

78 Oral Abstract Session, Fri, 10:45 AM-12:15 PM, and Poster Session (Board #A8), Fri, 12:15 PM-1:45 PM and 5:15 PM-6:15 PM**Evaluating preliminary outcomes among primary care and oncology providers who participated in the cancer survivorship e-learning series for primary care providers.**

Mandi Pratt-Chapman, Aubrey Villalobos, Allison Harvey, Ashley Roccio; GW Cancer Center, Washington, DC; Vanderbilt University Medical Center, Nashville, TN

Background: The American Cancer Society estimates there are 15.5 million cancer survivors in the U.S. and projects this number will rise. Survivors are at increased risk for a variety of issues due to cancer and its treatment including long-term and late effects. In recent years, there has also been increased focus on ensuring coordinated care for survivors to address these and other issues. **Methods:** Launched in 2013, the E-Learning Series evaluation employs self-report pre/post surveys using a 5-point Likert scale of agreement. In an initial analysis conducted with available data, participants who took more than one module were represented more than once in the total sample. Independent samples t-tests and Mann Whitney U tests were used for tests of significance for comparisons between PCP and oncology providers. **Results:** Of the respondents (n = 1,662), PCPs were represented on average 30% across modules. Both PCP and oncology providers reported knowledge gains across modules from pre (Mean pre-range for PCP = 2.96-3.71, SD = 0.797-1.022; Mean pre-range for oncology = 3.28-3.92, SD = 0.717-0.964) to post (Mean post-range for PCP = 4.05-4.44, SD = 0.568-0.716; Mean post-range for oncology = 4.28-4.49, SD = 0.525-0.611). Mean change scores for PCPs ranged from 0.66-1.15 (SD = 0.671-1.093) and for oncology providers change scores ranged from 0.58-1.04 (SD = 0.700-0.967). Related to shared-care model, differences in perceived knowledge gain about treatment late effects were statistically significant (p = 0.001) between PCPs (change score mean = 0.92, SD = 0.975) and oncology providers (change score mean = 0.58, SD = 0.799). Differences were also seen in rehabilitation module, with PCPs indicating gain in ability to identify appropriate interventions (p = 0.047). **Conclusions:** Initial results indicate the E-Learning Series is effective in improving knowledge about needs of survivors as well as recommended care practices among providers.

The effects of global and targeted advance care planning efforts at a national comprehensive cancer center.

Finly Zachariah, Lindsay Emanuel, Gayle Ito-Hammerling, Judy Wong-Toh, Denise Morse, Linda Klein, Matthew J. Loscalzo, Nellie Garcia, Sorin Buga, Michael Lew, David Horak, Chandana Banerjee, Stefanie Mooney, Joseph C. Alvarnas; City of Hope, Duarte, CA; City of Hope National Medical Center, Duarte, CA; City of National Medical Center, Duarte, CA; City of Hope Natl Med Ctr, Duarte, CA

Background: Advance Care Planning is a central component of patient centered care and helps assure treatment aligns with a patient's goals, values, and priorities. Various studies demonstrate advance care planning decreases stress and anxiety, increases satisfaction, improves awareness and implementation of a patient's end of life wishes, and reduces costs in select populations. At City of Hope (COH) National Medical Center, we made concerted efforts over the last four years to improve the overall number of advance directives(ADs), and have additionally focused on improving AD capture rates in clinically relevant populations (patients undergoing surgery, those with metastatic disease, and those undergoing hematologic transplant). **Methods:** The Department of Supportive Care Medicine with executive team endorsement and in collaboration with medical oncology, hematology, anesthesia, surgery, nursing, marketing, and informatics created a patient-centric advance care planning program. We developed disease specific workflows, created multi-lingual AD workshops in the Sheri & Les Biller Patient and Family Resource Center, changed policy to provide complimentary patient/caregiver and staff notarizations for ADs, leveraged the electronic medical record (assured providers were able to document discussions, know when ADs were absent, and easily retrieve ADs when present), deploy AD specific screening questions, and most recently created a culturally sensitive branding campaign coined "Plan Today for Tomorrow." **Results:** The rate of advance directive capture for all patients new to COH has continuously improved from 12% in 2012 to 22% in 2016. In transplant patients, AD capture rate increased to 63%. In a pilot for bladder cancer patients undergoing cystectomy, ADs were increased to 68%, and in the pre-anesthesia testing clinic, ADs were increased to 35%. **Conclusions:** We have made significant strides in the capture of advance directives at City of Hope with markedly higher capture rates in selectively targeted, clinically relevant populations. We anticipate improved patient centric care as a result, with the unintended consequence of cost savings and decreased resource utilization.

Finding common ground: Aligning institutional and survivorship steering committee (SSC) goals.

Andrew Joseph Ward, John Bell, Lindsey Jerkins; University of Tennessee Medical Center, Cancer Institute, Knoxville, TN; University of Tennessee, Knoxville, TN; The Cancer Institute at The University of Tennessee Medical Center, Knoxville, TN

Background: Developing a Survivorship program goes beyond providing survivorship care plans to patients upon completion of cancer treatment. Programs can take many forms; ranging from very robust with long-term follow-up to minimal, with patients returning to the primary care provider when cancer-specific treatment is complete. To develop our program at an academic medical center with 2900 annual new cancer patients, we chose to enlist a SSC of survivors to help shape our program. **Methods:** In addition to fulfilling the American College of Surgeons Commission on Cancer Standard 3.3 requirements, we also desire to meet the needs of the patient. Thus, the survivorship program coordinator requested that providers within the Cancer Institute (CI) identify patients to form a SSC. 13 physicians contributed a total of 14 patients as candidates. Each patient was invited to participate and 7 accepted. The initial SSC meeting was held 6 months after initiation of our survivorship program. **Results:** SSC members represented 5 different primary malignancies and had varying degrees of experience within the treatment continuum. The initial meeting began with an overview of the current services available in the CI. Members were also given the opportunity to share treatment & survivorship experiences. Some of the SSC members utilized patient navigation during CI initial intake; others had experience with CI support groups. Some used ancillary services such as physical therapy, integrative health, financial counselors, and social services; others were not aware these services were available. A list of 4 categories of goals for program development was suggested with a meeting planned again in one year to review progress. Meeting one year later, the group determined progress was made in 3/4 (75%) of the goals. **Conclusions:** When creating a Survivorship program, patient goals should be considered and aligned with institutional and accreditation goals. One way to ensure that this is accomplished is to enlist front-end input from a SSC that represents a wide variety of treatment experiences and providers. In our experience, this strategy leads to alignment of patient and programmatic goals resulting in increased patient satisfaction and program quality.

Feasibility study using tablet PC for assessment of quality of life and risk factors of breast cancer survivors.

Su-Jin Koh, Yunsuk Choi, Chung Reen Kim, Kim Ju Hee; Department of Hematology and Oncology, Ulsan University Hospital, University of Ulsan College of Medicine, Ulsan, South Korea; Department of Hemato-Oncology, Ulsan University Hospital, Ulsan University College of Medicine, Ulsan, Republic of Korea; Department of Physical Medicine and Rehabilitation, Ulsan University Hospital, Ulsan University College of Medicine, Ulsan, Republic of Korea; Ulsan University Hospital, Ulsan, Republic of Korea

Background: The aim was to assess the feasibility of using tablet PC for assessment of risk of breast cancer recurrence and primary cancer, physical and psychological effect of breast cancer and treatment, health promotion at first visit among breast cancer survivors. **Methods:** The prospective study was carried out in the survivorship clinic, university teaching and tertiary referral hospital. After clearance from the Institutional Review Board, 40 breast cancer patients first visiting survival clinic received surgical treatment and adjuvant chemotherapy were included in the study after informed written consent, irrespective of the age and stage of disease. The patients were answered as per quality of life, physical function and activity, pain, fatigue, anxiety and depression, distress by using tablet PC. We evaluated the information of education, marriage, job, economic status and health, knowledge about management of cancer survivors, feasibility (difficulty, simplicity, necessity, comfort, satisfaction, recommendation) of using tablet PC and difficulty of the questionnaire in understanding, psychological, social and documenting aspect. **Results:** Most of patients using tablet PC agree with easy (85.7%), simplicity (75.4%), necessity (75.5%), comfort (72.1%), satisfaction (83.9%), recommendation to others (77.8%). Age over 60 years (83% vs 96%, $p=0.037$), general health status ($r=0.491$, $p=0.001$) affect to the difficulty of using tablet PC. And age, knowledge, education, general health status affect to the understanding of questionnaire. In multivariation analysis, educational status (elementary school ($\beta=-0.312$, $p=0.016$), middle school ($\beta=-0.452$, $p=0.001$) and general health status ($\beta=-0.344$, $p=0.010$) affect to the understanding of questionnaire. **Conclusions:** We can use tablet PC in outpatient cancer survivors clinic effectively. But we need careful evaluation for who are not good in general health status.

Online social network use among parents of young childhood cancer survivors.

Justin Gregory Wilford, Kathryn Osann, Lari B. Wenzel; University of California Irvine, Irvine, CA; University of California, Irvine, Orange, CA; University of California, Irvine, Irvine, CA

Background: Online social networks (OSNs) have emerged in the past decade as potentially powerful tools for health information sharing and health behavior change. According to a recent study by the Pew Research Center, 75% of all parents are active on OSNs. Given the high level of need for childhood cancer survivorship health education and preventive health behavior change, OSNs represent key resources for parents to engage with experts and peers over survivorship health. **Methods:** A cross-sectional survey of 114 parents of young and adolescent (< 13 years) childhood cancer survivors was used to examine parent OSN use in specific platforms. Recruitment was conducted through online social support groups of two childhood cancer non-profits that focus on parent support. The novel online survey investigated OSN frequency of use, history of making new friends in OSNs, and whether OSNs were “good for sharing and receiving reliable and high quality information on diet, physical activity, and other healthy behaviors.” **Results:** Parents reported high levels of OSN use with 80% reporting daily use. Facebook was the most commonly used OSN by a wide margin. Seventy-eight percent of parents reported using it every day. The next most used OSN was Instagram (15%). Parents reported making new friends on Facebook (86%), followed by Instagram (22%) and Twitter (10%). Among parents who have used the respective OSNs, several were endorsed as being “good” or “extremely good” for sharing survivorship-related preventive health information. Facebook was endorsed by 76% of its users, Twitter and Pinterest by 59%, Google+ by 52%, and Instagram by 40%. None of the demographic variables collected predicted parent OSN use or perception. There was a strong association between parents using OSNs daily and their reporting having made new friends on OSNs ($p < .000$). **Conclusions:** Parents of young childhood cancer survivors recruited from online support groups report high levels of OSN use and making new friends through OSNs, and find OSNs potentially good sources for sharing and receiving survivorship-related health information. OSNs in general, and Facebook in particular, represent promising avenues for childhood cancer survivorship health information dissemination.

The transition from treatment to follow-up care: A critical time for patient navigation.

Sam Gaster, Rita Sanem, Diane Jones-Larson, Jordan Fiegen, Jamie Arens; Avera Cancer Institute, Sioux Falls, SD

Background: There are many points of transition in cancer care, and each presents a unique set of challenges for patients and providers (Nekhlyudov, Levit, Hurria, & Ganz, 2014). This includes the transition from treatment to follow-up care, or the transition to survivorship. For patients, challenges include the need for continued support, education, and communication with the cancer care team. For providers, challenges include the management of late- and long-term effects, modification of health behaviors, and coordination with other providers (IOM, 2005). These challenges can be overcome with patient navigation services. However, survivors' access to these services is not universal. This evaluation describes the implementation and assessment of these services at six regional cancer centers in the Midwest. **Methods:** Key stakeholders designed a protocol for survivors to receive patient navigation after their transition to follow-up care. These navigation services are provided by nurse and social work navigators, and involve placing outbound calls to survivors. These contacts occur approximately two weeks after survivors receive a survivorship care plan (SCP) and a needs assessment. **Results:** From August through September 2016, 33 (91.67%) survivors were contacted by patient navigators. Three survivors could not be reached. Twenty-one percent (n = 7) of survivors contacted had not previously received navigation services. However, all survivors contacted received navigation services that would not otherwise been provided. Contacted survivors expressed high satisfaction with the services, and the most common needs addressed were anxiety and fatigue. **Conclusions:** Results support the value of patient navigation services for cancer survivors. This evaluation describes the successful implementation of a protocol for the continued navigation of survivors after their transition to follow-up care. Results encourage further development and evaluation of this protocol, including its impact on symptom management, health promotion, and care coordination via referrals and the provision of education and resources.

Caregiver needs during transition from acute cancer: Findings from focus group discussions with cancer survivors and caregivers.

Elliott Tolbert, Janice Bowie, Claire Frances Snyder, Barrow Makia, Katherine Clegg Smith; Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; Johns Hopkins Bloomberg School of Public Health, Baltimore, MD; Johns Hopkins University School of Medicine, Baltimore, MD; Johns Hopkins University, Baltimore, MD

Background: The Institute of Medicine recommends that all cancer patients receive a survivorship care plan to help alleviate challenges faced when transitioning from acute treatment to long-term survivorship. As nearly three million Americans act as caregivers for a loved one with cancer, it is important that the survivorship care planning process consider the needs of not only the survivor, but also caregivers. **Methods:** In preparation for a randomized controlled trial of survivorship care planning, we conducted four focus groups with adult survivors of breast, prostate, and colorectal cancer (n = 28) and two with self-identified caregivers of people who had been treated for these three cancers (n = 20). Focus group participants were recruited from a large, urban academic medical center and a rural community cancer center. Discussions focused on needs and expectations during the transition from cancer treatment to survivorship. Each discussion was recorded, transcribed, and analyzed qualitatively. Data analysis also included review of findings by an advisory board of patients and caregivers. **Results:** Six themes emerged, some raised by both survivors and caregivers, and some only by caregivers. The need for information on side effects and follow-up care recommendations, confusion regarding the role each provider plays once treatment is complete, and the need for resources and support to help deal with issues such as physical and emotional distress and living a healthy lifestyle were brought up by both caregivers and survivors. In addition, caregivers discussed uncertainty about their role as a caregiver, their own mental and emotional health needs, and the idea that adjusting to 'a new normal' is not just for the patient, but also caregivers. **Conclusions:** Caregivers have distinct needs in addition to those of the patient. These caregiver concerns may need to be addressed during the survivorship care planning process. Based on these findings, we are including a caregiver-specific resource in our survivorship care planning randomized controlled trial.

Information when patients participate in a phase I trial: A systematic review.

Katrine Toubro Gad, Ulrik Niels Lassen, Paul Morten Mau Sorensen, Mette Terp Høybye, Christoffer Johansen; Department of Oncology, Rigshospitalet, Copenhagen University Hospital, Copenhagen, Denmark; Rigshospitalet, Copenhagen, Denmark; Interdisciplinary Research Unit, Elective Surgery Center, Silkeborg, Denmark; Institute of Cancer Epidemiology, Copenhagen, Denmark

Background: While phase I trials are essential for the development of new anticancer drugs, there is a limited chance of benefitting for cancer patients participating in such trials. The information dialogue is therefore of substantial importance for providing a foundation to make a decision, and the support from relatives of potential value for the patient. This systematic review investigated patients' prerequisites for deciding to participate in a phase I trial by summarizing the existing knowledge regarding patients' decision-making when entering a phase I trial, and patients' and their relatives' perception of the information prior to enrollment. **Methods:** The review is based on the principles of Preferred Reporting Items for Systematic Reviews. A comprehensive systematic search was performed using the PubMed, Embase and PsycInfo databases and supplemented by a search for unpublished literature. **Results:** We identified 36 studies for inclusion in this review. When patients are offered participation in a phase I trial, information procedures as well as the patients' individual approach influence the decision-making and the perception of the information provided. Across the studies exploring patients' perception of information, there was a limited understanding of trial purpose and unrealistic expectations of benefit. The relatives' perception of information remains unexplored. Evaluation of the included studies demonstrated a comprehensive risk of bias in the majority of studies. **Conclusions:** The information dialogue between physician and the patient concerning participation in a phase I trial seems to benefit from exact information taking account of the perspectives for each individual patient as well as the need for further discussion of trial. While relatives intuitively function as resources for patients entering a phase I trial, this topic is still not investigated.

Development of the medical appointment planner.

Margaret Clayton, Lee Ellington, Kathi Mooney; University of Utah College of Nursing, Salt Lake City, UT; University of Utah, Salt Lake City, UT

Background: Breast cancer survivors experience multiple physical and emotional symptoms. Difficulties occur when women cannot effectively present questions and concerns during surveillance visits resulting in unmet needs and unanswered questions. **Methods:** The Medical Appointment Planner (MAP) is a structured visit preparation approach providing communication skills to facilitate presentation of a woman's symptoms/concerns to medical providers. MAP was developed sequentially in 4 phases: Phase 1) Focus groups explored women's issues during surveillance visits. Phase 2) Feasibility pilot, using paper-pencil delivery. Phase 3) iPad feasibility, usability / satisfaction pilot. Phase 4) National trial pilot with Susan Love's Army of Women comparing electronic MAP delivery to a usual care group developing question lists. **Results:** Focus Groups. A major theme was "difficult interactions with medical providers" especially presenting concerns. Paper-Pencil Feasibility. Eight women (age 30-79) used MAP for medical visit preparation; the average number of symptoms endorsed was 17 out of a possible 21. All women successfully used MAP to prepare for their upcoming medical visit. MAP was determined to be feasible with women asking for electronic delivery for ease of use. iPad Prototype: 26 women (age 40-80); Outcomes of symptoms, mood, uncertainty, and well-being, improved pre to post-visit. National pilot: 49 women (age 50-77); 21 in the MAP intervention group, 28 in the usual care group preparing questions pre-visit. No differences between groups in age or breast cancer stage were observed. After first use, women report MAP is helpful, and providers have reacted favorably to visit preparation with feasible electronic national delivery. The question list group also reports ease of program use. **Conclusions:** Across MAP pilot studies women report that MAP helps organize thinking, condense thoughts, and stay "on track". Improving current practice that recommends preparing question lists before medical appointments; the structured MAP visit preparation approach teaches communication skills to facilitate presentation of symptoms and concerns to providers, enabling women to break into the medical "script" and get their symptoms/concerns addressed.

87

**Poster Session (Board #H8), Fri, 12:15 PM-1:45 PM and
5:15 PM-6:15 PM****Development of a statin risk communication tool for use in cancer survivors: A pilot.**

Nirupa Jaya Raghunathan, Deborah Korenstein, Nassim Anderson, Roberto Adsuar, Emily S. Tonorezos, Kevin C. Oeffinger; Memorial Sloan-Kettering Cancer Center, New York, NY

Background: There are currently over a million survivors of childhood, adolescent, and young adult (CAYA) cancer in the US, many of whom were treated with radiation therapy. Chest radiation with fields including the coronary arteries is a risk factor for cardiovascular disease (CVD). Of note, survivors are often unaware of this increased CVD risk or, if they are aware, do not know how to mitigate the risk. Visual aids and communicating risk in terms of absolute risk reductions are shown to improve patients' understanding. The Institute of Medicine recommends use of decision aids to optimize patient discussions of benefits and harms of therapies. Our goal is to develop and pilot test a statin therapy risk communication tool for use in high-risk cancer survivors to improve shared decision making and patient knowledge of coronary artery disease risk. **Methods:** The Statin Risk Communication Tool, modeled after the validated Statin Choice decision aid, presents a pictorial representation of absolute risk of coronary heart disease risk in survivors of CAYA cancer treated with radiation to the chest. The intervention also presents data depicting absolute risk reduction of myocardial infarction with use of statins in similar risk populations ($\geq 7.5\%$ baseline risk). This pilot study compares the statin risk communication tool to usual care. The post-visit assessment uses Likert-like scales to explore patient perceptions of statin use, knowledge questions to assess patient understanding of the risks and benefits of using statins and the validated 16-item Decisional Conflict Scale to measure decisional satisfaction. We will also survey participants three months after introduction of the tool to ascertain statin use and attitudes towards the discussion of statins. **Results:** The timeline for data collection anticipates analyzable results by August 2017. **Conclusions:** This risk communication tool will be assessed for acceptability, knowledge enhancement, and decisional conflict. Additionally, we will gather qualitative data regarding usual care. With this information, a future randomized controlled trial across institutions could provide information on how CAYA survivors approach shared decision making with risk communication tools. Clinical trial information: NCT02895880.

Monitoring oral anti-cancer therapy adherence in cancer patients using web based application guided communication compared with nurse counseling in a community cancer center.

Milana V. Dolezal, Vivian Leong, Rajesh Behl; Alta Bates Summit Comprehensive Cancer Center, Berkeley, CA; Alta Bates Summit Medical Center, Berkeley, CA

Background: Smart phone web based applications (apps) can be effective communication tools for monitoring compliance and increasing adherence to oral anti-cancer therapy in the out-patient setting. **Methods:** Cancer patients age 18-90 treated with various oral anti-cancer therapies were recruited to this prospective, 3 month observational trial at our large community cancer center to determine feasibility of using an app for oral anti-cancer therapy compliance. Enrolled patients are randomized to either Arm 1 App arm and nurse counseling or Arm 2 nurse counseling only. The free apps MyMeds and Medisafe incorporate medication reminders and record doses. Patients complete the validated RAND 36- item quality of life (QOL) questionnaire and a free text feedback. **Results:** 91 patients were screened between 11/2015 to 9/2016 (45 declined enrollment due to various factors). 46 patients were randomized with 25 to Arm 1 and 21 to Arm 2. Demographics included 10 men (various tumor types but mostly multiple myeloma) and 36 women; 22 with breast cancer. MyMeds app lacked the necessary real-time communication so patients were switched to the MediSafe app which features email alerts. 15 patients have completed the study through Month 3. Four patients on Arm 1 missing their monthly visit or were non-compliant with the app. 23 patients remain active in the study. Differences are a higher QOL score in Arm 1 vs Arm 2 in measured domains of Energy/Fatigue (56% in Arm 1 compared to 44% for Arm 2) and Pain (72% in Arm 1 compared to 58% in Arm 2). Patients randomized to the app found the electronic alerts very helpful. **Conclusions:** Our limited pilot study demonstrated the potential of smart device apps as effective communication tools for improving patients' adherence to oral anti-cancer therapy and QOL. Ultimately, convenient ways to monitor patients' compliance with anti-cancer therapy will impact survival and facilitate provider-patient communication.

Use of a web-based app to improve breast cancer symptom management and aromatase inhibitor adherence.

Ilana Graetz, Caitlin N McKillop, Edward J. Stepanski, Gregory A. Vidal, Lee Steven Schwartzberg; University of Tennessee Health Science Center, Memphis, TN; West Cancer Center, Memphis, TN

Background: For postmenopausal women with hormone receptor-positive breast cancer, long-term use of aromatase inhibitors (AI) significantly reduces the risk of cancer recurrence and improves disease free and overall survival. Despite the known benefits of AIs, many patients are nonadherent due to adverse side effects. We conducted a pilot randomized controlled trial of a web-enabled application (app) to provide real-time monitoring and better management of treatment-related adverse symptoms among patients with hormone-receptor positive breast cancer and a new AI prescription. **Methods:** Eligible patients who agreed to participate were randomized into either: App: had access to the app and received weekly reminders to use it; or Usual Care: had access to the app but did not receive reminders. Concerning responses and trends triggered email alerts to the patient's providers, who then could review responses to manage ongoing treatment and make therapeutic adjustments. The main analyses compared overall AI adherence using the Morisky Medication Adherence Scale and quality of life using the Functional Assessment of Cancer Therapy Endocrine Symptoms (FACT-ES). **Results:** We enrolled 44 patients, 21 in the App and 23 in the Usual Care groups; 83% of patients approached agreed to participate, 23% were African-American, and 32% were over the age of 65. Overall, 74% of participants in the App group used the app at least once per week compared with 38% in the Usual Care group ($p < 0.01$). Reported AI adherence at 8 weeks after initiation was significantly higher among App compared with the Usual care group at 8 weeks (100% vs. 72%, $p = 0.01$). Using a differences-in-differences analysis, we found a substantially larger decrease in quality of life in the Usual Care group compared with the App (-11.5 vs. -3.9, $p = 0.191$), although this difference did not reach statistical significance. **Conclusions:** App use with weekly reminders significantly improved short-term AI adherence. If short-term gains in adherence persist, this low-cost intervention could improve survival outcomes for women with hormone-receptor positive breast cancer.

Survivors' stories are the teacher: Narrative mapping and survivorship care plans as educational innovation for pre-clerkship medical students.

Alyssa Claire McManamon, Marie Thompson; USUHS, Bethesda, MD; Wright State University, Dayton, OH

Background: The IOM's recommendation for Survivorship Care Plans (SCPs) has met slow adoption, further hampered by growth in survivorship. Inviting patients into SCP creation supports individualized care goals. Narrative mapping is a visual tool to navigate challenging communicative landscapes. We describe an educational innovation that values SCP completion, engages physicians & trainees to solicit patient narrative, and allows emergence of collaborative care. We hypothesized it is feasible to: provide preclerkship medical students "legitimate peripheral participation" via meaningful use of the electronic health record (EHR) to review an individual patient's cancer history; engage survivors and learners through narrative mapping to improve the SCP process; provide a student-prepared, clinician/survivor vetted SCP, leveraging UME in support of survivors' needs. **Methods:** 170 second-year students at the Uniformed Services University were invited to enroll in a pilot curriculum on cancer survivorship. Oncology providers identified patients without an SCP and interested in sharing their stories since time of diagnosis. Survivors and students (in separate 90 min workshops) created and shared drawn maps of personal health stories. Students received EHR training to inform use of the ASCO SCP template for an assigned survivor. Following student-survivor review of survivors' narrative maps, triads (student-survivor-oncologist) met to finalize SCPs for EHR upload. **Results:** Over three months, 18 medical students drafted an SCP on behalf of an assigned survivor. 19 survivors received an SCP following creation and sharing of their narrative map. Post-pilot, 95% of participating students submitted written reflections (uniformly positive) and survivors requested to remain involved in UME, finding meaning in sharing their stories. **Conclusions:** Survivors are enthusiastic educational partners in complex care environments. It is feasible to engage medical students with cancer survivors to create SCPs, with narrative mapping as a contextualizing approach. UME learning needs dovetail with those of survivors to address the call for SCP adoption.

Patient-provider communication during post-treatment breast cancer care: Findings from a pilot project.

Neetu Chawla, Michael Sanchez, Jayson Harpster, Leslie Manace Brenman, Raymond Liu; Kaiser Permanente Northern California, Oakland, CA; Kaiser Permanente, San Francisco, CA

Background: Patient-provider communication is essential to delivering high quality cancer care, including post-treatment when survivors have many complex care needs. In this study, we used data collected for quality improvement from a small, feasibility sample to examine patient perceptions of provider communication and inform the development of a new Oncology Survivorship Clinic model. **Methods:** As part of a pilot project conducted at Kaiser Permanente Northern California (KPNC), we surveyed 51 breast cancer patients post-treatment. The survey included a communication measure from the 2011 Medical Expenditure Panel Survey (MEPS) Experiences with Cancer survey evaluating provider discussions of: surveillance for recurrence; late or long-term treatment effects; healthy lifestyle behaviors; and emotional or social needs. We also examined reports of the six core functions of patient-centered communication (i.e. managing uncertainty, responding to emotions, making decisions, fostering healing relationships, enabling self-management, and exchanging information) using a measure from the Health Information Trends Survey (HINTS) survey. Part of the purpose was to evaluate acceptability of a new Oncology Survivorship Clinic utilizing non-physician providers. **Results:** The sample included 51 breast cancer patients surveyed in 2016 within six months of treatment completion. Overall, sizable proportions received detailed communication about surveillance (65%), treatment side effects (46%), emotional needs (41%), and healthy lifestyles (71%) and the majority received patient-centered communication (range: 60-73% based on core function). Particular gaps were noted related to provider communication about treatment side effects (54%), emotional/social needs (59%), managing uncertainty (35%), and responding to emotions (40%). **Conclusions:** Our very preliminary findings suggest that the majority of women had positive communication experiences, including with non-physician providers. However, clear communications gaps existed underscoring future avenues for research and care delivery interventions to address the comprehensive needs of breast cancer patients.

Development of a preliminary model of connectedness with healthcare providers for adolescents and young adults with cancer.

Celeste Phillips, Joan Haase; Indiana University School of Nursing, Indianapolis, IN; Indiana University, Indianapolis, IN

Background: Adolescents and young adults with cancer (AYA) have poorer outcomes than younger or older cancer patients. AYA survivorship outcomes are complicated by psychosocial late effects and engagement in risky lifestyle behaviors that may increase secondary cancers and other chronic illnesses. Earlier identification and enhancement of protective factors that foster healthy lifestyle behaviors is an NIH/NCI priority. Early connectedness with healthcare providers (HCPs) may diminish risk-taking behaviors and foster healthcare self-management in AYA survivors. The purpose of this presentation is to describe the processes of developing a preliminary model of connectedness with HCPs for AYA. **Methods:** A preliminary model of connectedness was initially derived from a concept analysis that systematically critiqued 28 peer-reviewed sources. The preliminary model of connectedness was then validated and expanded by results of a phenomenological study of AYA cancer survivors (n = 9) regarding their experience of connectedness with HCPs. **Results:** The concept analysis identified 7 critical attributes of connectedness: intimacy, belonging, empathy, caring, trust, respect, and reciprocity. Outcomes included: greater self-esteem, enhanced interpersonal skills, enhanced emotional adjustment, and greater identify exploration. Results of the phenomenological study uncovered two additional attributes of connectedness specific to AYA experiences of connecting with HCPs: a sense of gratitude and disconnectedness. The disconnectedness attribute indicated there are processes that can occur that either lead to an outcomes of sustained connectedness or disconnectedness. If AYA felt more connected (vs. disconnected) to their HCPs as a whole, then they continued to engage in long-term follow-up. On the other hand, if AYA felt more disconnected to their HCPs, it led to unwillingness to participate in long-term follow-up. **Conclusions:** A preliminary model of connectedness with HCPs for AYA was derived from two studies. This model can be used to help guide the development of interventions aimed at enhancing early connectedness and fostering long-term follow-up practices of AYA.

Primary care providers' awareness and utilization of survivorship care plans.

Alicia R. Rosales, Tina Schaal, Shelby Darland, Dan Sayam Zuckerman; St. Luke's Mountain States Tumor Institute, Meridian, ID; The American Cancer Society, Boise, ID; St. Luke's Mountain States Tumor Institute, Boise, ID; St. Luke's Mountain States Tumor Institute MSTI, Boise, ID

Background: The Commission on Cancer (CoC) standard 3.3 requires that all patients who complete cancer treatment receive a survivorship care plan (SCP). To aid in care coordination, the standard also requires that the SCP be provided to the patient's primary care provider (PCP). St. Luke's Mountain States Institute (MSTI) has been providing patients and PCPs with SCPs for more than 5 years. Other local accredited cancer centers also provide SCPs for their patients. **Methods:** In partnership with the local chapter of the American Cancer Society, MSTI created an online survey aimed at assessing the utilization of the SCP in primary care clinics and the PCP's comfort level carrying out the recommended surveillance. The survey link was distributed through email to approximately 300 PCPs across a large geographical area in varying sized practices. **Results:** Sixty three responses were received in 3 weeks with 46 responses from physicians and 17 responses from advanced practice providers. All of the respondents said they care for cancer survivors in their practice but 54% have never received a SCP. Twenty nine reported having received a SCP and answered 8 questions related to how they use the SCP in practice. The majority refer to the SCP to monitor for recurrence and 52% use it as a tool for coordination of care. Forty eight percent use the SCP to manage co-morbid conditions. Ninety-five percent of all respondents indicated they feel comfortable carrying out a surveillance plan provided by the oncologist for patients 2 years out from treatment. Sixty-four percent indicated they would like additional education about caring for cancer survivors. A common theme in comments included the desire for improved communication between the oncologists and PCPs. **Conclusions:** This standard was created in part to improve care coordination between oncologists and PCPs. More than half of the PCPs in the MSTI service area have not seen a SCP for their patients. Most indicated they are comfortable providing surveillance if they have a clear follow-up care plan from the oncologist. More than half want additional information about caring for cancer survivors. Future exploration could include assessment of barriers to communication and utilizing the SCP in practice.

95

**Poster Session (Board #J7), Fri, 12:15 PM-1:45 PM and
5:15 PM-6:15 PM**

A multisite cancer survivorship clinical placement program for primary care practitioners (PCPs).

Michael Jefford, Georgina Wiley, Amanda Piper, Judy Evans, Linda Nolte, Allison Drosdowsky, Liz Simkiss, Kathryn Whitfield, Julie Cairns, Giovanna Raco, Bruce Mann, Kerry Shanahan, Meron Pitcher, Bianca Bell; Peter MacCallum Cancer Centre, Melbourne, Australia; Austin Health, Melbourne, Australia; Department of Health and Human Services, Melbourne, Australia; The Royal Melbourne and Royal Women's Hospital, Melbourne, Australia; Royal Melbourne Hospital, Melbourne, Australia; Western Health, Melbourne, Australia

Background: Following a successful pilot, a survivorship placement program for PCPs (general practitioners (GPs) and general practice nurses (GPN)) was refined and extended to additional sites. The program aimed to facilitate collaborative learning, with an emphasis on the post treatment phase. Objectives were to improve clinical knowledge of the health needs of survivors and enhance confidence with shared care (ShC). **Methods:** Four cancer centres participated. Each received an implementation toolkit and videos, developed to promote the role of PCPs in survivorship care. PCPs received pre-placement materials and attended multidisciplinary meetings and specialist clinics for 10 hours. PCPs and hospital-based specialists completed pre and post-placement surveys, assessing perceptions of the program, perceived barriers to ShC, perceived knowledge regarding survivorship issues (9 items), confidence managing survivorship issues (8 items) and with ShC (1). **Results:** Forty-seven PCPs (32 GPs, 15 GPN) completed placements and pre and post-placement surveys. Median scores for all confidence items and 8 of 9 knowledge items increased; 1 remained the same. Matching of pre and post responses assessed individual changes. Across the 9 knowledge items, 57-86% of PCPs reported an increase; for the 9 confidence items, 68-89% reported improvement (no decreases). Data from specialists is currently available from 1 site; 16 specialists completed the pre- and 14 (88%) the post-survey. The majority of median knowledge and confidence scores were high and remained unchanged. Specialists (n=14, 88%) and PCPs (n=37, 76%) identified the biggest barrier to ShC as 'lack of systems to support transition of care.' All PCPs and specialists agreed/strongly agreed the 'program was relevant to my clinical practice.' **Conclusions:** The program enhanced PCP's knowledge and confidence regarding survivorship care, was highly regarded and identified perceived barriers to ShC.

Comparative study of the perceptions of continuity of care of CRC survivors transitioned to primary care.

Jeffrey James Sisler, Zoann Nugent, Tara Carpenter-Kellett, Joel Roger Gingerich; University of Manitoba, Winnipeg, MB, Canada; CancerCare Manitoba, Winnipeg, MB, Canada

Background: Colorectal cancer (CRC) patients are increasingly being discharged to a primary care provider (PCP) for follow-up care. This study used a pre-post design to evaluate the impact of the Moving Forward After Cancer (MFAC) program at CancerCare Manitoba on patient perceptions of continuity of care. **Methods:** The MFAC program was introduced in 2010 to support transfer of care to primary care and includes transitional appointments (TAs) and survivorship care plans. The pre-implementation (PRE) group was a random sample of patients on the provincial cancer registry diagnosed in 2008/09 with Stage II / III CRC. The post-implementation (POST) group was recruited in oncology clinics after their TA over four years starting in 2010. Both groups completed the same mailed survey. Respondents were asked to identify the main provider(s) of their follow-up care. Those indicating a PCP completed the Patient Continuity of Care Questionnaire (PCCQ) which assesses continuity upon discharge with scoring between 5 and 25. Quality of life, disease, treatment, and demographic data were collected. **Results:** There were 246 responses in the PRE group (rate of 68.3%) and 83 (66%) in the POST. The POST group was significantly younger, more urban and further from diagnosis. It included more Stage III and rectal cancer patients who received more treatment. Comparing the subset of both groups (106 vs 65) who described a PCP as a main provider, the POST group demonstrated higher scores on the PCCQ (24.0 v 22.8, $p=0.0065$) and on two of its subscales. This finding persisted when tested for the impact of differences between the two groups in stage, site, age and treatment. The most common pattern of provider involvement in follow-up was the "FP alone," which rose from 19% in the PRE group to 54% in the POST ($p<0.0001$). The proportion of participants who felt "adequately prepared" for their transfer of care was significantly increased (71 vs 91%, $p=0.003$). **Conclusions:** A formal information sharing process with CRC patients at time of transition to primary care follow-up improved their evaluation of continuity of care. Significant shifts were seen in the locus of care from oncology to primary care settings consistent with the intent of the MFAC program.

97

**Poster Session (Board #J9), Fri, 12:15 PM-1:45 PM and
5:15 PM-6:15 PM****Primary care physicians experiences of caring for cancer survivors: Toward developing a primary care-responsive cancer survivorship research agenda.**

Denalee M. O'Malley, Stacy N. Davis, Benjamin F Crabtree, Shawna V. Hudson; Rutgers Robert Wood Johnson Medical School, Department of Family Medicine and Community Health, New Brunswick, NJ; Rutgers School of Public Health, New Brunswick, NJ; Rutgers University, New Brunswick, NJ

Background: Understanding of the ecology of primary care can inform efforts that aim to build primary care capacity to address cancer survivorship issues. This study describes the experiences of primary care physicians (PCPs) delivering care to cancer survivors. **Methods:** Semi-structured in-depth interviews were conducted with PCPs (n=30) across two NCI-funded studies of cancer survivorship in primary care. PCPs were recruited from primary care practices enrolled in a qualitative case study of cancer survivorship in patient centered medical homes (R01 CA176545; n=21) and from a sample recruited for the formative development of a primary care mHealth and health coaching interventions for cancer survivors (R01 CA176838; n=9). Interviews averaged 30 minutes, were audio-recorded and transcribed verbatim. A multi-step immersion/crystallization approach was used to identify emergent themes using Atlas.ti. **Results:** PCPs stated that their role in cancer survivorship care varies widely and is often shaped by patient characteristics. These characteristics include: patient expectations of the PCPs role; the patient's ability to provide clinical details about their cancer and its treatment; and the status of patient relationship with cancer treatment team. PCPs described having incomplete information and recounted experiences of cancer survivors presenting for visits motivated by fear of disease recurrence. PCPs described the tensions around having to make decisions about further additional testing versus offering support about recurrence of fears with incomplete clinical information. PCPs also expressed a need for basic clinical information and surveillance plans to be integrated into existing systems of care (e.g. electronic medical record systems and registries), citing immunization schedules as a potential model. **Conclusions:** The lack of clinical information to inform cancer survivors' care remains a critical challenge to PCPs. Survivorship care plans are a proposed strategy to rectify informational deficits; however, further evaluation of how effectively care plans integrate into primary care systems and processes are needed.

Understanding primary care provider (PCP) experiences with survivorship care plans (SCPs) and informational needs when caring for cancer survivors.

Natalie Garces, Tara Eaton, Myra M Robinson, Beth York, Chasse Margot Bailey-Dorton, Wendy G. Brick; Levine Cancer Institute, Charlotte, NC

Background: Survivorship advocate organizations, including the Commission on Cancer and the American College of Surgeons, have proposed SCPs as one solution to help meet the post-treatment needs of cancer survivors and improve coordination of care between provider types. Though there have been a few recent studies investigating PCP evaluation of SCPs and their survivorship informational needs, widespread incorporation of PCP and other provider types' perspectives on survivorship care planning and SCPs is lacking. **Methods:** Levine Cancer Institute emailed 598 surveys to PCPs and obstetrics and gynecology (OBGYN) providers affiliated with Carolinas HealthCare System. 159 surveys were returned (26.6% response rate) between February and August 2016. **Results:** Nearly half of providers reported having received a SCP (42.4%, 67 of 158) and the vast majority of those who did (95.5%, 64 of 67) found them useful. Providers stated that the most useful parts of the SCP for their practice needs were the surveillance recommendations (50.0%) and the treatment summary (45.3%). Respondents indicated the most challenging part of caring for cancer survivors is knowing the recommended surveillance tests/schedule/who is the responsible provider to order tests (53.8%) and knowing what late-effects of treatment to look out for (20.2%). The majority (77.7%) of providers reported using Up-to-Date to guide them in their care of patients who have completed cancer treatment. Providers indicated that guidelines for identifying and managing late (44.9%) and lingering (32.7%) effects of treatment would be the most helpful resources in caring for cancer survivors. Finally, providers reported interest in attending future CME conferences on surveillance (73.4%), managing late (57.8%) and lingering (54.1%) effects, and integrative and alternative therapies (24.8%). **Conclusions:** Preliminary findings from this internal survey suggest PCPs and OBGYNs may find SCPs useful and may need additional resources to guide their care of cancer survivors. We recommend formal study of preferences for SCP content among these understudied provider groups in the coordination of survivorship care.

99 Oral Abstract Session, Fri, 10:45 AM-12:15 PM, and Poster Session (Board #A6), Fri, 12:15 PM-1:45 PM and 5:15 PM-6:15 PM**Patient preferences for provider roles in collaborative breast cancer survivorship care.**

Lauren P. Wallner, Yun Li, Christopher Ryan Friese, Kevin C. Ward, Ann S. Hamilton, Reshma Jagsi, Steven J. Katz, Sarah T. Hawley; University of Michigan, Ann Arbor, MI; Emory University, Atlanta, GA; Department of Preventative Medicine, Keck School of Medicine, University of Southern California, Los Angeles, CA; University of Michigan Health System, Ann Arbor, MI; Cancer Surveillance and Outcomes Research Team, University of Michigan, Ann Arbor, MI

Background: Prior studies have explored barriers to collaborative cancer care and suggest a need for greater clarity about clinician roles. However, little is known about patient's preferences and expectations for which clinicians handle various aspects of care after primary cancer treatment. **Methods:** A weighted random sample of patients newly diagnosed with breast cancer in 2014-15 as reported to the Georgia and Los Angeles SEER registries were surveyed approximately 6 months after diagnosis (N = 2,342, 70% response rate). Patient preferences for which clinician handles the following aspects of care after treatment were ascertained: follow-up mammograms, screening for other cancers, general preventive care, treatment of comorbidities and reassurance about their breast cancer. Response categories included primary care clinician (PCP), cancer doctors, either or both. The associations between patient demographic and clinical factors with preferences for clinician roles were assessed using multinomial logistic regression. **Results:** The majority of women preferred to see oncologists for mammograms (65%), other cancer screening (64%), and reassurance about their cancer (69%), and PCPs for general preventive care (76%) and comorbidity care (79%). Black women and Hispanic women (vs. White) were more likely to prefer to see both clinicians (vs. PCP) for mammograms (Black OR: 2.8, 95%CI: 1.5, 5.1; Hispanic OR: 1.9, 95%CI: 1.1, 3.3), screening for other cancers (Black OR: 3.3, 95%CI: 1.8, 6.1; Hispanic OR: 1.8, 95%CI: 1.0, 3.1), general preventive care (Black OR: 3.5, 95%CI: 2.0, 6.0; Latina OR: 2.5, 95%CI: 1.4, 4.3) and comorbidity care (Black OR: 2.1, 95%CI: 1.3, 3.6; Hispanic OR: 2.0, 95%CI: 1.2, 3.3). Less than a high school education was also associated with a preference for seeing both clinicians for mammograms. **Conclusions:** While patients report clear preferences for which clinicians handle various aspects of their collaborative survivorship care, variation exists by race and education. Targeting these patients to clarify clinician roles may be particularly effective in interventions to improve collaborative cancer care.

100

**Poster Session (Board #J12), Fri, 12:15 PM-1:45 PM and
5:15 PM-6:15 PM****Barriers to care in two differing models of follow-up for long-term childhood cancer survivors.**

Brooke Russell, Kathleen Reynolds, Maria Spavor, Janine Giese-Davis; University of Calgary, Calgary, AB, Canada; University of Alberta, Edmonton, AB, Canada

Background: Long-term childhood cancer survivors (CCSs) require lifetime medical follow-up to screen for and treat adverse health outcomes related to cancer and its treatment. In Alberta, primary-care providers (PCPs) are involved in this follow-up care, though differently so in Northern and Southern regions of the province. Our aim was to identify potential province-wide and region-specific preferences and care barriers that may impact medical and quality-of-life outcomes for patients. **Methods:** Forty-four PCPs following CCSs completed surveys about knowledge gaps, communication, and health-system barriers. Knowledge gaps were assessed using a hypothetical case vignette followed by three multiple-choice questions regarding appropriate follow-up, based on available guidelines. Communication barriers were measured using a 6-item 5-point scale. Health-system barriers were measured using a 12-item 5-point scale. **Results:** PCPs were 54.54% female, age 31-72 ($m=51.36$) with 1-50 years of practice ($m=22.49$). These preliminary results suggest PCPs across Alberta are experiencing moderate communication barriers (scale: 0-24, $m=10.85$, $SD=6.59$) but fewer health-system barriers (scale: 0-48, $m=14.58$, $SD=5.11$). Scores on the case vignette were markedly low province-wide (scale: 0-3, $m=0.65$, $SD=0.65$), indicating considerable knowledge gaps regarding long-term oncology-related care follow-up. No statistically significant differences were observed between regions. **Conclusions:** Albertan PCPs are experiencing barriers to care and knowledge gaps when following ASCCs. This is of primary concern for PCPs in Southern Alberta, currently tasked with the sole responsibility of providing oncology-related follow-up care. These data will be linked with data collected from their patients to explore the relationship between PCPs' barriers and knowledge, and the symptoms, quality of life, and unmet needs of their patients.

101

**Poster Session (Board #K1), Fri, 12:15 PM-1:45 PM and
5:15 PM-6:15 PM****Understanding and improving knowledge of cancer survivorship care among college providers.**

Alexandra M Psihogios, Lisa Schwartz, Helen Pauly-Hubbard, Jill P. Ginsberg, Wendy Hobbie, Dava Szalda; The Children's Hospital of Philadelphia, Philadelphia, PA; Penn State Hershey Medical School, Hershey, PA; Abramson Cancer Center of the University of Pennsylvania, Philadelphia, PA

Background: Young adult survivor (YAS) engagement in follow-up care is often compromised by competing developmental transitions, including attending college away from home and pediatric oncology team, as well as community providers' deficits in knowledge related to caring for YAS. The aims were to assess college providers' basic knowledge of the risks of YAS and related care guidelines and determine whether an educational in-service is an effective platform for increasing college health providers' knowledge about survivorship. **Methods:** During Phase 1, 40 college health and office of disability staff members from public and private colleges/universities (90.0% female) completed a 41-question survey on their experiences with students who were YAS. In Phase 2, a one-hour educational in-service was provided to 18 health center medical providers (94.1% female) at a private university. In-service content was informed by the original survey. Providers completed pre- and post-test assessments of knowledge about late effects, knowledge of resources, and comfort with caring for YAS. **Results:** While most providers indicated that YAS are at risk of chronic health conditions because of their cancer treatment (70.6%), nearly all were unfamiliar with the published long-term follow-up guidelines for cancer survivorship (93.8%). Over half of providers did not have knowledge of cancer survivorship services in their area (58.8%). All respondents were interested in more survivorship education. Attendees of the in-service had higher knowledge of survivorship follow-up guidelines at the post-test assessment ($M=4.19$) compared to the pre-test ($M=1.81$), $t=-5.56$, $p < .001$. They endorsed higher awareness of local resources at post-test ($M = 3.67$) compared to the pre-test ($M=2.13$), $t=-3.62$, $p < .01$. Attendees reported higher comfort with caring for cancer survivors at post-test ($M=3.00$) compared to the pre-test ($M=2.00$), $t=-3.42$, $p < .01$. **Conclusions:** College providers had little baseline knowledge of cancer survivorship guidelines, but were motivated to obtain more information. An in-service improved college health providers' knowledge of caring for YAS, awareness of published guidelines, and comfort in providing care.