median breast = 3.5, prostate = 4.0), but their sexual concerns varied by survivorship phase. Breast cancer survivors in later survivorship had twice as many sexual concerns as those in the early phase despite near-identical QOL. The opposite pattern was found for prostate cancer survivors. Early phase prostate survivors had nearly twice as many sexual concerns as later survivors despite near identical QOL. Prostate cancer survivors were most concerned with their ability to satisfy their partner (57%), while breast cancer survivors were most concerned with changes in the way their body works sexually (46%). **CONCLUSIONS:** The sexual concerns for breast and prostate cancer survivors vary by phase of survivorship and type of cancer. **RESEARCH IMPLICATIONS:** Additional research is needed on the best ways to address sexual health concerns among cancer survivors. **CLINICAL IMPLICATIONS:** Health care providers should be aware of the evolving sexual health concerns of their patients and promote additional clinical resources to address these needs. **FUNDING:** None.

P2-38

Impact of a Transition Visit on Addressing Quality of Life and Readiness to Assume Greater Self-Management Among Breast Cancer Survivors

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PURPOSE: Issues related to the quality of life in the initial phase of care post-treatment, the stage referred to as the re-entry or transition period, are of major interest to patients and providers alike. The purpose of this study was to assess the impact of a one-time transition visit on participant quality of life. **METHODS:** A single-arm pilot study was completed to assess the impact of a cancer survivorship transition visit on quality of

life (QOL) and patient concerns for women completing multimodality primary breast cancer treatment at a large, academic medical center. Participants initially completed a self-administered pre-survey including the SF-36, and the Preparing for Life As a New Survivor (PLANS) Scale. The PLANS is a 16-item self-report measure currently under development, designed to assess relevant knowledge, skills, expectations, and self-efficacy in survivors, as well as improvements in their ability to manage their future care. A transition visit (TV) was conducted within 4 weeks of the pre-survey, and then subjects completed a post-survey within 4 weeks of the TV. **RESULTS:** Study participants ($n = 20$) had a median age of 52 years and a median follow-up of just over 1 year from diagnosis. The TV had the largest impact on the SF-mental health composite score and issues specific to survivors. The greatest improvements in the PLANS were in knowing whom to call for questions about symptoms (pre-50%, post-85%), what symptoms to look for (pre-50%, post-85%), and what tests are included in standard follow-up care (pre-60%, post-90%). **CONCLUSIONS:** This study suggests that a well-designed transition visit may help improve mental health and provide relevant cancer-specific knowledge and expectations, as breast cancer survivors transition from multimodality treatment to assuming more self-management for their survivorship care. **RESEARCH IMPLICATIONS:** The results of this study support that a larger randomized control trial is needed in this patient population to determine the impact of a transition visit on quality of life. **CLINICAL IMPLICATIONS:** The findings of this pilot study suggest that patients in the re-entry or transition period may experience improved quality of life from a transition visit that addresses mental health needs and self-management strategies. **FUNDING:** None.

P2-39

Impact of a Transition Visit on Addressing Health-Related Patient Concerns Among Breast Cancer Survivors

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PURPOSE: Patients completing primary cancer treatment require information on how to address short and long-term survivorship concerns to achieve optimal recovery and well being. The purpose of this study was to assess the usefulness of a transition visit in addressing those concerns. **METHODS:** A single-arm pilot study was performed to assess the impact of a cancer survivorship transition visit (TV) in patients who had

completed multimodality adjuvant therapy for primary breast cancer at a large, academic medical center. Participants completed self-administered surveys that included a 23-item, 5-category checklist of concerns. Within 4 weeks of completing the surveys, subjects participated in a survivorship TV at the medical center. The broad categories represented in the concerns checklist, were risk of recurrence, long-term side effects, health maintenance, family needs, and risk of breast cancer in family members. Participants were asked to identify all current concerns and to prioritize their top three concerns. The top concerns were addressed in detail during the TV. Participants completed the same surveys 1 month post-TV. **RESULTS:** The sample included 20 women (median age = 52 years) who were a median 5 months post-treatment. Rates of concern were recorded for each item in both the pre and post-TV surveys with the top 5 concerns being risk of cancer recurrence (selected by 90% pre-TV, 60% post-TV), Appropriate follow-up care (85% pre-TV, 25% post-TV), Bone Health (80% pre-TV, 45% post-TV), symptoms requiring medical attention (75% pre-TV, 50% post-TV) and risk of other cancers (70% pre-TV, 45% post-TV). In the pre-TV survey, 10 concerns were identified by at least 70% of participants. After the TV, no concern was selected by >60% of participants, and only 8 concerns were selected by >30% of women. The concern rate dropped for all but 2 items post-visit. **CONCLUSIONS:** The findings indicate that a transition visit was particularly effective in addressing concerns related to health maintenance and health care utilization. **RESEARCH IMPLICATIONS:** Additional research is needed to ascertain the long-term effectiveness of a transition visit in decreasing patient concerns. **CLINICAL IMPLICATIONS:** This study suggests that a well-designed transition visit can help reduce patient concerns as women transition from multimodality breast cancer therapy into long-term survivorship. **FUNDING:** None.

P2-40

Exploration of Culturally Unique Needs and Challenges Experienced by Chinese Breast Cancer Survivors Living in the United States: A Qualitative Study Using Expressive Writing Approach

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PURPOSE: Psychological well-being and challenges among immigrant Chinese breast cancer survivors were understudied in the literature. This study used the expressive writing approach to

explore the unique needs and challenges experienced by Chinese breast cancer survivors living in the US. **METHODS:** Sixteen Chinese breast cancer survivors living in Southern California were recruited through community-based organizations. With a mean age of 54, participants were living in the US for 8–35 years. Most of them were diagnosed at Stages I and II (32% and 53% respectively). Participants were asked to write three 20-minute essays related to their experience with breast cancer (in 3 weeks) based on the given writing instructions. Participants' writings were coded with line-by-line analysis. Categories and themes were generated independently among the authors. Discussion on disagreed categories and themes continued until consensus was built. **RESULTS:** Participants' concerns were revealed in 4 aspects. In personal aspect, concerns about body image and body disfigurement were common among the participants. Emotion suppression, self-stigma and perceived stigma about being a breast cancer survivor were also reflected in the writings. Interpersonally, participants indicated their reluctance to disclose diagnosis to family and friends and concerns for fulfillment of multiple roles. Some of them also mentioned communication problems with their husbands. Related to life in the US, participants felt unfamiliar with the health insurance and health care system in the US and encountered language and financial barriers. Regarding knowledge and treatment of breast cancer, some participants indicated a lack of knowledge about breast cancer before the diagnosis. A number of them hesitated to choose mastectomy as their treatments. **CONCLUSIONS:** Multi-aspects of needs and challenges among Chinese breast cancer patients in the US were identified, providing important research and clinical implications. **RESEARCH IMPLICATIONS:** Further studies on the exploration of caregivers' needs and effective strategies for Chinese breast cancer patients' family and marital adjustment are warranted. **CLINICAL IMPLICATIONS:** Counseling services capturing concerns about patients' body image, stigma, and communication among family members may benefit patients' adjustments. Tailor-made information materials printed in Chinese about health insurance in the US, diagnosis and treatment for breast cancer may also help patients go through the course of recovery. **FUNDING:** This study was supported by Susan G. Komen Foundation (Ref. no: BCTR0707861 (Q. Lu), (PI: Qian Lu) and the American Cancer Society (Ref. no: MRS GT-10-011-01-CPPB (Q. Lu) (PI: Qian Lu).

P2-41**Communicating Cancer Treatment Information and Follow-Up Care Recommendations to Survivors of Cancer**

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PURPOSE: Cancer treatment information and follow-up care recommendations are an integral part of cancer care that significantly enhances quality of care and psychosocial support for patients. Uniform methods of disseminating this information have not been mandated, resulting in disparities in cancer information sharing. We examined demographic, cancer and health care characteristics associated with receipt and non-receipt of cancer related information from providers. **METHODS:** Data from the 2009 Behavioral Risk Factor Surveillance System (BRFSS) were analyzed using SAS-Callable SUDAAN to account for the complex sampling design. Predictors of receipt of information were examined using multivariate logistic regression models. **RESULTS:** The sample included 8,323 self-identified survivors of cancer, who were largely female (64.8%), White, non-Hispanic (88.6%), and 65 years and older (58.1%). Thirty-four percent of survivors reportedly received a written summary of their cancer treatments. Of the 67.6% of survivors who reported receiving follow-up care instructions, 57.9% received this information in writing. Only 27.9% of survivors reportedly received both treatment and follow-up care information and they were more likely to be White, non Hispanic (vs. Black, non Hispanic: OR = 2.64; 95% CI = 1.55–4.49), female (OR = 1.40; 95% CI = 1.08–1.82), lower income (<\$25,000 vs. >\$75,000: OR = 1.79; 95% CI = 1.18–2.70), not enrolled in clinical trials (OR = 1.88; 95% CI = 1.19–2.98), 15–19 years post diagnosis (vs. <5 years: OR = 2.36; 95% CI = 1.47–3.78) and seen by a surgical specialist for the majority of their health care (vs. cancer specialist: OR = 2.07; 95% CI = 1.26–3.40). **CONCLUSIONS:** Although survivorship care plans have tremendous potential to improve care by empowering patients to facilitate communication and seek appropriate care, only one-third of survivors reported receiving a summary of care and two-thirds reported receiving follow-up information. **RESEARCH IMPLICATIONS:** A significant number of survivors reported disparities associated with their receipt of treatment and follow-up care information. Future research should examine ways of increasing the dissemination of care planning information to survivors who are Black, non Hispanic, male, higher income, enrolled in clinical

trials, and less than 5 years post treatment. **CLINICAL IMPLICATIONS:** Our findings provide health care providers with imperative information about survivor reported disparities affecting their receipt, recollection of receipt, or internalization of care planning information. **FUNDING:** None.

P2-42**A Comparison Between Physical Activity Rehabilitation Program Designs for Self-Reported Physical Activity and Selected Social Cognitive Theory Variables**

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PURPOSE: To determine if the delivery method of a social cognitive theory based behavioral modification program designed to enhance physical activity of survivors of cancer differed in ability to influence the relationship between self-reported physical activity and selected social cognitive theory variables. **METHODS:** The present study compiled data from two groups of survivors of cancer on self-reported physical activity, exercise self-efficacy, exercise role identity, and self-regulation of physical activity from two groups of survivors of cancer. One group participated in a completely an email-only based intervention designed to enhance physical activity, while the other group participated in a face-to-face physical activity program supplemented with email messages designed to enhance physical activity. **RESULTS:** No statistically significant differences were observed for demographic variables between the two groups. For the face-to-face group a statistically significant relationship was observed between self-reported physical activity and the social cognitive variables self-regulation of exercise ($F = 7.408$, $p = 0.000$), exercise self-efficacy ($F = 2.009$, $p = 0.048$) and exercise role identity ($F = 3.049$, $p = 0.003$). For the social cognitive theory based email-only intervention statistically significant relationships were observed for exercise role identity ($F = 16.85$, $p = 0.001$) and exercise self-efficacy ($F = 7.46$, $p = 0.01$). Self-regulation of exercise was not statistically significant for the email-only intervention ($F = 2.70$, $p = 0.11$). **CONCLUSIONS:** These findings indicate that the implementation of a face-to-face social cognitive theory based intervention supplemented with email messages designed to enhance the physical activity of survivors of cancer has a greater influence on the number of variables significantly influenced when compared to an email-only intervention. **RESEARCH IMPLICATIONS:** These

findings offer refinement in the determination of the most effective and efficient method of intervention design for survivors of cancer. **CLINICAL IMPLICATIONS:** Email messages, in conjunction with face-to-face meetings, have a greater influence on the relationship between self-reported physical activity and selected social cognitive theory variables of survivors of cancer than a completely online intervention. It is important to determine the method of influential and efficient method to afford survivors of cancer the best opportunity for long-term survival. **FUNDING:** None.

P2-43

The MilesStrong Model: A Translational Approach to Cancer Rehabilitation

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PURPOSE: Created in 2003 by staff members, board members, volunteers and cancer survivors, the mission of Miles Perret Cancer Services (MPCS) is "to serve families in fighting and surviving cancer, with care and compassion." The mission of MPCS is founded on the principle that life is sacred, and quality of life should not be forgotten or neglected, particularly when battling cancer. Many cancer patients and their families need the organized and deliberate support of a cancer services center invested in their welfare and healing. In fall 2008, MPCS developed and offered a physical activity based rehabilitation program: MilesStrong. MilesStrong is designed to improve the quality of life of survivors of cancer before, during, and after traditional treatment through the utilization of various forms of physical activity and theory-based behavior modification. **METHODS:** Post-physician's approval, participants are evaluated on physiological and behavioral variables to design the most strategic plan of care. This care plan is developed to optimize rehabilitation services. Variables of interest include medical history, physiologic measures, quality of life, depression, fatigue, and behavioral variables (goal setting, social support, relapse prevention, self-monitoring, time management, exercise self-efficacy, exercise role identity). **RESULTS:** MilesStrong has shown a significant impact on all behavioral variables. Quality of life and depression have been positively affected as well. **CONCLUSIONS:** The MilesStrong Model used to offer the services provided by this service organization have profoundly positive effects on its participants, community, and all associated with the survivorship of cancer. **RESEARCH IMPLICATIONS:** The MilesStrong Model of

cancer rehabilitation provides services for a population often participating in various phases of sophisticated treatment. It also provides the means to track the progress of its participants over time to best insure a positive outcome with the ultimate hope to garner long-term survival. **CLINICAL IMPLICATIONS:** Implementation of the methods involved in the MilesStrong Model of cancer rehabilitation can offer a viable opportunity for cancer care providers to enhance the survivorship of its participants. **FUNDING:** Elements of the program are funded by Blue Cross and Blue Shield of Louisiana, The Susan G. Komen Foundation and by private donations.

P2-44

Using Reiki, Yoga, Meditation or Patient Education to Address Physical and Psychological Symptoms Related to Chemotherapy-Induced Peripheral Neuropathy: A Pilot Study

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PURPOSE: With few medical treatment alternatives for attenuating the symptoms of chemotherapy-induced peripheral neuropathy (CIPN), people living with CIPN have few options for managing the symptoms other than to endure them. A pilot study was conducted to determine the efficacy of each of three complementary approaches in reducing physical and psychological symptom distress related to CIPN. **METHODS:** Utilizing a pretest-posttest control group design with random assignment, this four-arm pilot study compared Reiki, Yoga, or Meditation interventions, against a holistic education control group. Interventions were delivered during 1-hour sessions each week for six consecutive weeks. Quality of life (QOL) and neurotoxicity data were collected using the Functional Assessment of Cancer Therapy instrument that contained 11 item neurotoxicity subscale (FACT-GOG-Ntx) (Calhoun, et al., 2003). Psychological distress data were gathered using the Brief Symptom Inventory-18 (BSI-18) (Derogatis & Melisaratos, 1983; Zabora et al, 2001) and the Mindful Attention Awareness Scale (Brown & Ryan, 2003) was used as a measure of mindfulness. **RESULTS:** Study participants ($N = 26$) reported duration of CIPN symptoms for an average of 33 months. Although statistical significance was not achieved, descriptive analysis of the data indicated that experimental group participants had improved overall scores on QOL and neurotoxicity outcomes measures. Psychological Distress scores improved for participants in the Yoga and Reiki groups, but declined slightly in the meditation group. With the exception of a worsening of neurotoxicity

symptoms, no change was demonstrated in the control group on any of the outcomes measures. No change was noted in any of the groups with respect to mindfulness. **CONCLUSIONS:** When used alone or as an adjuvant to traditional medical interventions for CIPN, the complementary approaches used in this study produced positive results on QOL, neurotoxicity, and psychological distress outcomes measures. No changes occurred in the control group. **RESEARCH IMPLICATIONS:** Positive results from the current study lend support for conducting future studies with larger randomized samples that would increase the power of the experiment to detect an effect upon QOL, neurotoxicity, psychological distress and mindfulness. **CLINICAL IMPLICATIONS:** Study findings provide preliminary support for integrating complementary interventions in the management of physical and psychological symptoms related to CIPN. **FUNDING:** George Mason University Center for consciousness and Transformation.

P2-45

Teaching Caregivers and Cancer Survivors to COPE: An Evidence-Based Problem Solving Intervention for Individuals Affected by Cancer Varner A¹, Clark K²

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PURPOSE: For the majority of the 1.5 million people in whom cancer is diagnosed each year (Jemal, 2009), at least one friend or family member assumes the role of informal cancer caregiver. Informal cancer caregivers are defined as those who provide physical, emotional, spiritual, financial, or logistical support to a loved one with cancer. While the 2008 Institute of Medicine report, *Cancer Care for the Whole Patient*, mandates that health care teams address the social and emotional needs of both patients and caregivers, descriptive studies show the needs of cancer caregivers are often overlooked and unmet (Borg, 2006; Cangelosi, 2009; Carter, 2006; Coon, 2007; Docherty, 2008; Donnelly, 2008). Cancer caregivers have a variety of health concerns including increased incidence of disturbed sleep (Carter, 2006), anxiety and depression (Carter, 2006; Pitceathly, 2004), and poor health (Borg, 2006) compared to their non-caregiving counterparts. More than 50% of cancer caregivers in a recent study were found to have depressive symptoms (Rivera, 2009), and family caregivers report having chronic illnesses of all types at twice the rate of non-caregivers (Glaser & Glaser, 2003). Interventions for cancer caregivers addressing these issues have been developed and studied, but they are not widely available in the community (Given, Given,

Kozachik, & Rawl, 2003). To begin to address the unmet needs of cancer caregivers, a community based organization developed a 4 session workshop series for caregivers and patients, CAREing and COPEing, based on and Julia Bucher's and Peter Houts' evidence-based problem solving COPE intervention (Bucher, Loscalzo, Zabora, Houts, Hooker, & BrintzenhofeSzoc, 2001; McMillan & Small, 2007). The series teaches participants the COPE method of problem solving with the aim of improving problem solving ability and communication between caregivers and survivors. **METHODS:** The workshop series is offered in a group setting with between 4 and 7 survivor-caregiver dyads. The same group meets weekly for 2 hours for a total of 4 sessions, learning and practicing the COPE model. The program was piloted as a research study in 19 community satellites around the country. Given the community participatory setting, convenience samples was used in each location. The research design was a pre-test, post-test, 3 and 6 month follow-up using five measures found to be reliable and valid: Satisfaction of Life Domains Scale of Cancer (Baker, Denniston, Hann, Gesme, Reding, Flynn & Kennedy, 2007), the Social Problem Solving Inventory - Revised (D'Zurilla, Nezu, & Maydeu-Olivares, 1998), the City of Hope Quality of Life Scale - Family Version (Ferrell & Grant, n.d.), Manne's Scale of partner intimacy (Manne, Ostroff, Rini, Fox, Goldstein, & Grana, 2004), and the Generalized Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). **RESULTS:** Data analysis using paired t-tests shows significant positive change in the confidence (self-efficacy) participants had with problem solving ($p < 0.05$), and positive trends were noted in overall problem solving ability. 3 and 6 month follow-up data are still being evaluated. **CONCLUSIONS:** Results of this study indicate that the COPE Intervention can be used effectively with cancer survivors and their caregivers in a community setting. The poster will present the challenges and successes of conducting community participatory research. **RESEARCH IMPLICATIONS:** In today's arena of psychosocial oncology where caregivers receive relatively little attention, this study indicates that the COPE method of problem solving is effective in assisting participants to feel more comfortable with problem solving and to feel increased mastery. This study also opens the door for further study as to the method of dissemination and the number of sessions needed to achieve the effect. **CLINICAL IMPLICATIONS:** The COPE Model of problem solving can be taught to patients and caregivers with relatively little expense. This study indicates that it is effective in assisting participants to feel more comfortable with problem solving and to feel increased mastery. This opens the door for psychosocial oncology professionals to be able to

provide a meaningful, low-cost intervention for caregivers. **FUNDING:** This study was made possible by funding through the Breast Cancer Fund of National Philanthropic Trust.

P2-46

Innovative Models of Online Support: Leukemia and Lymphoma Society and Cancer Support Community's Collaboration

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PURPOSE: Community-based cancer support organizations are searching for ways to serve effectively the growing number of cancer survivors. Survivors who live in rural areas are particularly vulnerable to not receiving the psychosocial care they deserve (Kenny, 2007; Wilson, 2000). The Internet is an increasingly effective way to reach survivors, both urban and rural and to reach patients who may live too far or are too ill (Lieberman, 2005; Owen, 2009). Online health support groups, especially for those dealing with cancer, are popular, being used by about 4% of the US adult population (HINTS, 2007). The Cancer Support Community and the Leukemia & Lymphoma Society created a collaborative partnership to better serve patients and caregivers through online support groups. **METHODS:** The Cancer Support Community (CSC) has pioneered professionally facilitated synchronous online support groups for people affected by cancer. Similarly, the Leukemia and Lymphoma Society has an extensive internet outreach program. In 2006, CSC and the Leukemia and Lymphoma Society began a partnership to maximize reach and resources, providing online support groups for LLS patients and caregivers. Pilot data from our earlier work indicated that over 60% of participants reported that online support was their primary source of support. In 2010 we developed and implemented an updated survey of all patients and caregivers in the CSC and LLS online groups. **RESULTS:** In 2009, CSC's website had nearly ¼ million unique visitors and over 8000 new online members joined the community. CSC conducted 14 weekly online, synchronous, support groups. Since August 2009, 507 patients and caregivers have enrolled in CSC's online community as a result of the partnership with LLS. Of those, 157 were served in online support groups. In this poster, we report on the development, implementation, and findings from the evaluation of this innovative collaborative model to provide much needed psychological and emotional support for leukemia, lymphoma and CML patients. **CONCLUSIONS:** This collaborative model—especially in today's economic environ-

ment where community-based non-profits organizations are asked to do "more with less," may be a model for the future. This is particularly true since CSC and LLS provide these services at no cost to patients and caregivers. **RESEARCH IMPLICATIONS:** Community-based organizations are a trusted resource for patients and caregivers. Collaborative partnership among community-based organizations who actively engage patients and families through social networking opportunities may be a cost-effective method of providing much needed support for the growing number of survivors. Moreover, there is a need to better understand the impact on behaviors and outcomes for survivors who participant regularly in online support groups and the potential opportunity to engage additional survivors in online support groups. **CLINICAL IMPLICATIONS:** There is a growing need to evaluate community-based organizations as they grow social networking opportunities. This collaborative model may provide a template for other community organizations to form partnerships that better serve patients and caregivers throughout the cancer continuum. **FUNDING:** None.

P2-47 was withdrawn.

P2-48

Cancer as an Awakening

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PURPOSE: The purpose of this project is to observe and describe coping strategies of patients in the midst of cancer or afterwards as survivors in remission. **METHODS:** In a qualitative way, cancer patients and cancer survivors will be described with a focus on their coping strategies and styles; namely how it may "awaken" them to new ways of living the rest of their lives. This will be described from the perspective of a private practitioner of psychiatry whose practice is approximately 45% related to cancer. **RESULTS:** Results will describe patients who have made changes in life style, have made major life changes or who have changed work or relationship situations as a result of having had cancer. **CONCLUSIONS:** The conclusions drawn from these observations support the notion that cancer is transformative in many ways. **RESEARCH IMPLICATIONS:** It would be of interest to look at cancer by diagnosis, severity and disability and relate these quantitatively to life changes. Also, the following question could be looked at: Do cancer patients or survivors with psychological impairments have a more difficult time changing

life strategies in response to cancer? **CLINICAL IMPLICATIONS:** Clinicians will become aware of the need to focus on how to enhance a patients coping strategies. **FUNDING:** None.

P2-49

Optimism Moderates the Association Between Age at Cancer Diagnosis and Risk of Depression

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PURPOSE: Younger age at cancer diagnosis has been associated with a higher risk of depression among cancer survivors, while optimism has been reported to be inversely associated with depression. This study examined whether the association between age at diagnosis and depression varies according to the degree of optimism. It was hypothesized that age at diagnosis would have a weaker association with depression among more optimistic survivors compared to less optimistic survivors. **METHODS:** Survey data from a heterogeneous sample of cancer survivors ($N = 1114$) were analyzed. Optimism was assessed with The Life Orientation Test- Revised. Scores at or below the 25th percentile were classified as low. Participants self-reported age at cancer diagnosis (in years) and depression (lifetime history of diagnosis by physician). Multivariable logistic regression was used to examine the association between age at diagnosis, degree of optimism, and the likelihood of being diagnosed with depression, adjusting for time since cancer diagnosis, sex, education, and marital status. **RESULTS:** Median age at diagnosis was 56 years (range 6–93) and median survival time was 7 years (range 2 - 71). Participants were primarily Caucasian (82.1%) and female (78.4%). Risk of being diagnosed with depression was inversely associated with age at cancer diagnosis (OR = 0.98, 95% CI: 0.97 - 0.99) and optimism (OR = 0.36, 95% CI: 0.27–0.48). The association between age at diagnosis and depression varied by degree of optimism (p for interaction = 0.048). There was a significant inverse association between age at diagnosis and risk of depression among less optimistic survivors (OR = 0.96, 95% CI: 0.94 - 0.99), but not more optimistic survivors (OR = 0.99, 95% CI: 0.97–1.01). **CONCLUSIONS:** Optimism may weaken the adverse association between younger age at cancer diagnosis and lifetime risk of

depression. **RESEARCH IMPLICATIONS:** The psychological impact of cancer differs based on age at cancer diagnosis and perceived optimism. More research is needed to understand how optimism influences the cancer experience across the lifespan. **CLINICAL IMPLICATIONS:** Certain groups of survivors (e.g., those that are relatively young at diagnosis and less optimistic) may be most vulnerable to negative psychological sequelae following cancer. These survivors may particularly benefit from psychological assessment and intervention. **FUNDING:** None.

P2-50

Capturing Gynecologic Symptoms and Sexual Problems in Cervical Cancer Survivors

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PURPOSE: We assessed sexual dysfunction, gynecologic symptoms, and severity of symptoms in cervical cancer survivors. **METHODS:** One hundred and fifteen cervical cancer survivors who concluded treatment 9–12 months prior to assessment completed the Female Sexual Function Index (FSFI), the Gynecologic Problem Checklist (GPC) (Wenzel et al., 2005; evaluates symptoms and sexual dysfunction specific to cervical cancer and its treatment) and individual questions regarding current sexual activity and frequency. **RESULTS:** The mean age of participants was 46 (range: 29–77) and most were married/living with a partner (63%). Seventy-percent had a stage I diagnosis (1a: 27%, 1b: 37%, 1 NOS: 6%), 17% stage II, and 13% stage III. Fifty percent of participants received surgery only, 7% radiation only and 43% radiation and chemotherapy. Women who were currently sexually active had a mean FSFI score of 21.4 (SD = 6.9), suggesting some impairment (Serati et al., 2009). Furthermore, 30% of sexually active participants reported that frequency was less than usual and 25% reported not being satisfied with frequency. As radiation has been associated with the greatest impairment in this population, we compared sexual function and gynecologic symptoms between women who received surgery only and women who received radiation. There were no significant differences in total FSFI scores or questions regarding frequency among treatment groups. However, on the GPC measure, women who received radiation reported significantly worse gynecologic symptoms ($p = 0.019$) and difficulty with intercourse ($p < 0.001$) compared to those treated with surgery only. Twenty-five percent of women who were not sexually active reported some impairment (“a little bit” to “very much”) on the GPC symptom subscale—a finding that would not other-

wise be captured by measures only assessing sexual function. **CONCLUSIONS:** It is important to develop and utilize measures that are sensitive to treatment- and disease-specific effects and accurately assess sexual and symptom sequelae in all women including those who are not sexually active. **RESEARCH IMPLICATIONS:** These results demonstrate the need to develop measures and interventions that are sensitive to issues associated with particular cancer populations and their treatment. **CLINICAL IMPLICATIONS:** The ability to capture disease and treatment-specific sequelae will have a substantial impact on survivor outcomes. **FUNDING:** National Cancer Institute:5R01CA118136-04.

P2-51

A View of Career Development and Community Integration From the Parent and Young Adult Brain Tumor Survivor's Perspective

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PURPOSE: Needs assessments conducted with parents, brain tumor survivors and late effects clinics indicated the greatest unaddressed challenges to be employment and social isolation. Young adult brain tumor survivors are more than twice as likely to be unemployed when compared to other childhood cancer survivors and also report being socially isolated. Focus groups indicated about half of parents and survivors demonstrated discrepancies in perceptions of employment potential, educational attainment capabilities, level of peer support and ability to live independently. Survey data from both parents and survivors confirm significant discrepancies between parents and survivors in terms of perceptions regarding employment potential and community integration. With parents serving as advocates and primary support people for the population this creates potential barriers in obtaining maximum employment, independence and quality of life. **METHODS:** A mixed methodology approach was used. Fifty young adult brain tumor survivors completed community integration, satisfaction with life, and career self-efficacy scales. Their parents completed the parent forms of each survey. Four parent and young adult survivor focus groups and both individual and large group interviews with young adult survivors were conducted. A literature review on quality of life of brain tumor survivors was completed. Brief assessment of current parent and survivor assessment used by educators and current relevant employment services (state vocational rehabilitation programs, TBI employment programs) was conducted.

RESULTS: Focus group analysis indicated differences in career expectation and potential, perception of peer support and community integration, and overall cognitive and physical changes as a result of the brain tumor diagnosis and treatment. Survey analysis was used to verify and quantify the differences. Group and individual interviews supported perception differences as well as supporting evidence that many parents and survivors agree on the majority of factors investigated. **CONCLUSIONS:** Focus groups suggest differences between parent and survivor life perceptions which may create barriers to obtaining appropriate employment, achieving maximum independence and reaching educational potential. Survey data indicate significant differences between parents and survivors in terms of employment expectations and community integration. Overall there is some significant discrepancy between parents and survivors on employment expectations and community integration. **RESEARCH IMPLICATIONS:** Differences between parent and survivor expectations regarding employment and community integration need to be actively addressed to facilitate psycho-social adjustment. Factors contributing to differences between parents and survivors needs to be further explored. Discrepancies between parents and survivors may present a significant barrier to maximizing employment and community integration. **CLINICAL IMPLICATIONS:** Discussions with families around cognitive, physical, and behavioral changes and the result this has on education achievement goals, career development and readiness, and independent living potential need to occur throughout the treatment and survivorship continuum. Current programs need to assess both parent and patient perspective. **FUNDING:** None.

P2-52

Prevalence of Depression in Cancer Patients: A Meta-Analysis

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PURPOSE: This meta-analysis investigates the prevalence of depression in cancer patients during or after treatment with curative intent. **METHODS:** A meta-analysis was performed based on a literature search in 4 databases (PubMed, PsychINFO, EMBASE en CINAHL) including epidemiological studies on the prevalence of depression among adult cancer patients during or after curative treatment. Studies were included in which depression was assessed by validated questionnaires CES-D, HADS-D, BDI,

BSI, PHQ-9 or (semi-) structured clinical interviews. **RESULTS:** From 1649 studies, 129 studies were included: 42 cohorts on breast cancer, 13 on cancer of the male reproductive organs, 13 on head and neck cancer, 10 on the digestive system, 9 on female reproductive organs, 8 on hemato-oncology, 6 on airway, 6 on brain, 2 on skin, 2 on urinary, 2 on endocrine nodes and 1 on bone cancer. A mixed group was investigated in 38 cohort studies. Mean prevalence of depression was 15.6% (I² = 94.95). The highest prevalence ($\geq 15\%$) was found in studies on patients with cancer of the female reproductive organs, head and neck cancer, hemato-oncology, and cancer of the brain and digestive system. Prevalence differed regarding assessment method ($p < 0.001$). No differences were found regarding phase of the disease (during or after treatment). **CONCLUSIONS:** Prevalence of depression in cancer patients during or after treatment with curative intent is on average 15.6% and seems to vary among types of cancer. **RESEARCH IMPLICATIONS:** More prospective studies are needed especially among less frequently studied cancer types. It is recommended to use uniform assessment methods in future studies. **CLINICAL IMPLICATIONS:** Identifying and referring patients with co-morbid depression should be one of the priorities in oncological care settings. **FUNDING:** None.

P2-53

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

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PURPOSE: The purpose is to investigate the prognostic significance of health-related quality of life (HRQOL) at baseline and 6 months after microvascular reconstructive surgery and radiotherapy with regard to survival in 80 patients with advanced oral or oropharyngeal cancer. **METHODS:** Multivariate Cox regression analyses of overall and disease specific survival were performed including sociodemographic (age, gender, marital status, comorbidity), and clinical (tumor stage and site, surgical margins, metastasis) parameters, and HRQOL (EORTC QLQ-C30 global quality of life scale). **RESULTS:** At baseline, younger age and having a partner were predictors of disease-specific survival, and younger age was associated with overall survival. At 6 months post

treatment, disease-specific and overall survival was only associated with (deterioration of) global HRQOL (HR: 0.96; 95% CI: 0.94–0.99). Global HRQOL after treatment was mainly influenced by emotional functioning. **CONCLUSIONS:** Deterioration of global HRQOL after treatment is an independent predictor of survival in patients with advanced oral or oropharyngeal cancer. **RESEARCH IMPLICATIONS:** Future studies are needed to disentangle the relation between HRQOL and survival and possible confounders, such as sociodemographic and tumor- and treatment-related parameters, comorbidity (e.g., depression and anxiety), and lifestyle. **CLINICAL IMPLICATIONS:** Information regarding HRQOL may contribute to a more precise prognosis in HNC patients. **FUNDING:** None.

P2-54

A Stepped Care Strategy Targeting Anxiety and Depression in Cancer Patients

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PURPOSE: The purpose is to develop and test a stepped care strategy. **METHODS:** A touch screen computer system (OncoQuest) measuring anxiety, depression and quality of life was implemented in clinical practice. A prospective study was carried out to assess anxiety and depression before treatment and during follow-up. A cross-sectional study was performed on the need for psychosocial care, peer support, and e-health. **RESULTS:** Low levels of distress at baseline or follow-up were noted in 64%; 18% had normal scores at baseline and developed distress at follow-up; 11% had high levels at baseline and returned to normal scores at follow-up, and 7% had persistent distress. No patients were referred to psychosocial care at time of diagnosis, at follow-up 21% were referred. The need for psychosocial care and peer support by patients was limited; the majority used the Internet frequently. Preliminary results reveal that stepped care including: 1. Watchful waiting, 2. Internet-based self-help, 3. Problem Solving Therapy by a nurse, and 4. Specialized psychological intervention/medication, is feasible in clinical practice. **CONCLUSIONS:** A high level of emotional distress is common and few patients are referred to psychosocial care. A stepped care approach including is feasible and may be beneficial for cancer patients. **RESEARCH IMPLICATIONS:** A randomized controlled trial is ongoing to assess cost-effectiveness of this stepped care strategy targeting emotional distress in head and neck and lung cancer patients. **CLINICAL IMPLICATIONS:** Results will contribute to

improved psychosocial care in cancer patients. FUNDING: Netherlands Organisation for Health Research and Development, ZonMw.

P2-55

Screening for Distress as the 6th Vital Sign: Successes and Challenges With a Canadian Project Involving Rural Health

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PURPOSE: Screening for Distress has been endorsed in the U.S.A. since 1999 with the introduction of NCCN Distress Management Clinical Practice Guidelines in Oncology. Eight years after the guidelines were introduced, a report from the Institute of Medicine concluded that cancer patients often do not have their psychosocial needs met despite the evidence supporting the effectiveness of psychosocial interventions. In Canada, Screening for Distress has been endorsed as the 6th Vital Sign by the Canadian Partnership Against Cancer-Cancer Journey Action Group (CPAC-CJAG). The purpose of this presentation is to describe the implementation of a 2 year project to Screen for Distress at 14 Community Oncology Clinic Network (COCN) sites where patients are receiving chemotherapy closer to home. Patients are screened with the Edmonton Symptom Assessment System scale (ESAS) and the Canadian Problem Checklist (CPCL) at each cycle of chemotherapy. **METHODS:** A review of Canadian Policy will be presented in the context of implementing Screening for Distress programs. The implementation of the project will be presented describing the principles that were adopted from the Screening for Distress toolkit developed by the CPAC-CJAG. Planning processes and successful strategies will also be described such as: engaging support of stakeholders; respecting cultural diversity; incorporating screening tools as part of nursing practice; applying concepts of Participatory Action Research as part of knowledge translation; anticipating and planning the delivery of psychosocial services in rural communities and, tracking patient outcomes. **RESULTS:** The project was initiated in April 2009 and as of June 2010 all 14 targeted COCN sites were screening patients for distress. Knowledge translation, to apply findings from research to clinical practice, continues to be a focus of the project to support the practice of nurses working with distress scores. **CONCLUSIONS:**

APOS members attending this presentation will have an understanding about policy and the impact on Screening for Distress programs. Knowledge will also be gained about best practices to implement Screening for Distress programs. **RESEARCH IMPLICATIONS:** The outcomes being tracked for this project may help determine the frequency that patients should be screened for distress while undergoing chemotherapy. Reduction of ESAS and CPCL scores will be evaluated in the context of nursing interventions and referral patterns to other health care professionals. **CLINICAL IMPLICATIONS:** Lessons learned from this project will help participants implement their own Screening for Distress program with the ultimate goal of providing patient-centered care. **FUNDING:** Canadian Partnership Against Cancer-Cancer Journey Action Group & the Northern Cancer Research Foundation.

P2-56

Assessing the Need for Social Work in Outpatient Academic Oncology Setting

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PURPOSE: Cancer affects one out of three Oklahomans and is the second leading cause of death. Prior to the University of Oklahoma's Cancer Institute's inception and initiative, no out-patient social work services were offered to cancer patients. Through foundation's funding a Patient Services program was created. **Project Goals:** To assess volume and scope of need for outpatient cancer patients. To assess actual needs vs. perceived needs of referring providers and measure time required to address all needs. **METHODS:** A referral form was implemented. Type of care provider making the referral and identified problem(s) were documented. Patient assessment discovered additional needs. Time requirements and patient volumes per social worker are analyzed. A qualitative and quantitative approach was used to explore the experiences of the Patient Support Services Team. **RESULTS:** Over the first 6 months there were 530 documented referrals to social work. 1591 patient contacts were required on 766 different identified needs. When re-measured again in the next 6 month time period, 569 documented referrals to social work were received, 1873 patient contacts were made and 795 needs were addressed. **CONCLUSIONS:** The IOM states that in spite of the evidence, one of the barriers is physicians and other care providers feel that providing attention to patients psychosocial health needs is considered the exception rather than the rule in cancer care today. The IOM recommendation is 1 full time MSW per

400 patients. **RESEARCH IMPLICATIONS:** To identify patient barriers and needs. To identify staffing and program needs. **CLINICAL IMPLICATIONS:** Interventions: Financial counseling was identified as largest need. A new position for a financial counselor was created and funding received. The use of a screening tool and patient informational packets were developed. The next steps would be: Maximizing resources. Continue to evaluate, seek funding opportunities and grow patient. Continue to assess referral patterns and evaluate the effectiveness of the new positions and new tools created. **FUNDING:** None.

P2-57

Role of Staff Support Groups in an Oncology Setting — A Developing Country Perspective

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PURPOSE: Literature has shown that community health care workers are a vulnerable population because they frequently encounter situations at work that are physically and emotionally demanding, with chronic exposure to stress having significant implications on physical and psychological wellbeing, even more so in a stress intensive environment like oncology. The aim of the current study was to evaluate the benefits, if any, of staff support groups in an oncology setting in India, conducted for urban outreach programme project workers of a tertiary care oncology institute, who had difficulties dealing with issues related to working in oncology, for e.g. grief reactions following patients' deaths, increasing preoccupation about patients' advanced illness, etc. **METHODS:** Health workers working (in fieldwork and hospital duty) for an urban outreach program projects, in a tertiary care oncology institute, in a developing country, were the participants in this study. The programme consisted of weekly support group sessions over 8 weeks, conducted by the mental health professionals of the in-house liaison psychiatry service Based on cognitive behavior therapy principles; the elements included ventilation of emotions, development of coping skills (problem solving, addressing negative automatic thoughts, etc), information provision and encouraging mutual support. Immediate evaluation (by verbal feedback) and sustained benefits (by formal feed back questionnaire after 4 months) of support group sessions were done. **RESULTS:** The main issues were stress related to dealing with patients and their compliance and communication problems. All found the sessions useful, mainly in areas like improving communication, handling grief reactions and developing better coping skills, both immediately and 4 months after completion of sessions. **CONCLUSIONS:** Staff support groups have a beneficial effect for non-profes-

sional health care workers in an oncology setting, and these benefits are maintained. **RESEARCH IMPLICATIONS:** Process and outcome research in support groups for different staff (e.g. in Bone Marrow Transplant Unit, Palliative care etc.) based on various psychotherapy models, need to be undertaken, especially in the setting of developing countries. **CLINICAL IMPLICATIONS:** Staff support group programmes can be tailor-made to suit different groups of health care professionals to address their vulnerabilities and improve stress management, which should part of service protocols of liaison psychiatry service in oncology. **FUNDING:** None.

P2-58

The Attitudes of Physicians Working in a Cancer Hospital in Egypt Toward Psychiatry

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PURPOSE: To assess the attitudes of physicians working a cancer hospital towards psychiatry versus attitudes of physicians working in a general hospital towards psychiatry. **METHODS:** Subjects: A cross sectional study of a convenient sample of 77 physicians of different specialties working in a cancer hospital and 80 physicians of different specialties working in a general hospital. Tool: A structured questionnaire for this study was distributed among the subjects. The questionnaire includes 10 subcategories including: 1) Attitudes towards the field of psychiatry, 2) Previous career intention to psychiatry, 3) Attitudes towards psychiatrists, 4) Attitudes towards mental health services, 5) Attitudes towards psychiatric treatment, 6) Attitudes towards mental illness and mentally ill patient, 7) Etiology of mental illness, 8) Human rights of psychiatric patients, 9) Acceptance and social distance from the mentally ill patient, 10) Psychiatric teaching and training. Setting: Children Cancer Hospital Egypt and the general hospital of the Faculty of Medicine Cairo University. **RESULTS:** Physicians working in cancer hospital showed more positive attitudes than those working in a general hospital in the subcategories of attitudes towards mental health services, psychiatric treatment, etiology of mental illness, psychiatric treatment and training. While physicians working in general hospital showed more positive attitudes than others at only the subcategory of acceptance and social distance from the mentally ill patient. Other subcategories showed very close results between both groups. Both groups should close negative attitudes to certain items such as Attitudes towards ECT. **CONCLUSIONS:** The attitudes of physicians working in a cancer hospital are more positive towards psychiatry than physicians working in a general hospital. This may be after that the psy-

chiatric care in cancer hospital is involved with all cancer patients and tumors committees. Still physicians are not fully aware by some aspects in psychiatry showing negative attitudes towards it. **RESEARCH IMPLICATIONS:** Further research work should be made about how physicians perceive the importance of the psychiatric care for patients with different diagnoses. Other research work should be done on patients' perception of the need of the psychiatric care for them while treated from different medical illnesses. **CLINICAL IMPLICATIONS:** Medical staff should have lectures and meetings discussing main diseases in psychiatry, signs and symptoms of mental illness, psychiatric treatment, and how to deal with a mentally ill patient. Enhancing the role of liaison psychiatry in with other branches is essential. Involving the psychosocial consultation to all patients with different diagnoses. Using different means **FUNDING:** None.

P2-59

Patient and Family Psychosocial Support Program Evaluation

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PURPOSE: Psychosocial support groups and services have moved from being considered an adjunct to cancer treatment to an essential piece of comprehensive cancer care. As these services have engendered increasing support as useful and beneficial to a patient's broader treatment experience, a multitude of programs have been developed that attempt to address the varying psychosocial concerns of cancer patients and their families. The Duke Cancer Patient Support Program (DCPSP) has developed three such programs that cater to specific populations and their diverse needs. KidsCan! (a support group for children aged 6–18 with a parent/caregiver diagnosed with cancer), Camp Kesem (a week-long camp for children with a parent/caregiver diagnosed with cancer), and the Pink Ribbon Yoga Retreat (a 3 day beach yoga retreat for breast cancer survivors) have all become integral components of the program's psychosocial offerings, and have seen a sustained increase in attendance since their initial implementation. The DCPSP has engaged in an ongoing evaluation process with each group so as to better understand the wants and needs of participants, which in turn allows each program to evolve in tandem with those who participate in them. This presentation will offer a description of each program, as well as a description of the findings of the evaluation process. **METHODS:** A history and description of each of the three pro-

grams will be offered, as well as how the evaluation process looks and its findings utilized. The results from the evaluation process, which include both quantitative and qualitative descriptions of service, will also be presented to elucidate the differences and commonalities across groups in terms of their needs and concerns. **RESULTS:** The ongoing evaluation process has allowed the DCPSP to continue to change and adapt each program to address the specific concerns of the groups being serviced. As such, these groups have experienced significant, continual increases in attendance since their initial implementation. APOS members will learn of the benefits offered by each group, as well as the evaluation process, and will be given ideas as to how this reflexive evaluation helps facilitate group growth and attendance. **CONCLUSIONS:** APOS professionals will be offered guidelines and ideas to successfully implement such support programs and evaluation processes. **RESEARCH IMPLICATIONS:** Support groups like the ones offered by the DCPSP can be studied to better understand the exact benefits obtained from participation in them, whether that is through quantitative or qualitative inquiries. **CLINICAL IMPLICATIONS:** Findings from these programs will allow for the development of best practices in regards to structuring support groups/services for continual and sustained growth. **FUNDING:** None.

P2-60

Counselor and Chaplaincy Collaboration in Provision of Psychosocial Cancer Services

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PURPOSE: A diagnosis of cancer carries with it various systemic impacts on patients' and families' biological, psychosocial, and spiritual experiences. While treatment regimens have improved in their attending to and attempt to mediate the psychosocial impacts of diagnosis and treatment, spirituality is often not fully utilized as a resource. Traditionally when called upon, spiritual counseling and consultation provided through chaplaincy service has been relegated to the inpatient arena, and as such, fails to address the spiritual needs of patients and families throughout their cancer experience, especially in an outpatient capacity. This presentation is based on the pilot conducted by the Duke Cancer Patient Support Program (DCPSP) in their partnering with and inclusion of chaplain residents as part of their outpatient and inpatient psychosocial service offerings. A description of the pilot program itself, benefits and barriers to the resident's inclusion, and the perceptions of its utility by the resident and counselors involved in the

program will be presented. **METHODS:** The program evaluation method used to assess the pilot will be described, as well as the history and specifics of the pilot program itself. For one semester a chaplain resident was on-call for 7 hours a week within the DCPSP. This resident was able to function in a more traditional role by providing spiritual care and consultation to admitted cancer patients, but also provided synchronous spiritual care by helping to facilitate support groups along with the counselors of the DCPSP. The resident and counselors also engaged in tandem one-on-one sessions with patients/families who presented for dual spiritual/mental health concerns. **RESULTS:** Themes regarding best practice in terms of chaplaincy exposure to patients and tandem counselor and chaplain engagement, as well as the perceived utility of the collaboration between the chaplain and counselors has led to the DCPSP hoping to continue the program in the future. APOS members will learn of the practice benefits of working collaboratively in this capacity, along with the programmatic considerations necessary to make such a relationship worthwhile to all involved. **CONCLUSIONS:** APOS professionals will be offered guidelines and ideas to successfully incorporate outpatient chaplaincy as a consistent complimentary service offering to cancer patients and their families. **RESEARCH IMPLICATIONS:** The utility of spirituality as a resource for coping with the stress and trauma of a cancer diagnosis has been documented in contemporary literature. However, consideration must also be given to how this resource can be enhanced and incorporated throughout the care of patients and families in its entirety, along with how that inclusion can further insulate all involved from cancer's negative psychosocial impacts. **CLINICAL IMPLICATIONS:** Findings from this pilot evaluation will allow for continued and increased utilization of outpatient chaplaincy services with cancer patients and their families. **FUNDING:** None.

P2-61

Outpatient Integrated Psychosocial Triage

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PURPOSE: As psychosocial services have increasingly been incorporated into the treatment regimens of cancer patients, as well as medical patients in general, two main issues have presented as impediments to providing this collaborative care; 1) identifying patients that present with a psychosocial need, and 2) long lag times between identification of that need and the patient's referral to a mental health specialist.

Keeping these issues in mind, the Duke Cancer Patient Support Program (DCPSP), in collaboration with other Duke oncology psychosocial providers, has developed and implemented the use of a psychosocial triaging process to better identify and address patients and families who present with psychosocial concerns. This process trains medical staff to identify psychosocial issues, as well as helps facilitate the most appropriate avenue of psychosocial referral based on the stated need. The following presentation will address the development and implementation of this psychosocial triaging process by the DCPSP, and the unique challenges faced by their counselors as the providers of psychosocial care. **METHODS:** The triaging process itself will be described along with how the DCPSP negotiated this referral mechanism among the other oncology psychosocial providers. How the DCPSP incorporates and addresses referrals from the triaging process will be emphasized, along with a description of the criteria used by the DCPSP in order to identify patients with acute psychosocial needs/issues. **RESULTS:** As this triaging service has continued to demonstrate its utility, not only in its ability to train medical staff to better recognize psychosocial distress, but also in providing a framework for making adequate referrals to psychosocial providers, the process has seen increased utilization by medical staff. With this sustained growth, the DCPSP has had to evolve in tandem with the project in order to adequately negotiate the influx of referrals from these various sources. APOS professionals will be presented with potential and actual issues regarding this type of triaging system, along with the solutions decided upon by the DCPSP in order to successfully navigate them. **CONCLUSIONS:** APOS professionals will be offered ideas and guidelines regarding the incorporation of these kinds of triaging services, as well as the benefits and drawbacks to their inclusion and expansion. **RESEARCH IMPLICATIONS:** Psychosocial triaging processes can be studied to better understand their impact on cancer patients and their families, as well as how their inclusion can help facilitate a more efficient, appropriate, and comprehensive system-wide referral process. **CLINICAL IMPLICATIONS:** Findings from this program will help enable the continued implementation and adjustment of triage processes in order to better identify and address cancer patients' and their families' psychosocial needs. **FUNDING:** None.

P2-62**Creating an Integrative Biopsychosocial Screening Model for People With Cancer: A Community Initiated Research Collaboration Demonstration Project**

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PURPOSE: The Institute of Medicine (2007) recommends psychosocial screening for all cancer patients to improve integration of care. In the United States, up to 85% of patients are treated in the community rather than comprehensive cancer centers. However, distress screening for patients in the community is largely non-existent. To bridge this gap, the Cancer Support Community is testing the feasibility and effectiveness of community-based comprehensive screening for cancer patients. **METHODS:** Using the Community-Initiated Research Collaboration model, the first phase of a larger demonstration project is to validate and adapt an existing problem-related distress screening tool for the community. The screening tool asks cancer patients to identify and rate their practical, social, and emotional problems along with their medical, informational and referral resource needs. To validate this tool, a pen-and-paper version of a 53-item measure (SupportScreen™) and a standardized distress measure (Center for Epidemiologic Studies Depression Scale; CES-D) were administered to 350 patients at ten community-based sites nationwide. **RESULTS:** Patients reported the five most common causes of problem-related distress were fatigue (49%), sleeping (43%), worry about the future (39%), finances (37%), and side-effects of treatments (34%). The five most common problems for which participants requested assistance were managing my emotions (49%), worry about the future (46%), sleeping (44%), feeling down or depressed (43%), and feeling anxious or fearful (42%). Using statistical and theoretical criteria, 19 items were dropped from the screening tool, 6 items revised and 2 items added comprising a 36-item community version. Using results from factor analysis, 6 items comprised a depression scale which correlated strongly with the CES-D score for depression ($R = 0.72$, $p < 0.001$, $n = 343$). **CONCLUSIONS:** These findings provide a first step in creating a reliable and standardized

method of assessing psychosocial distress across a large network of community-based care providers. **RESEARCH IMPLICATIONS:** The promising findings of the validation study support next steps to validate the revised, 36-item version of the screening tool for use within the community. **CLINICAL IMPLICATIONS:** Lessons learned around the feasibility and impact of implementing community-based distress screening can inform the establishment of quality standards and best practices for distress screening in the community. **FUNDING:** Genentech, Eli Lilly and Company Foundation.

P2-63**Decisional Factors Influencing Breast Reconstruction Post-Mastectomy: Results From a National Survey**

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PURPOSE: The decision whether to undergo breast reconstruction can be complex for women diagnosed with breast cancer. Guided by Cognitive-Social theory, the Cancer Support Community (CSC) conducted a national survey in an effort to better understand the patient decision-making process around breast reconstruction. **METHODS:** 840 U.S. women with breast cancer (762 eligible for breast reconstruction) participated in the survey online or by paper-and-pencil at Cancer Support Community affiliate sites in 2010. In addition to demographics, information about their diagnosis, treatment, and experience with reconstruction, women rated the influence of various psychosocial factors on their decision about whether or not to undergo reconstruction. **RESULTS:** The majority of participants (63.2%) have chosen to undergo reconstruction and many participants currently undergoing treatment, plan to consider it at a later time. 18.5% of participants have already decided against undergoing reconstruction. Participants who chose to have reconstruction generally reported that body image (70.3%) and physical appearance (73.1%) influenced their decision "a great deal", whereas factors that were "not at all" influential included financial concerns (69%) and opinions of others (60.3%). Participants who chose not to undergo reconstruction reported concerns about side effects (62.1%), concerns about undergoing additional procedures (59.3%), and fear of recurrence (42.1%) as influencing their decision "a great deal", but sexuality (39%) and body image (33%) did not influence their decision. For those currently considering reconstruction, physical appearance and concerns about side effects influenced participants (60.7% and 52.7%, respectively) "a

great deal". These individuals also had the largest percentage of respondents endorsing experiences of other women with breast cancer (66.1%) as "somewhat" influential in their decision. All differences between groups were statistically significant. **CONCLUSIONS:** Multiple psychosocial factors influence the decision whether or not to undergo breast reconstruction. **RESEARCH IMPLICATIONS:** These results suggest the relative weight of psychosocial decisional factors in this often challenging and personal decision-making process. **CLINICAL IMPLICATIONS:** Results will inform the development of a new national educational program, entitled Frankly Speaking About Cancer: Spotlight on Breast Reconstruction which, among other goals, provides tools necessary to empower patients and support effective decision-making tailored to the individual. **FUNDING:** Developed with support from Mentor Worldwide LLC, a leading supplier of aesthetic medical products.

P2-64

Recognizing and Addressing Suicide Risk in Cancer Patients

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PURPOSE: Medical illness, particularly cancer, heightens the risk of suicide, and cancer patients commit suicide at approximately twice the rate of individuals in the general population. Appropriate assessment of suicidal risk, including how to assess suicidal statements, will be examined in detail. Recommended responses to and treatment of the suicidal patient based on the situation, with plan, intent, history, and other factors considered, will be described. **METHODS:** Statistical information regarding cancer and suicide risk was obtained from the literature, and recent articles regarding cancer and suicide were reviewed, along with published material by prominent authors in the field. Clinical procedures used in psychiatric practice and clinical experience in evaluating potentially suicidal patients will be discussed. Documents and programs used at MD Anderson to identify and treat these patients will be described. **RESULTS:** Not a research study. **CONCLUSIONS:** Risk for suicide in cancer patients is known, and studies have underscored the seriousness of this issue. As most healthcare providers caring for these patients do not specialize in Psychiatry, a review of risks, assessment, and interventions can be helpful. Recognizing risk factors for suicide early can help prevent unnecessary loss of life. Programs have been established in our institution and are effective in reducing the risk for suicide in patients with cancer. **RESEARCH IMPLICATIONS:** Researchers may

want to compare suicide prevention programs to see if any method appears superior in prevention of suicide. **CLINICAL IMPLICATIONS:** It is important for clinicians to know what the risk factors are, know how to evaluate a patient with suicidal thoughts for suicidal intent and risk, and what appropriate interventions to use to maintain safety. **FUNDING:** None.

P2-65

Predictors of Change in Distress, Anxiety and Question Self-Efficacy Following a Community-Based Treatment Decision Support Program for Hematological Cancer Patients

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PURPOSE: Open to Options is a pilot project that aims to enhance treatment decision making and improve well-being among blood cancer patients in three communities nationwide with an emphasis on enrolling ethnic minority participants. Trained facilitators provide one-on-one patient support using an evidence-based decision-making model entitled SCOPED (Situation-Choices-Objectives-People-Evaluation-Decisions) to prompt patients to list questions about diagnosis and treatment. Evaluation data indicate a decrease in distress and anxiety and increase in question self-efficacy (QSE) following the program. The present analysis examines factors associated with greater change in outcomes. **METHODS:** Distress, anxiety, and QSE were measured on a scale of 0–10, with 0 being minimum and 10 maximum. Multiple regression analysis was used; the dependent variable was the difference between pre- and post-intervention values. **RESULTS:** To date, three facilitators have used the SCOPED question-listing process with 64 patients (16% ethnic minority). Among patients, there was a decrease in distress ($p = 0.058$) and anxiety ($p = 0.026$) and increase in the patient's question self-efficacy ($p < 0.001$). Lower income ($p = 0.005$) and higher baseline distress ($p = 0.011$) were associated with a greater decrease in distress. Higher baseline anxiety was associated with a greater decrease in anxiety ($p < 0.001$). White race ($p = 0.041$) and lower baseline QSE ($p < 0.001$) were associated with a greater increase in QSE. **CONCLUSIONS:** Early findings suggest one-on-one decision support for blood cancer patients may improve

coping and decision-making skills. Several factors (income, race, baseline levels of distress, anxiety and QSE) predicted greater response to the question-listing program. **RESEARCH IMPLICATIONS:** The established feasibility and the promising findings of this pilot support a larger randomized controlled trial. Further research is needed to evaluate the value of targeting and/or tailoring treatment decision-making programs for blood cancer survivors. **CLINICAL IMPLICATIONS:** Individual support is feasible at Cancer Support Community and a valuable addition to current programs and services. **FUNDING:** Centers for Disease Control and Prevention (#DP07-709 U58/DP001111).

P2-66

Depression — Paraneoplastic Syndrome in Parotid Tumor?

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PURPOSE: The association between inaugural psychiatric symptoms and oncological disease has been described in a variety of tumors. Depressive complains are frequently the first presentation in lung and pancreatic tumors. The presence of these symptoms in parotid tumors has not been described and, concerning a case report, the authors suggest this association as a paraneoplastic manifestation. **METHODS:** The authors reviewed relevant literature in this area, namely parotid tumors, psychiatric symptoms, paraneoplastic syndromes, collecting data from Medline, EMBASE and PsychINFO databases. The authors focus on a case report of a 60 years old man, presenting major depressive episode with psychotic symptoms, resistant to multiple psychopharmacology, leading to prolonged psychiatric inpatient care, 4 months before oncologic diagnosis. **RESULTS:** During psychiatric hospitalization and after thorough clinical and laboratorial exams (namely, cerebral and facial TC scan and MRI) a malignant parotid tumor was found; therefore the patient started adequate surgical and radio therapeutic treatment. The depressive complains rapidly disappeared after surgical tumor excision, and the patient is currently in psychopathological remission and oncologic follow-up. **CONCLUSIONS:** Despite the lack of reference of the association between inaugural psychiatric symptoms and parotid tumors in the literature, the psychopathological presentation and evolution in this case strongly suggests a depressive paraneoplastic syndrome, as described in other tumors. **RESEARCH IMPLICATIONS:** Further research is fundamental to understand this clinical association and the physiopathology inherent to the paraneoplastic mechanisms. **CLINICAL IMPLICATIONS:** The

authors are giving a contribution to enhance the interest in this border area, leading to a rapid clinical identification and adequate treatment. **FUNDING:** None.

P2-67

Nutritional Status of Women Evaluated for Pelvic Mass

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PURPOSE: Malnutrition prior to surgery is associated with increased length of hospital stay. This pilot study assessed the relationship between malnutrition scores and other components of health pre- and post-operatively in women presenting with a pelvic mass determined at surgery to be benign. **METHODS:** Patients completed the validated Patient-Generated Subjective Global Assessment (PG-SGA), the fatigue subscale of the Functional Assessment of Cancer Therapy instrument, and the Women's Health Initiative Physical Activity Questionnaire at the pre- and post-operative visits. A nurse practitioner trained in conducting nutritional assessments completed the physical examination section of the PG-SGA. Total PG-SGA score is the sum of scores from sections A – D of the instrument. Score A is based on self report of recent Weight Loss, Food Intake, Symptoms (such as feel full quickly, nausea, etc) and Activity Level. Nutritional intervention is suggested for patients with a total PG-SGA score > 4. **RESULTS:** Mean total pre-operative PG-SGA scores of 14 women were 6.79 ± 1.53 ; 57% had a total PG-SGA score > 4. The majority of the score was due to Score A (mean 6.21 ± 1.50) and the two scores were correlated ($r = 0.994$, $p < 0.001$); the largest component of Score A was Symptoms (mean 4.07 ± 1.12). Pre- and post-operatively, 57% reported at least some regular exercise each week. Pre- and post-operative mean fatigue scores were 20.4 ± 4.5 and 14.2 ± 3.5 . Women lost a mean of 5.8 ± 1.9 lbs between visits. Post-operative mean total PG-SGA scores were $4.14 \pm .91$. PG-SGA scores were correlated with fatigue scores pre-operatively ($r = 0.632$, $p = 0.015$) and post-operatively ($r = 0.537$, $p = 0.048$). **CONCLUSIONS:** Evaluation of nutritional status should be included in the pre-surgical evaluation. Section A of the PG-SGA correlates well with the overall score and can be used as a screening tool. **RESEARCH IMPLICATIONS:** The established feasibility and the promising findings of this pilot support a larger randomized controlled trial with intervention to determine if addressing malnutrition improves patient outcomes. **CLINICAL IMPLICATIONS:** This study supports use of Section A of the PG-

SGA to identify those patients who might need nutritional intervention FUNDING: None.

P2-68

Relationship Between Psychological and Medical Factors and Cancer Related Fatigue Syndrome in Advanced NSCLC Patients Receiving Palliative Chemotherapy

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PURPOSE: Prospective, observational study was conducted to find out correlations between psychological, emotional and medical factors and cancer-related fatigue syndrome (CRF) in NSCLC patients receiving palliative chemotherapy and additionally to evaluate clinical response in case different CRF level. **METHODS:** 76 patients in advanced NSCLC, undergoing palliative chemotherapy participated in the study. Prior, during (up to 6 cycles of chemotherapy) and after treatment (follow-up visit (FU) after 8 weeks) the patients were asked to complete a set of psychological questionnaires, like temperament questionnaire FCB-IT (Zawadzki, Strelau, 1997), Hospital Anxiety and Depression Scale (HADS) (Zigmond, Snaith, 1983), Cognitive Emotion Regulation Questionnaire (CERQ) (Garfalski, Kraji, Spinhover, 2001). At the same time physicians completed medical form with clinical data, in which objective parameters of the disease were monitored (e.g. EPO, Haemoglobin level, weight, ECOG/WHO, etc.). **RESULTS:** Results show r-Pearson correlation between CRF and temperament traits in some cycles, like: endurance ($r_1 = -0.229$, $r_2 = -0.292$, $r_3 = -0.273$, $r_5 = -0.673$, $p < 0.05$), emotional reactivity ($r_6 = 0.652$; $p < 0.05$), sensory sensitivity ($r_5 = -0.668$; $p < 0.05$) and briskness ($r_5 = -0.572$, $p < 0.05$); with coping and emotional strategies, like: concentrating on other positive aspect ($r_1 = -0.243$, $r_2 = -0.289$, $r_{FU} = -0.288$; $p < 0.5$), rumination ($r_6 = 0.664$; $p < 0.05$), catastrophising ($r_6 = 0.893$; $p < 0.001$), anxiety ($r_3 = 0.393$, $p < 0.01$; $r_5 = 0.584$, $p < 0.05$; $r_{FU} = 0.796$, $p < 0.015$) and depression ($r_3 = 0.307$, $r_4 = 0.315$, $p < 0.05$; $r_6 = 0.796$, $p < 0.01$; $r_{FU} = 0.312$; $p < 0.5$). Additionally, there were found medical parameters of this correlation, like: erythropoietin

concentration in serum in 6th cycle of chemotherapy ($p < 0.05$), iron concentration (Fe) ($r_1 = 0.279$, $r_2 = 0.320$, $r_4 = 0.323$, $r_6 = 0.675$; $p < 0.5$), reticulocytes ($r_1 = 0.286$; $p < 0.05$) and TIBC ($r_3 = 0.312$; $p < 0.05$). Furthermore it was found that patients with higher CRF level in 1st cycle had worse clinical response – disease progression (PD) in comparison to partial response (PR; $p < 0.01$) or stable disease (SD; $p < 0.05$) when they have statistically lower CRF. **CONCLUSIONS:** The findings indicate that there is significant correlation between cancer-related fatigue syndrome and both medical and psychological factors, including traits of character. Moreover, level of perceived by pts fatigue may indicate better or worse clinical response. **RESEARCH IMPLICATIONS:** The establish methodology and attractive findings in NSCLC support further research in other cancers and bigger groups. It would be interesting to evaluate psychological support during treatment in contexts of reducing cancer fatigue and improvement clinical response. **CLINICAL IMPLICATIONS:** The findings of this study show significant role CFR level in clinical response and both medical and psychological factors in CFR syndrome. It seems to be important to monitor psychological parameters in parallel to medical factors in NSCLC patients. **FUNDING:** None.

P2-69

Olanzapine in Oncology: An Atypical Use for the Atypicals

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PURPOSE: Psychiatric providers are presented with a unique challenge when treating oncology patients. This patient population is already plagued with a number adverse effects from cancer treatments and first line psychiatric medications sometimes worsen these physical complaints. In fact some psychiatric medications are even contraindicated depending on the patient's treatment protocol. It is at times difficult to balance preserving the integrity of the treatment regimen while maintaining quality of life. This case series presents the use of olanzapine in an oncology population to address mood symptoms and adverse effects of chemotherapy. **METHODS:** A review of the literature discussing olanzapine's receptor activity will be presented. This case series follows three oncology patients treated with olanzapine. In these patients, olanzapine is used off label to treat mood symptoms, appetite, nausea, vomiting and insomnia. Patients are managed and followed by a psychiatric nurse practitioner and psychiatrist working in a large oncology practice. **RESULTS:** Patient outcomes including electrolyte

values, HbA1c, patient reported nausea/vomiting, mood and insomnia are measured pre and post initiation of olanzapine. **CONCLUSIONS:** This case series sheds light on the potential risks and benefits of using olanzapine off label in an oncology population, and provides a basis for future research in the area of psycho-oncology. **RESEARCH IMPLICATIONS:** There is an opportunity to evaluate long term risks and benefits of olanzapine in an oncology population. Outcome measures, including quality of life indicators for oncology patients, could be measured long term to evaluate the efficacy of this type of intervention. Future research including both treatment and control groups would shed more light on the impact of this medication in an oncology population. **CLINICAL IMPLICATIONS:** This case series provides outcomes for oncology patients using olanzapine off label for the treatment of mood symptoms and adverse effects of chemotherapy. These outcomes can guide psychiatric providers working with an oncology population to address symptoms effectively while minimizing the medication burden common in this population. **FUNDING:** None.

P2-70

Urinary Symptoms in Endometrial Cancer Survivors: A Controlled Comparison

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PURPOSE: Urinary symptoms in women are commonly associated with aging, menopause, and obesity, and have been shown to adversely affect quality of life. The same factors predispose women to endometrial cancer. Radiotherapy and surgery also put survivors at risk of urinary symptoms. Little is known about these symptoms in survivorship and their effect on quality of life. The purpose of this study was to examine urinary symptoms and their relationship to quality of life in survivors compared to women with no history of cancer. **METHODS:** Participants in the current study were 41 endometrial cancer survivors who had completed treatment 1 year previously and 56 women with no cancer history. There were no differences between the group in mean age, body mass index, and menopausal status ($p > 0.05$). Participants completed the International Consultation on Incontinence Questionnaire-Female Lower Urinary Tract Symptoms Module and the Medical Outcomes Study-Short Form. **RESULTS:** Among survivors, urinary symptoms were not associated with disease or treatment characteristics, including radiotherapy. Compared to controls, survivors reported more storage symptoms and incontinence symptoms ($ps < 0.05$), but not more voiding symptoms ($p > 0.05$). Survivors

also reported more bother associated with storage symptoms and incontinence symptoms ($ps < 0.05$) but not voiding symptoms ($p > 0.05$). Overall physical and mental-health related quality of life did not differ between survivors and controls ($ps > 0.05$). More severe urinary symptoms were associated with poorer physical quality of life in both survivors and controls ($ps < 0.05$) and with worse mental quality of life in survivors ($p < 0.05$). **CONCLUSIONS:** Findings suggest symptoms may be more common in survivors than women with no cancer history. Symptoms are associated with significant bother and adversely impact quality of life. **RESEARCH IMPLICATIONS:** Future research should replicate these findings in a larger sample. Research should also be designed to elucidate efforts to manage symptoms and identify barriers to seeking help so effective interventions may be developed. **CLINICAL IMPLICATIONS:** Left untreated, symptoms are likely to continue and may worsen over time. Clinicians should screen for symptoms in survivors and offer treatment recommendations or make referrals as appropriate. **FUNDING:** American Cancer Society, MRSG-06-082-01-CPPB.

P2-71

Delirium Induced by Lafutidine, Histamine H2-Receptor Antagonist in Postoperative Cancer Patients

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PURPOSE: Delirium in postoperative cancer patients often affect their prognosis. From psychosocial point of view, it also gives the patients and their family further anxiety. Histamine H2-receptor antagonist is known as one of precipitating factors of delirium, but delirium induced by lafutidine has not been reported. The purpose of the study is to examine the risk of lafutidine-induced delirium and the psychological influence on cancer patients and their family. **METHODS:** We report two cases of delirium during the treatment course of hepatocellular carcinoma. Case 1 was a 72-year-old woman. Two to four days after partial hepatectomy, she showed insomnia, disorientation and delusion of persecution. Intravenous haloperidol 5mg for her excitement was not effective at all. Lafutidine 10 mg prescribed from 2 days after the operation was stopped and her symptoms were immediately relieved. Case 2 was an 80-year-old man. Nothing in trouble had happened 3 days since partial hepatectomy. At the fourth night, he became disoriented and cut the drain attached to himself. Lafutidine 10 mg had been started from the very day. We stopped it and he immediately came back to usual. In both cases, patient's family was much shocked by patient's symptoms. Patients were also embarrassed to hear

afterward the conditions they did not remember. **RESULTS:** It may be that delirium observed in the cases was induced by lafutidine. Development of delirium would make patients and their family more anxious about the prognosis of their cancer. **CONCLUSIONS:** Risk of lafutidine-induced delirium may be high and it may lead to greater anxiety of cancer patients and their family. **RESEARCH IMPLICATIONS:** Histamine H₂-receptor antagonist including lafutidine may induce delirium in postoperative cancer patients. **CLINICAL IMPLICATIONS:** Clinicians should refrain from histamine H₂-receptor antagonist including lafutidine not to cause delirium and give cancer patients and their family further anxiety. **FUNDING:** None.

P2-72

Akathisia: Medication Induced Anxiety and Restlessness in Cancer Patients

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PURPOSE: Chemotherapy induced nausea and vomiting is a very common complaint in cancer patients. Drugs commonly used to control these symptoms have resulted in severe side effects, including increased risk for suicide. Initially the symptoms are mild and patients usually do not seek help until the condition worsens. The main complaints are acute anxiety, dysphoria, restlessness and fidgety movements while seated. The purpose of this presentation is to bring awareness to the clinicians for early detection of the condition and management of these patients. This presentation is based on 6 years of practice in a major cancer center and treating severe cases of akathisia. **METHODS:** We reviewed 3 years of records of patients seen in consultation for severe anxiety and restlessness. Clinical management of patients with akathisia will be described in detail followed by a management plan, which includes medication management and patient and family education about medications to be avoided in the future. A review of the literature on treatment options available is also provided. **RESULTS:** Recognition of the problem and immediate treatment of akathisia resulted in improvement of symptoms within 24 hours in most cases. In some cases long term management was required. **CONCLUSIONS:** Akathisia is a syndrome with variable presentations, from mild anxiety to extreme restlessness and agitation, which may lead to suicidal thoughts. It remains a concern in cancer patients under treatment for prolonged nausea and vomiting. The condition needs to be recognized early and treated efficiently. **RESEARCH IMPLICATIONS:** It would be worthwhile to track down all the patients with akathisia and

categorize them based on gender and age. Further study on specific dosage of the medication responsible and the lead time before the appearance of symptoms will be worthwhile. **CLINICAL IMPLICATIONS:** Accurate and standardized tests are required for early recognition and management of the syndrome. This will result in better patient outcome. Suicide can be prevented as it has been reported in patients in whom akathisia remained unrecognized and untreated. It will be cost effective to treat these patients as outpatient versus emergency room consultation or hospitalization. **FUNDING:** None.

P2-73

Androgen-Deprivation Therapy is Associated With Increased Insomnia in Patients With Prostate Cancer

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PURPOSE: Between 25 and 40% of prostate cancer patients report insomnia symptoms and the role of androgen-deprivation therapy (ADT) in their occurrence has been postulated. ADT leads to nocturnal hot flashes and nocturia which may both disturb sleep. As part of a larger longitudinal study, this investigation aimed to: (1) compare the evolution of rates of insomnia in patients receiving ADT + radiotherapy (ADT-RTH) to patients receiving RTH only; and (2) assess the mediating role of hot flashes and urinary symptoms in the relationship between ADT and insomnia. **METHODS:** Sixty men scheduled to receive RTH for prostate cancer, with ($n = 28$) or without ($n = 32$) ADT, were assessed prior to receiving any treatment (baseline) and at seven additional times over a period of 16 months (1, 2, 4, 6, 8, 12, and 16 months) using the Insomnia Severity Index and a measure of physical symptoms assessing the frequency of hot flashes and night sweats (2 items) and urinary symptoms (3 items). Linear mixed models using a factorial (2 groups x 8 times) design tested main and simple effects. Physical symptoms were added as covariates to test mediation. **RESULTS:** After controlling for age and physical activity frequency, a significant time effect was found in ADT-RTH patients, $F(7.354) = 2.16$, $p = 0.04$, but not in RTH only patients, $F(7.354) = 0.89$, $p = 0.51$. In ADT-RTH patients, significant differences between the baseline assessment ($M = 4.4$) and evaluations at 2 months ($M = 6.0$; $t(354) = 2.13$, $p = 0.03$), 4 months ($M = 6.0$; $t(354) = 2.17$, $p = 0.03$), and 6 months ($M = 6.9$; $t(354) = 3.25$, $p = 0.001$) were found. A significant mediating role of night sweats ($p = 0.006$) was found in the relationship between ADT and insomnia symptoms, while the mediating role of hot flashes frequency ($p = 0.07$) and excessive urinary

frequency ($p = 0.07$) was marginally significant. **CONCLUSIONS:** ADT appears to be associated with an increased risk for insomnia through the influence of nocturnal hot flashes and to a lesser extent of urinary symptoms. **RESEARCH IMPLICATIONS:** Further studies using objective measures of nocturnal hot flashes and sleep are needed to better understand their relationship. **CLINICAL IMPLICATIONS:** Interventions targeting nocturnal hot flashes would be relevant in order to prevent the development of insomnia in prostate cancer patients receiving ADT. **FUNDING:** NARSAD, CIHR, FRSQ.

P2-74

The Seven Levels of Healing® Program: Network Implementation and Impact of a Seven-Week Cancer Education and Support Program

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PURPOSE: The Seven Levels of Healing® Program (SLOH) is an integrative oncology education and support program designed to help participants and cancer centers coherently address the mental, emotional, and spiritual, as well as physical, issues encountered on the cancer journey. This presentation gives an overview of the SLOH Program and the results of the first 3 years of implementation across Rocky Mountain Cancer Centers (RMCC), the largest network of community oncology centers in Colorado. **METHODS:** In 36 months, a total of 41 seven-week SLOH Programs were offered at six RMCC

sites. Participants met weekly for 2-hour workshops addressing the following “levels”: 1) “Education and Information”, 2) “Connection with Others”, 3) “The Body as Garden”, 4) “Emotional Healing”, 5) “The Nature of Mind”, 6) “Life Assessment”, and 7) “The Nature of Spirit”. Qualitative and quantitative feedback was collected following each session. **RESULTS:** A total of 450 patients, post-treatment survivors, loved ones, and healthcare professionals attended the Program. Participant demographics varied widely according to role, sex, diagnosis, age, and socioeconomic background. Feedback was consistently strong with 92% of attendees rating their overall experience in the Program as “excellent” or “outstanding”. Participants reported that the Program assisted them in meeting needs for information on biomedical and CAM therapies, buffering stress, enhancing adaptation to illness, strengthening relationships, and fostering healing in body, mind, heart, and spirit. Ultimately, 91% of participants stated that they were “more likely” or “much more likely” to refer others to RMCC due to the fact that the Program was offered. **CONCLUSIONS:** The SLOH Program is a feasible and effective group model for offering comprehensive integrative cancer care to a broad range of people living with cancer. **RESEARCH IMPLICATIONS:** As a carefully operationalized psychosocial intervention which can be consistently implemented across a network of clinics, the SLOH Program offers a wealth of opportunity for future research regarding costs and benefits for participants, staff, physicians, and cancer centers. **CLINICAL IMPLICATIONS:** The SLOH Program is an effective manualized model for assisting a diverse group of people to navigate the physical, psychological, emotional, social, and spiritual dimensions of cancer illness and healing. **FUNDING:** Rocky Mountain Cancer Centers.

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