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PODIUM ABSTRACTS

ADVANCED PRACTICE

ONCOLOGY NURSE PRACTITIONER SYMPTOM MANAGEMENT THROUGH TECHNOLOGY-ENABLED MONITORING DURING THE COVID-19 PANDEMIC

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Patients receiving treatment for cancer are challenged to adjust to the diagnosis of a life-threatening disease, cope with treatment demands, and deal with disease and treatment-related side effects. Since early 2020, they have also dealt with the Covid-19 pandemic. Post-chemotherapy patients already facing an increased risk of infection due to immune compromise now contend with social isolation, pandemic related anxiety, and potential lack of access to needed treatment and adequate symptom control. Innovative solutions to address gaps in meeting patient needs while keeping them safe were needed. The purpose of this study was to describe symptoms that cancer patients experienced during treatment and the value of a remote, automated home monitoring system, Symptom Care at Home (SCH) that provided alerts to oncology NPs who responded to address Covid-19 and cancer concerns for patients at home. A prospective interventional design was utilized to consent and enroll 129 patients receiving cancer treatment May through December of 2020. They were instructed to call the SCH system daily and report presence and severity on a 0-10 scale of 11 cancer or Covid-19 related symptoms. Alerts were sent to the NPs for symptoms at moderate or higher levels. Alerts were sent to NPs to call patients for further evaluation and treatment. Patients were on average 60 years old, female (62%), with the most common diagnoses of breast or colorectal cancer. The majority had metastatic disease. There were 1614 symptom alerts generated and sent to the NPs; most common were pain (19%), anxiety (13%), depressed mood (10%), and dry cough (10%). An additional 46 alerts indicated that the patient had been in contact with a Covid-19 positive person.

Psychosocial distress increased overtime (p=.0002) and was more common in women, those with early stage cancers and those who did not self-identity as actively religious. NP interventions emphasized active listening, non-pharmacologic and pharmacologic interventions and medical and emotional counseling. Technology-enabled symptom monitoring with NP follow-up for cancer and Covid-19 related concerns offer an innovative and effective approach to offer responsive care to cancer patients during Covid-19, to keep them at home. Symptom patterns have changed during the pandemic and demonstrate escalated psychosocial distress that can be managed through systematic home monitoring and early intervention by oncology NPs.

THE IMPORTANCE OF THE CLINICAL NURSE SPECIALIST (CNS) ROLE IN SUPPORTING REDEPLOYED STAFF DURING COVID-19: RAPID INTEGRATION OF SKILLS AND KNOWLEDGE TO PROVIDE OPTIMAL PATIENT CARE

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CNS are in an ideal position to support staff during times of rapid change to ensure safe patient care. It is also essential that in unprecedent times feedback is sought to understand the needs of staff. The COVID-19 pandemic necessitates dramatic changes in healthcare delivery. Clinicians' were reassigned to unfamiliar teams, settings and patient population with various degrees of orientation to acclimate them to their newfound environment. Nurses had to acquire a broad array of knowledge and skills to care for unfamiliar patient populations. As clinicians were reassigned to unfamiliar areas the Clinical Nurse Specialist's (CNS) unique role became even more essential. CNSs support nursing staff, provide real time education, assist with emergencies and the rapid integration of skills to provide optimal care. The purpose of this initiative was to solicit nursing feedback on the CNS role for staff redeployed to new units during the pandemic. A survey of 108 nurses reassigned during COVID-19 to ascertain the support that was provided during this period and their feedback on needs should redeployment occur again. A response rate of 93%, in which demographic questions included the nurse's clinical level, years of nursing experience, were collected. The survey assessed length of time spent with a preceptor, the individuals utilized as a resource, and

in what capacity the CNS was of assistance. Findings indicated that for questions and support the deployed nurses utilized, their colleagues and charge nurses followed by the CNSs. Average years of nursing experience range from 8 months to 47 years with a median year of experience of 10.5 years. Most nurses were deployed to inpatient units such as acute care, critical care and our urgent care center. A small percentage were deployed to working remotely/outpatient. Data indicated 66% had at least some interaction with a CNS. CNSs were predominantly used for help with documentation, policy review ad followed by skills. Lesson learned from the survey that communication is vital in supporting deployed staff. CNSs are in an ideal position to support staff during times of rapid change to ensure safe patient care. During unprecedent times feedback is sought to continually understand the needs of staff and evolve our own practice.

POINT OF CARE GENETIC TESTING IN A BREAST CANCER SURVIVORSHIP CLINIC

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Breast cancer survivorship care (BCSC) includes the ongoing assessment of personal and family cancer history and offering genetic education, counseling and testing to survivors who meet NCCN, ASBrS and Medicare guidelines for germline genetic testing. It is reported that approximately 8% of patients with breast cancer (BC) will have a clinically actionable germline mutation. However, lower than expected rates of testing are seen in both the acute and extended phases of BCSC. We sought to identify the number of patients seen in a long-term survivorship clinic who had previously undergone or currently qualified for germline testing, and the prevalence of germline variants in BC survivors. In a Nurse Practitioner (NP) led clinic, from March 2019 – December 2020 there were 2,184 survivors who were screened to determine if: germline testing was previously completed, or if update germline testing or initial germline testing was needed (with a 3-generation review of family history). BC survivors eligible for initial or update germline testing (408 patients) were provided with genetic education, counseling, and offered multigene panel testing. Seven (7) BC survivors declined testing. The average age of survivors = 60.2yrs; average time since diagnosis = 10.7yrs; and average age at diagnosis = 50.1yrs. Within this cohort, 45 patients (11.2%) were found to carry an actionable genetic mutation; 116 patients (29%) were found to carry a variant of uncertain significance. Within a comprehensive Breast Cancer program where genetic testing is common practice, there is an ongoing need to screen breast cancer (BC) survivors for genetic testing eligibility. A significant number of BC survivors will test positive for a pathogenic mutation, a decade after an initial diagnosis. Genetic testing is a necessary step to stratify a BC survivors' risk of developing secondary cancers, appropriate screening and prevention strategies, cascade testing, and for some, treatment planning. This individualized approach to BCSC is often described, but difficult to put into action. Time/access and drop rates with a referral model are barriers. Incorporating a point of care genetic testing model requires additional support (genetic extender), professional development, education, and a commitment to provide patient centric care.

CLINICAL PRACTICE

COLLABORATION BETWEEN ONCOLOGY NURSES AND NURSE RESEARCHERS IN THE DEVELOPMENT OF A COMPLEX INTERVENTION, BASED ON PATIENT ENGAGEMENT THEORY, TO PROMOTE HEALTHY LIFE STYLES IN ONCOLOGY PATIENTS

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A strict collaboration between clinical nurses and nurse researchers is of strategic importance to ensure the development of studies that can make a real impact on

patient outcomes, and on the improvement of clinical practice. Considering the importance of this collaboration, the aim of this report is to share our experience in the development of a complex intervention, based on Patient Engagement (PE) theory, to promote Healthy Life Styles (HLSs) in oncology patients. The oncology nursing team in our outpatient department was interested in implementing a study that could promote HLSs through an educational intervention based on the World Cancer Research Fund (WCRF) guidelines. The nursing staff consulted our nursing research team for methodology support. Because of the complexity of changing behaviours, we hypothesised to develop a complex intervention, based on the medical research council framework. We therefore searched for a theory that would allow us to develop such intervention, finding the PE theory the most suitable. Therefore, a complex intervention was developed with the oncology nurses, tailored to the characteristics of local context. As primary endpoint, we chose change in HLSs, measured by the WCRF score, and as secondary endpoints change of PE level, quality of life, BMI and patient's satisfaction. The complex intervention consists of a first meeting with the patient, during which the level of PE is evaluated. Based on the PE level, the patients will receive a personalized plan to help them change their HLSs in a realistic way. The nurse will then discuss objectives and activities that the patient should achieve prior to the next session. Six encounters has been planned with the patients (first and at 1, 3, 6, 12, 24 months). A booklet, based on PE theory, has been created to support patients during their participation. The complex intervention will be tested in a pilot study in the next months with 40 patients (20 randomized to complex intervention and 20 randomized to usual care). From the results of the pilot study, a randomized controlled trial will be implemented. The collaboration between clinical nurses and our research team has been positive on both fronts. The complex intervention is solid from a methodological point of view and more close to the real context in which it will be implemented.

MINIMIZING NEGATIVE PSYCHOSOCIAL OUTCOMES OF SOCIAL ISOLATION: EVIDENCE-BASED NURSING INTERVENTIONS

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Social isolation (SI) occurs in up to 33% of cancer patients and may be even more prevalent during the COVID-19 pandemic which has magnified SI for high risk, immunocompromised populations. Psychosocial consequences of SI include loneliness, anxiety, depression, and decreased quality of life. While data supporting evidence-based nursing interventions to address SI in oncology are limited; data from older adults with other chronic conditions can inform oncology nursing practice. Oncology nurses have a unique and important role in addressing SI and improving psychosocial outcomes. The purpose of the project was to identify evidence-based interventions that reduce negative psychosocial outcomes of SI, a phenomenon that can dramatically impact quality of life. A critical appraisal of literature was conducted to identify effective interventions that reduce negative psychosocial outcomes of SI. A strategic search strategy was used to review scholarly databases. Intervention studies that evaluated nursing-sensitive psychosocial outcomes (e.g. depression, anxiety, and loneliness) were included. Studies evaluating non-nursing-sensitive psychosocial or exclusively physical outcomes were excluded. 25 studies met inclusion criteria. Ten meta-analyses, five systematic reviews, and ten randomized controlled trials were critically appraised and synthesized to inform oncology nursing practice. Four intervention categories were identified: (a) physical activity, (b) psychotherapy, (c) socialization, and (d) education and integrative therapies. Physical activity (e.g. walking), psychotherapy (e.g. mindfulness), and socialization (e.g. technology-based communication) had high quality of evidence and determined effective in decreasing depression and loneliness; inconsistent evidence exists for anxiety. Education and integrative therapies are possibly effective due to lower quality evidence. The COVID-19 pandemic has intensified SI for individuals with cancer. Implementing walking, mindfulness, and/or technology-based interventions can reduce negative psychosocial SI outcomes. Oncology nurses can (a) uniquely address SI, (b) improve psychosocial patient outcomes and quality of life, and (c) utilize readily available resources to implement feasible and effective evidence-based interventions. Cellphones, computers, and tablets are often available across care settings, yet may be underutilized. Nurses are equipped to encourage and promote fundamental physical exercises, such as walking and resistance bands. Resources tailored to the COVID-19 pandemic, are provided to assist oncology nurses in addressing SI. By implementing simple, yet innovative interventions to address SI, oncology nurses can reduce negative psychosocial outcomes of SI for individuals with cancer.

BREATHE IT IN: USING AROMATHERAPY TO DECREASE WORK RELATED STRESS AMONG AMBULATORY ONCOLOGY NURSES

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Work-related stress experienced by nurses has been associated with numerous negative factors including job burnout, low morale, poor retention and job dissatisfaction. As the nursing field increasingly faces new demands and stressors, it is imperative to find effective intervention strategies that can be used to enhance self-care and reduce work-related stress. The use of aromatherapy has been found to be beneficial in reducing stress among nurses in different nursing environments. The purpose of this evidence-based project was to assess the effectiveness of lavender aromatherapy on stress levels among registered nurses and nurse practitioners in an ambulatory oncology infusion unit during COVID. Sample size was 18 participants. Data was collected two days a week for four weeks starting November 9, 2020 and ending December 4, 2020. Participants completed a Personal Data/Demographics questionnaire two business days prior to the start of the study. A Perceived Stress Test questionnaire was filled out prior to the start and at completion of the study. Perceived stress levels were measured by an adaptation of a Perceived Stress Test questionnaire developed by nurses at Vanderbilt University. Confounding variables were reduced by placing participants in the same clinical exam room every session; lights were dimmed; nurses were placed in sitting position with legs elevated; nurses had coverage of responsibilities prior to starting the aromatherapy session; a 100% pure essential lavender oil aromatherapy self-adhesive tab was placed to left upper chest of uniforms at minimum scent; each session was 10 minutes. After completion of the study, a tabulation of the results yielded that nurses reported decreased stress levels post completion of the study. Pre-intervention findings showed 16.7% of nurses reported "most of the time" when asked "how often do you feel overwhelmed in the workplace?". Post intervention 4.3% of nurses reported "most of the time" to the same question. The implications of these findings are significant to nurses because aromatherapy can be an efficient, low-cost tool that can be effective in helping nurses relieve work-related stress, while fostering a therapeutic environment.

THE TIME COURSE OF ADVERSE EVENTS DURING DOSTARLIMAB TREATMENT IN

MISMATCH MUTATION REPAIR DEFICIENT AND PROFICIENT ENDOMETRIAL CANCER PATIENTS IN THE GARNET TRIAL

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Dostarlimab is a humanized programmed death (PD)-1 receptor monoclonal antibody that blocks interaction with the PD-1 ligands. GARNET (NCT02715284) is a phase 1 study assessing antitumor activity and safety of dostarlimab monotherapy in patients with solid tumors. Dostarlimab has shown antitumor activity in patients with mismatch mutation repair deficient (dMMR) and mismatch mutation repair proficient (MMRp) advanced and recurrent endometrial cancer (EC). The objective of this analysis was to evaluate the time of onset of treatment-related adverse events (TRAEs) and immune-related (ir) TRAEs over the course of dostarlimab treatment in patients with dMMR (cohort A1) and MMRp (cohort A2) EC in the GARNET trial. Patients with advanced or recurrent dMMR or MMRp EC that progressed on or after a platinum regimen received 500 mg of dostarlimab every 3 weeks for 4 cycles, then 1000 mg every 6 weeks (Q6W) until disease progression or discontinuation. A total of 126 patients with dMMR EC and 145 patients with MMRp EC were included in the safety population. Few TRAEs were seen in ≥10% of patients: fatigue (17.3%), diarrhea (14.4%), nausea (13.7%), and asthenia (11.1%). The majority of cases occurred during cycles 1–3, with a peak occurrence at cycle 1 for all 4 TRAEs. Hypothyroidism was the only irTRAE seen in ≥5% of patients, and 94% of cases occurred between cycles 2 and 8, with a peak occurrence seen at cycle 4. irTRAEs that were seen in ≥1% of patients included diarrhea (4.1%), amylase increased (2.2%), aspartate aminotransferase increased (2.2%), alanine aminotransferase increased (1.8%), colitis (1.5%), hyperglycemia (1.5%), lipase increased (1.5%), adrenal insufficiency (1.1%), and hyperthyroidism (1.1%). When analyzed over the dMMR and MMRp EC safety population of the GARNET trial, dostarlimab has an acceptable safety profile with manageable adverse events. irTRAEs and TRAEs were seen in a low percentage of patients and were seen more frequently earlier in the time course of dostarlimab treatment. No increase in the rate of TRAEs or irTRAEs was seen when changing to the 1000-mg Q6W dose.

INNOVATIONS IN SHARED CARE BETWEEN LEADING CANCER HOSPITALS IN NEW YORK AND NEW JERSEY

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In 2016 Memorial Sloan Kettering Cancer Center (MSKCC) and Hackensack Meridian Health partnered in an effort to change the face of cancer in New Jersey. One of the first initiatives was to provide inpatient care at Hackensack University Medical Center for MSKCC patients who reside in New Jersey. Initial challenges identified included communication barriers, health information sharing and seamless transitions of care back to primary oncology team. The purpose of this study was to improve patient coordination of care and transition of care between John Theurer Cancer Center at Hackensack University Medical Center, NJ and Memorial Sloan Kettering Cancer Center in NY/NJ. This study focused on improving the coordination of care between two major cancer institutions, John Theurer Cancer Center (JTCC) at Hackensack University Medical Center (HUMC) and Memorial Sloan Kettering Cancer Center (MSKCC) across New York and New Jersey providing world-class cancer care closer to home. A multi-disciplinary approach was used with advanced practice providers (APP), registered nurses (RN) and physicians from both institutions to ensure effective, timely bi-directional communication. Patient hand-off between APPs at HUMC and MSK facilitated patient awareness, immediate clinical information and seamless transitions of care. Medical records exchange between health systems ensures pertinent medical information availability for the treating providers reducing delays in treatment. Email templates were created to standardize transmission of health information ensuring connection between partners. Nursing teams at both institutions utilize daily huddles to optimize structured communication amongst MSK and HUMC providers. Additionally, the share care teams communicate daily with the shared patient and caregivers to promote collaboration, coordination and seamless quality care amongst two leading cancer centers connecting the patients to their primary oncology team. Upon discharge from HUMC, aside from the patient's inpatient medical record being sent, APPs summarize hospitalization which includes procedures, consultations, pending results, follow-up recommendations and medication changes for primary oncology team. This was a qualitative study using telephone surveys to measure patient experience and emailed surveys to health care providers. Standardized and timely communication between John Theurer Cancer Center at Hackensack University Medical Center and Memorial Sloan Kettering Cancer Center in NY/NJ increased patient experience and facilitated smooth transition of care between two institutions.

CASE CONTROL STUDY: EFFECTIVENESS OF A STRUCTURED RN TO RN BEDSIDE REPORTING IN INCREASING PROCESS AND PATIENT OUTCOMES

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Bunting 15 at Mercy Medical Center piloted RN-to-RN Bedside Reporting due to declines in key "Communication of Care" areas. Project evaluated the effectiveness of evidence-based structured RN-to-RN Bedside Reporting for increasing patient satisfaction concerning communication of care. Creating an evidence-based report process to increase patient satisfaction indicators related to "Communication of Care" and identifying patient concerns during shift report was the objective. Educated nurses regarding process and standard tools of bedside shift reporting and patients of these nurses on RN-to-RN bedside rounding's purpose, process, expectations, and encouraged participation during report discussions. Conducted pre-report outside the room. Activity in the room was patient focused, engaging patients in discussion. Post-report, outside the room, involved evaluating patient condition and care. Fewer nurses (the intervention group) reported on more patients in less time (Intervention = 41% RNs vs. 59% RNs non-intervention; Intervention = 3.2 patients/RN vs. 1.85 patients/RN non-intervention). Report time decreased by 10 minutes in the intervention group. HCAHP scores increased: Courtesy and respect: 18th to 49th percentile; Response to call significantly improved: 1st to 76th percentile; Pain treatment: 98th to 99th percentile. Call light use decreased 72%, pre-intervention 5.83 calls per nurse per day, post-intervention 1.64 calls per nurse per day. RN satisfaction with report time increased in the interventional group (Extremely satisfied: non-intervention group = 0% versus intervention group= 75%). RN satisfaction on care communication to patient increased in the interventional group (Extremely satisfied: non-intervention group = 1% versus intervention group= 88%). Patient satisfaction with care communication stayed

the same (Extremely satisfied: nonintervention group = 81% versus intervention group= 81%). RN-to-RN Bedside Reporting significantly and sustainably increases patient satisfaction. Patient perception of pain management and treatment increased. Two-way discussion of the patients needs reassured patients the nurse knew their needs and how to meet them resulting in a significant reduction in call light use, 72% decline. Nurses hospital-wide were educated on the value RN-to-RN Bedside Rounding to engage patients during the report process. RN-to RN Bedside Rounding is now the standard of care.

CREATING AND EVALUATING PRE-STEM CELL TRANSPLANT PATIENT AND FAMILY EDUCATION VIDEOS

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Stem cell transplants are complex processes. The wealth of information that must be conveyed to patients and family members along the way can be challenging to deliver. Historically, this cancer center provided one-on-one or in-person live transplant education classes, which involved a minimum of 2 hours of the stem cell transplant nurses' time to coordinate and teach. In 2020, challenges with these teaching formats included logistical barriers, social distancing requirements and staffing shortages. The purpose of this project was to create pre-stem cell transplant patient education videos that could be easily viewed on any device with internet. Designed using health literacy principles, the videos could be watched before transplant by patients and their main care partner. The project sought to improve patient and care partner knowledge about transplant and answer common questions using an easy to access medium. The stem cell transplant team collaborated with the cancer center's patient education office to transform a portion of their pre-transplant patient education content into two videos - one for autologous transplant and one for allogeneic transplant. To track viewing and patient feedback, each video was placed on a secure, password accessible website and included an online survey. The transplant team created a work flow for

assigning the videos and follow up via phone with patients and their care partners to assess understanding, reinforce concepts and answer questions. The videos were assessed for understandability and actionability using the Patient Education Materials Assessment Tool (PEMAT); results will be shared. Viewing statistics and feedback from online surveys assessing overall satisfaction with the video and viewer confidence in their understanding of key education concepts will be summarized. This project demonstrates how core patient education content can be standardized and implemented into videos using health literacy principles and a virtual platform. In addition to enhancing the patient experience, the videos help the stem cell transplant program deliver consistent messages and free up nurses for other essential duties. Patients and their care partners can watch the videos in a comfortable setting, have time to process the information, and refer back to it if needed. Once exposed to the core content, transplant nurses can contact viewers to provide reinforcement and tailored education.

ASYMPTOMATIC COVID-19 TESTING FOR PATIENTS UNDERGOING IMMUNOSUPPRESSIVE TREATMENT

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Oncology patients receiving immunosuppressive therapy are at increased risk for severe complications related to COVID-19 infection. Our center is located in an underserved inner city area and our patients have many comorbidities, advanced cancers at diagnosis, and many lack social support. To provide safe care to patients undergoing treatment in our open space infusion center, we implemented COVID-19 screening for all patients receiving chemotherapy. Following the ASCO and ONS recommendation, our patients were screened every 14 days or before the start of the next cycle. In our infusion center we utilized our EHR to help us tract all results and intervene when necessary. Once the patient was scheduled for treatment, an additional appointment was created for COVID-19 screening. The recurring orders were placed by our Nurse Practitioners. After initial difficulties, to prevent disruptions to the clinic's flow and ensure appropriate staffing, appointments were scheduled on Monday, Wednesday or Friday depending on the treatment date. Our patients were educated about the importance of self-isolating once the test was performed. In addition on the day of the treatment,

all patients were screened for COVID-19 symptoms. Through the continuous collaboration between the scheduler, office practice nurses, nurse practitioners and the director of nursing the process is well established. 100% of our patients are scheduled, however due to transportation issues some need to be tested the same day creating minor delays. The asymptomatic testing helped us isolate numerous COVID-19+ patients and prevent the spread of the infection among our high risk patient population. After the quarantine period, these patients safely return to continue their treatment.

HOW SHOULD WE TELL THE KIDS? COACHING PARENTS THROUGH DISCUSSION ABOUT NEW CANCER DIAGNOSIS WITH CHILDREN

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The negative ramifications of not telling children about a parent's or grandparent's new diagnosis of cancer are multiple. According to data gathered by this team, nurses may hesitate to coach patients about how to have these discussions due to lack knowledge regarding methods and materials to have these conversations. The project entailed education for oncology nurses, chaplains, social workers, case managers, physicians and patient navigators to build their skills regarding guiding a patient through a discussion with their children or grandchildren about their new diagnosis of cancer. This presentation will describe the training sessions held to provide this education. Training consisted of oncology health professionals attending a two hour training session with contact hours on how to tell children about a new cancer diagnosis. Training began with a discussion of why children should be told what is happening and the possible psychosocial ramifications of not being honest. After discussing the rationale for the discussion, information about how to level the discussion based on developmental stage and tips on when to have the discussion was offered. Print and other media resources to guide patient education in this area were then reviewed. After being given the tools to have this discussion over a one hour period, a speaker led the attendees through a role play activity using a variety of case studies. During role play, the learners were encouraged to suggest the parent or grandparent use a book or other type of resource to have the discussion. The training sessions all ended with a program evaluation and survey to exam the impact of the program. Outcomes of the program will be shared. An evaluation was administered to participants immediately after completing the training program. All participants reported the program met the objectives and will enhance their professional development. Participants also felt the program increased their confidence in approaching this subject with patients. The role play was seen as a critical method of building confidence. An overview of this approach to this important clinical challenge will encourage nurses to strengthen education regarding these important discussions regarding serious illness in their practice settings. This is the first project of this type done by nurses.

INTERNATIONAL

NURSE WORK ENVIRONMENT AND MISSED NURSING CARE IN ONCOLOGY AND PALLIATIVE CARE INPATIENT UNITS IN COVID-19 PANDEMIC: A CORRELATIONAL STUDY

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Missed nursing care refers to needed nursing care that is delayed or not completed at all. Studies have confirmed that there is a significant relationship between the quality of care and omitted nursing care and therefore the prevalence of missed nursing care is a reliable quality indicator of nursing care. In Italy a significant number of cancer patients die in hospitals even if they are eligible for hospice care and, moreover, the missed nursing care phenomenon related to oncology and palliative care has been poorly investi-

gated during the COVID-19 pandemic. The primary aim of this study was to investigate the association between work environment and number of missed nursing care in oncology and palliative inpatient units in the north west of Italy during the COVID-19 pandemic. A correlational study with convenience sample was conducted in 2 oncology and 5 hospice inpatient units. Data were web-based collected in 2020 using the Italian validated version of the practice environment scale of the nursing work index, nurse-perceived quality of care, missed nursing care and a demographic section. A Pearson's correlation was run to assess the relationship between number of missed nursing care and work environment. The unit of analysis was the nurse. We invited 81 nurses, (n=39 cancer nurses; n=42 hospice nurses) with a response rate of 64% (n=25) and 71.4% (n=30) for the cancer and hospice units, respectively. Sixty-three percent of nurses had a bachelor's in nursing. In cancer units more covid-19 patients were admitted compare to hospice inpatient units (p<0.001). In cancer units the mean number of missed care was 5.1 (sd=3.09) and the mean work environment composite score was 2.6 (sd=0.65) there was as statistically significant moderate negative correlation between mean number of missed nursing care and work environment composite score, r= -0.57, p=0.035. In hospice inpatient units the mean of missed care was 3.48 (sd=4.46) and the mean work environment composite score was 3.05 (sd=0.54) there was not a significant correlation between the two variables. In cancer units positive work environment led to a reduction in mean number of missed nursing care. It is necessary to increase early hospice care access for eligible cancer patients. This study represents a first step for understanding the impact of COVID-19 pandemic on cancer patients in two different settings.

LEADERSHIP/MANAGEMENT/EDUCATION

DEVELOPING AND IMPLEMENTING AN OUTPATIENT CAR-T PROGRAM INTERACTIVE EDUCATIONAL MODULE

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Over the next few years, outpatient clinical nurses and advanced practice providers will be increasingly involved in patients receiving Chimeric Antigen Receptor (CAR) T-Cell Therapy. This novel therapy is commercially available for non-Hodgkin lymphoma, B-cell acute lymphoblastic leukemia, and mantle cell lymphoma. Projections show commercial expansion to various hematologic malignancies, certain solid tumor malignancies and eventually more outpatient setting administration. Implementing CAR T-cell therapy at a large outpatient oncology center requires interdisciplinary collaboration to develop a robust clinical educational program. As education was initially geared towards inpatient workforce, there was a need to educate the outpatient interdisciplinary team on the many critical facets of this new hospital program to prepare for outpatient administration and management of adverse reactions. The purpose of this project was to create an educational platform for clinical staff administering and caring for patients receiving CAR T-cell therapy in the outpatient setting through the online e-learning authoring tool, Easygenerator, and the learning management system: Portal for Education and Advancement of Knowledge (PEAK). The clinical program manager created content encompassing: program and regulatory oversight, basics of the immune system, mechanism of action, available and pipeline products, the typical patient journey, diagnosis and management of common adverse events, patient referral process, and REMS program requirements. Senior nurse leadership and nurse education supported throughout development and implementation and ensured employees completed the education modules. With interdisciplinary collaboration, the 60 minute module was reviewed and published to our center's learning management system. This module is required of all outpatient hematology / oncology services to complete annually, launching in 2020. Staff education is monitored by the outpatient oncology nurse educator and is also integrated within the new nurse oncology orientation. The clinical program manager will review and update the content yearly. This is the first comprehensive outpatient CAR-T educational program offered at our oncology center setting the foundation for a rapidly expanding portfolio. This strategy reduced the amount of REMS required staff by 85% while allowing for equal educational opportunity for those that do not fall under the REMS defined category (prescriber, dispenser, administrator). As CAR T-cell therapy continues to revolutionize the cancer therapy landscape, staff must receive optimal education to ensure outstanding care delivery.

ONCOLOGY NURSES LEADING THE WAY IN EDUCATION OF COLLEAGUES IN

ADMINISTRATION OF MONOCLONAL ANTIBODIES TO FIGHT COVID 19

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Monoclonal Antibody (MoAb) treatments have been a part of combination therapies for the care and cure of oncologic diseases since the late 1980's. Oncology nurses are leaders in infusion therapies for monoclonal antibodies. During the Covid 19 pandemic it was discovered through clinical trials the use of MoAb therapy was effective in decreasing viral load in patients with mild to moderate symptoms and decreasing hospitalization and progression of Covid -19 symptoms. The first emergency use authorization (EUA) for MoAb came November 8, 2020 and we treated our first patient four weeks later on December 3rd, 2020. The purpose of this project was to determine the use of oncology nurses to effectively educate and validate competency in delivery of MoAb therapy to covid 19 positive patients. The oncology nurse supported the delivery of MoAb therapy outside of the ambulatory infusion suites that delivered chemotherapy. Initially, the therapy was provided in the Emergency Department. It was realized that the ED was not the ideal place to provide this care and opened an independent MoAb infusion suite. The suite had 7 infusion chairs and 3-hour slots were created for treatment from 8:00 am till 6:00 pm with maximum capacity of 21 patients each day. We were able to treat a maximum of 9 patients a day given the restrictions on administration in the ED. Now we can treat up to 21 patients a day. The initial rollout of MoAb therapy occurred in 3 emergency departments of Montefiore Medical Center. Two major challenges were immediately identified: training the ED staff in the administration of MoAbs and navigating an increasing second COVID-19 surge in New York City. Identification, infusion, and observation proved difficult under the EUA guidelines, prompting the necessity for space to house a free-standing MoAb Infusion Unit. It was adherence to the ONS guidelines for MoAb infusion that provided framework for the development of a separate MoAb infusion unit. The development of the unit required collaboration with our infectious dis-ease, and pharmacy colleagues. The development of an ambulatory covid 19 MoAb Unit to provide care to the most vulnerable of patients under the guidelines of an EUA.

VIRTUAL ROUNDING IN THE JAMES MEDICAL INTENSIVE CARE UNIT. REAL TALK. REAL TIME

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At The James Cancer Hospital, we know there is no routine cancer, so why should there be a routine means of communication? What if we told you that any physical barrier that challenges family participation in multidisciplinary rounds could be overcome? Evidence shows that family involvement in multidisciplinary rounds improves patient outcomes, family satisfaction, staff satisfaction, and overall teamwork among the care team. Family participation in multidisciplinary rounds is a critical component of patient-centered care. Providers and family members have expressed a strong desire to include family members in multidisciplinary rounds. They have described inconsistency in initiation of family participation and identified communication and logistical challenges to family involvement. Both health care providers and patients' family members expressed receptivity to technological platforms that would allow the families to participate in rounds virtually should they not be physically present at the bedside. Currently, there is an infrastructure and process for multidisciplinary rounds in the James Medical Intensive Care Unit (JMICU). There is a lack of evidence to support the best interventions for facilitating family involvement in rounds. Our project closed this gap by implementing a technological platform that removed barriers to family involvement in multidisciplinary rounds such as family proximity to the hospital and inconsistent timing of multidisciplinary rounds. To supplement this process, a virtual rounding workflow and infrastructure was created to complement multidisciplinary rounds. As a result, we streamlined plan of care communication and allowed for real talk, in real time. Additionally, post implementation data revealed no additional cost to the organization

and data suggests an increase in patient/family participation in multidisciplinary rounds, patient/family satisfaction and we gained proof of concept that a virtual health platform can be utilized to connect families to the bedside. Virtual rounding allowed for family members to actively engage in care planning regardless of location or time of day, especially during the COVID-19 pandemic in which visitation in the hospital setting has been significantly reduced. This process has served as the missing link between loved ones and crucial conversations at the bedside in the James Medical Intensive Care Unit.

COVID-19 ORIENTATION FOR FRONTLINE HEALTHCARE STAFF THROUGH THE LENS OF AN INSTRUCTIONAL DESIGNER: A NURSE'S PERSPECTIVE

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During the COVID-19 pandemic, providing quality care while educating staff on current best practices and rapidly evolving information on the novel coronavirus became a challenge. Traditional means of creating and distributing educational activities, delivered in-person, was no longer applicable. It became evident that there was a need to find alternative methods for distributing educational activities, as well as developing a streamlined process for creating educational activities in order to meet the rapidly changing clinical landscape. As nurses with instructional design expertise, we were ready to adapt to these challenges. We will provide changes of practice, techniques and valuable experiences during the course of creation and distribution of education activities. A team approach was needed to rapidly develop educational activities. We worked in collaboration with nursing leadership, subject matter experts (SMEs) and the learning management system (LMS) team. The educational activities were deployed using virtual platforms including eLearning courses and Zoom, and covered topics such as basic use of PPE, masking requirements, disinfecting practices, hand washing, social distancing, COVID-19 screening practices, use of respiratory equipment for critical care, and roles of inpatient and outpatient support personnel. Employees were able to have readily current accessible information on-demand in order to prepare them to care for our vulnerable patient population. An eval-uation and posttest were included in all educational modules to capture the learner's new knowledge and to provide necessary feedback for continually improving the modules. The evaluations are in alignment with our institutional goals of protecting our patients, ensuring the health of our workforce, reducing the impact of the virus on our community while following CDC guidelines. High prioritization and collaborative workflows allowed us to rapidly meet the educational needs of the institution. The COVID-19 pandemic presented new challenges in existing educational strategies, especially in oncology care. Adapting to these changes requires rethinking traditional teaching methods and finding innovative solutions. Collaboration with SMEs has become crucial in the outcome of the educational activities. Coordination is also vital in timing the release of these activities to avoid "training fatigue" among nurses.

RESTRUCTURING THE DISCHARGE HUDDLE TO IMPROVE WORKFLOW, ATTENDANCE, AND QUALITY OF INFORMATION TO MAINTAIN THE ORGANIZATION'S GOALS

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An oncology nursing unit observed a breakdown in the discharge huddle from accomplishing the organization's goal of discharging 50% of patients before 2PM. The discharge huddle was becoming longer in time, without leadership or expectations for each participant, and inconsistent attendance by healthcare providers, creating frustration amongst nursing staff. Sustaining the effectiveness of the huddle positively affected discharges before the 2PM organizational goal, which improved nursing workflow on the unit. This abstract discusses the restructuring of the discharge huddle to improve preparation of discharges prior to 2PM. The discharge huddle time was changed from 12:30PM to 8:30AM. The multidisciplinary team conducted observations over a two-week period to compare the two discharge huddles. The data included length of the huddle, quality of information, and attendance. The discharge board had five streamlined questions to answer in a "story format". The primary nurse discussed the patient's discharge needs during the huddle. Restructuring led to a decrease in length of time in conducting the huddle. This allowed the medical providers to promptly begin their morning rounds.

Medication reconciliation was completed and issues in prescriptions were troubleshoot earlier in the day instead of closer to the end of business day. Case managers were able to explain the likelihood of patients' discharge destination and logistics before end of the day. Rehab therapy was able to prioritize patients set for projected discharges. The patients and their caregiver received discharge communication earlier, which allowed for nursing preparation such as teaching, ordering supplies, and transportation needs. The multidisciplinary team benefited from earlier communication that resulted in preparing for discharges in a timely manner. Patients' experience with their discharge is in the center of improving operations on this multidisciplinary disease management team. The restructuring of the discharge huddle improved the multidisciplinary team's sense of preparedness for discharge, the quality of information presented, and a reinstated leadership role for the discharge. Qualitatively, there was an improvement in the multidisciplinary team and patient satisfaction. Nursing benefited from the medical team workflow and established plan of care earlier in the day.

QUALITY IMPROVEMENT

ORAL CHEMOTHERAPY START DATE

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Oral chemo start dates were not consistently being documented on the appropriate flow sheets within the Electronic Medical Record (EMR). The start date is integral in the treatment outcome for patients on an oral chemotherapy regimen. Retrospective study was conducted to assess compliance with documenting the oral chemotherapy start date on Oral Chemotherapy Follow-up Flowsheet which auto populates the Onc TX Snapshot in EPIC. Onc TX Snapshot has been identified as the source of truth for documenting confirmed start date for oral chemotherapy. Retrospective study from Q2 2019 – Q3 2019, 419 oral anticancer agent (OAA) charts from 19 Aurora Cancer Care clinics were analyzed. Improvement with the documentation of OAA start date in the EMR was indicated as results showed a 43.2% (181/419) compliance rate. Q2 2019 and Q3 2019 chart review findings and analysis was shared with operation leaders. The leaders agreed there was a need to improve OAA start date documentation. The data was vetted, and feedback requested from the governing Nurse Practice Council (NPC) as the oncology clinic nurses are responsible for documenting the start date of oral chemotherapy. Once the recommendations were confirmed, Epic Beacon Governance workgroup was brought in to discuss documentation strategies from NPC. It was agreed to edit questions on the Oral Chemotherapy Follow-up Flowsheet to include start date, cycle number, drug name and dose as written on the prescription. Education for nurses was completed and the Oral Chemo workflow was updated to reflect these changes. It was agreed to restudy OAA charts in Q2 2020 and Q3 2020 to assess effectiveness of improvements. Monthly results and outliers were shared with the site and system leaders. System results show a significant increase (P value = < 0.0001) in compliance with the documentation of oral chemotherapy start date on the Onc Tx Snapshot: With implementation of standardization, a significant improvement was seen in the documentation on Oral Chemotherapy Follow-up Flowsheet. Additional positive outcomes resulting from the study included increased transparency in the EMR of the oral chemotherapy medication prescribed, the specifics including both the cycle and dose as well as creating an environment in the EMR that enhanced communication among all caregivers to ensure the best possible patient outcome.

DOES THE USE OF ONCOLOGY CASE STUDIES, HANDS-ON TRAINING, AND SIMULATION LABS IMPROVE ONCOLOGY NURSE CONFIDENCE IN PRACTICE?

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Nursing staff at this long-term acute care facility with a dedicated oncology unity is largely comprised of new grads who are trained on chemotherapy competency after 1 year on the oncology unit. Despite this training, nurses express a lack of confidence in caring for oncology patients (pre/post chemo) and in administering chemotherapy. The often-complex chemotherapy medications and monitoring as well as the risk of side effects and oncologic emergencies can contribute to lower

nursing confidence levels versus caring for non-oncology patients. The setting was a long-term acute care facility outside of Boston, MA with a dedicated oncology unit. A classroom training and SIM lab educational intervention was developed, incorporating hands-on learning for new nurses during oncology orientation. Nurses were given training stations to practice with chemo equipment and a patient case study with hands-on simulation of chemo administration in our SIM lab. Following the educational intervention, we conducted a debrief and review. A pre- and post-survey was used to assess nurses' confidence in caring for oncology patients. Qualitative and quantitative data was collected from 12 oncology nurses during October 2020. Following the educational intervention our pre-post survey showed an increase in nurse confidence in administering chemotherapy of 48% (p = 0.006). While not statistically significant, increases were also seen in caring for oncology patients 9% (p = 0.266) and caring for patients post-chemo of 12.7% (p = 0.139). Qualitative responses to the simulation lab experience emphasized the need for more frequent simulation experiences, beyond orientation, with an emphasis on adverse events. A simple educational intervention was able to increase nursing confidence in caring for oncology patients (including post-chemotherapy) and administering chemotherapy. Our findings also suggest that regular simulation experiences can further increase confidence levels and nurse knowledge when implemented beyond the single educational intervention tried here. Our intervention was limited by the small group size due to COVID-19 distancing precautions in place. We plan to continue the educational intervention as part of new nurse orientation to the oncology unit. We are also developing regular simulation lab experiences covering various oncology topics and scenarios that will continue throughout the nurse's tenure on the oncology unit.

KEEPING ONCOLOGY PATIENTS OUT OF THE EMERGENCY DEPARTMENT BY DEVELOPING A SYMPTOM MANAGEMENT CLINIC

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Oncology patients were presenting to Emergency Department (ED) for symptom management care when the cancer center was closed weekends and holidays. As a result, these immuno-compromised patients were exposed to communicable illnesses and delayed symptom relief as the prioritization of care amongst all ED patients was greater. The purpose of this project was to provide timely symptom management care for our oncology patients and reduce ED encounters. Oncology leadership collaborated with representatives from the Infusion Center, Oncology Pharmacy, Clinical Lab, Environmental Services, Service Access Team, and Hospital senior leaders to develop guidelines supporting implementation of an Oncology Symptom Management Clinic. The guidelines specified our targeted patient population, phased hours of operation, scheduling process, staffing, and infusion therapy. We adjusted staffing schedules to operationalize the additional clinic hours and deployed schedule tracks including holiday rotations. We incorporated the LeanTaas iQueue Infusion Scheduling program to identify a schedule template that would optimize care provisions with staffing support. Clinic staff and providers received education on how to schedule appropriate patients in the Oncology Symptom Management Clinic. Since implementation of the Oncology Symptom Management Clinic on February 1, 2020, we have treated 380 patients, averaging 7 encounters per weekend between the hours of 8a–1p. Symptom management provided has included: blood transfusions, fluids for hydration, electrolyte replacements, antibiotics, growth factors and laboratory diagnostics, such as blood cultures and urinalysis. Preliminary data indicates trends in reducing the number of ED encounters and inpatient admissions. Implementation of the Oncology Symptom Management Clinic has been a great success for our oncology patients needing weekend and holiday treatment. It has reduced the need for emergency department care and facilitated efficient symptom relief. Providers in the cancer center have utilized this service for our patients. This clinic can be easily replicated in community and academic infusion centers. As volume continues to grow, phase two will include extending our hours of operation to 4:30 p.m.

IMPROVING EMOTIONAL WELL-BEING THROUGH TECHNOLOGY IN THE ONCOLOGY POPULATION

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The Holistic Nursing Council at a cancer-specific hospital consistently evaluates patient data for opportunities to improve the patient experience through the delivery of holistic, comprehensive care.

This team of nurses assessed patient's satisfaction scores in the ambulatory care setting and discovered a need to improve upon how patient's and caregiver's emotional needs are addressed by the nursing staff in the organization. This was evidenced by a patient satisfaction score of 90.4 in June 2020. The team created a plan to develop a resource guide for patients and caregivers in order to improve their overall emotional well-being. At a time during a global pandemic, a need to provide virtual and electronic resources was evident as well. The Holistic Council nurses created the "Caring for your Emotional Needs – Helpful Apps and Resources" tool, containing information about validated mobile applications and free websites focused upon holistic modalities targeted for stress relief, meditation, guided imagery, and mindfulness. The nurses in the ambulatory care setting adopted the tool to distribute to all patients at their oncology appointments. This tool was also made available during new patient orientation and as a constant reminder on the electronic information kiosks in the hospital waiting areas. As a result of the creation and distribution of the valuable electronic wellness resources, patient satisfaction scores improved from 90.4 to 93.8 in September and October 2020, specific to patients' emotional needs. The tool is widely used as a resource in the inpatient and ambulatory care areas. As a result of this initiative, the Holistic Council nurses continue to evaluate data to improve patient care in the organization, through innovative ideas with a specific focus on technology. Next steps are the creation of wellness videos, based on holistic modalities, to provide virtual education to patients, staff, and the broader community.

DEVELOPING HEART IN THE MIDST OF COVID-19

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Tennessee Oncology's HEART (Healthcare Emotional Aid Response Team) Program is lead by psychologist Dr. Brynda Quinn, PhD to assist employees cope with increased stress and anxiety associated with the COVID-19 pandemic. The program's concept is similar to other peer support programs but was modified to accommodate all Tennessee Oncology staff, not just physicians and is available for both work and personal issues, not solely medical/ patient related crises. An intensive training program for 34 peer nominated staff was completed and HEART launched in July 2020. Staff members can easily click on a provided link within the company's intranet then email or Lync a peer responder of their choice from a list provided. After initial contact, the employee and responder will schedule a time to meet in person, via Zoom or by phone ensuring privacy. Because HEART is in its early phases, quantitative data on effectiveness is yet unknown. In the interim, a brief and confidential survey was completed with 30 staff members asking about their stress level in response to COVID-19. All interviewed staff members stated they have experienced some level of associated stress related to increased safety/activity restrictions and requirements put in place per state and federal guidelines. Also, when staff members were asked whether they would be willing to participate in the HEART program, all said they would when they felt they needed it. 85% of those surveyed asked more about the HEART program and felt secure talking with their peers knowing they would be provided with a confidential and nonjudgmental conversation. The HEART program is not a substitute for counseling. It was developed with the goal of lessening stress levels. Trained responders can assist staff with accessing our Employee Assistance Program and/or provide information to other outside resources if more counseling is deemed necessary. HEART is a valuable option for staff to take advantage of in order to decrease stress during these unprecedented times which in turn allows them to better support our patients effectively and with compassion. Although this program was developed during the pandemic it has the potential to go beyond and help employees cope with support from their peers and colleagues in non-pandemic related situations.

NURSING-DRIVEN QUANTITATIVE ASSESSMENT OF NAUSEA AND VOMITING IN ONCOLOGY PATIENTS

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Chemotherapy-induced nausea and vomiting (CINV) is a significant adverse effect that results in increased morbidity and decreased quality of life. Oncology patients often express concerns about the level of nausea and vomiting during their course of treatment. The management of these adverse effects can be complicated by interprofessional variations in quantifying and evaluating symptoms, antiemetic

orders with conflicting or duplicate administration instructions, and lack of evaluation of symptom supportive care. A nursing-driven CINV assessment tool was developed to aid nursing staff to provide clear direction and communication for assessing patients' nausea and vomiting symptoms, administrating appropriate antiemetic regimens, and validating intervention effectiveness. The utilization of the tool would also allow for a history of patient-reported nausea and vomiting for future interventions. We describe our experience of integrating the tool into the inpatient oncology/hematology service at a large academic medical center to standardize the care for our patients. The inpatient oncology nurses were tasked with utilizing the electronic medical record to document patients' nausea and vomiting history upon admission, assess nausea and vomiting with every shift and when a patient self-reported any symptoms. This included describing the symptom and assigning a level of symptom severity based on a numeric scale. If there were any polypharmacy issues, including duplicate therapies and unclear order of antiemetic administration, the nurse would address with the pharmacy and physician teams to resolve discrepancies. The nurses were then required to evaluate symptom severity within 60 minutes of antiemetic administration. The nursing-driven CINV assessment tool was created in the electronic medical record and implemented alongside formal nursing education for the inpatient staff on the new workflow. Nurses documented episodes of nausea and vomiting, implemented medication interventions as directed by the providers, and decreased polypharmacy. An assessment tool to allow for standardization of nausea and vomiting care is integral to ensure that the level of care is optimal for our oncology patients. Next steps include further nursing education for more widespread adoption of the tool, data collection of our oncology patients, and utilization of the tool in other patient care settings.

RESEARCH

HOW CAN TECHNOLOGY-BASED COMMUNICATION IMPROVE HEALTH OUTCOMES IN ADVANCED CANCER PATIENTS?

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Patients facing an advanced cancer diagnosis require clear and distinct communication with their oncology providers. Technology is evolving at a rapid rate and has been utilized in many different capacities to navigate communication in cancer care, but few authors examine the specific areas of communication from a theoretical perspective. The purpose of this literature review aims to 1) identify articles aimed at technology-based communication strategies to improve outcomes in individuals with advanced cancer, and 2) appraise them using Epstein and Street's model, to identify the areas in which technology-based communication has been used to improve cancer health outcomes, and 3) identify gaps that exist in technology-based communication care in advanced cancer patients. A systematic search of PubMed, CINAHL, and PsychInfo was conducted using predetermined keywords, mesh headings, and exploded topics which returned 446 articles. Articles were reduced to 46 after review of the title and abstract using strict inclusion and exclusion criteria. Using Epstein and Street's 2007 framework that describes the six core areas of communication in cancer care, 6 additional articles were excluded, making the final sample 40. This review identified 33 clinical trials, 1 quantitative descriptive, and 6 qualitative studies. The articles were then categorized into one area that fit best within Epstein and Street's areas of communication: responding to emotions (n=7), exchanging information (n=14), managing uncertainty (n=5), enabling patient self-management (n=8), fostering healing relationships (n=2), making decisions (n=4). Many (13) of the articles examined the patient's and provider's acceptability and feasibility of technology-based methods of communication, while other articles (20) examined their efficacy. While research studies were identified in each of the areas, the majority of technology-based communication strategies were focused on the exchange of pertinent information between patients and their providers. Further research and the development of technology-based communication interventions assessed in clinical trials are needed in the areas of healing relationships and making decisions in cancer care. Additionally, the communication strategies found effective at improving outcomes in advanced cancer, should begin to be implemented into clinical practice, therefore reaching more patients.

DISTINCT SLEEP DISTURBANCE PROFILES IN PATIENTS WITH GASTROINTESTINAL CANCERS RECEIVING CHEMOTHERAPY

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Patients with gastrointestinal (GI) cancers experience moderate to high levels of sleep disturbance during chemotherapy that decreases their functional status and quality of life (QOL). Study purposes were to identify subgroups of patients with GI cancers with distinct sleep disturbance profiles and evaluate for differences among these subgroups in demographic, clinical, and sleep characteristics, co-occurring symptoms, as well as QOL outcomes. Patients (n=405) completed questionnaires six times over two cycles of chemotherapy. Sleep disturbance was evaluated using the General Sleep Disturbance Scale (GSDS). Latent profile analysis (LPA) was used to identify subgroups of patients with distinct sleep disturbance profiles. Differences in demographic, clinical, and sleep characteristics, co-occurring symptoms, and QOL outcomes among the subgroups were evaluated using parametric and non-parametric analyses. Three distinct sleep disturbance classes (i.e., Low (35.8%), High (48.6%), Very High (15.6%)) were identified across the six assessments. Compared to the Low class, patients in the High and Very High sleep disturbance classes were significantly younger, had a higher number of comorbidities, had a higher number of prior cancer treatments, were less likely to be married/partnered, and were less likely to exercise on a regular basis. Compared to the Low class, patients in the Very High sleep disturbance class were less likely to be employed and had a diagnosis of back pain. Compared to the Low and High classes, patients in the Very High sleep disturbance class were more likely to report having childcare responsibilities. Significant differences were found among the three classes for comorbidity burden, occurrence of depression, and the GSDS subscale and total scores (i.e., Low < High < Very High). Patients in the Very High class reported higher levels of anxiety, depressive symptoms, morning and evening fatigue, and pain, and lower levels of attentional

function and QOL scores at enrollment. This study is the first to use LPA to identify subgroups of patients with GI cancers with distinct sleep disturbance profiles. Findings provide new insights into risk factors and co-occurring symptoms for higher levels of sleep disturbance in patients with GI cancers. Clinicians can use this information to identify patients who are at the highest risk for sleep disturbance and develop personalized symptom management interventions to reduce symptom burden and improve QOL.

THE FEASIBILITY AND PRELIMINARY EFFICACY OF A SELF-ADVOCACY SERIOUS GAME INTERVENTION FOR WOMEN WITH ADVANCED BREAST OR GYNECOLOGIC CANCER: A PILOT RANDOMIZED CLINICAL TRIAL

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Cancer survivors must self-advocate to get their symptom and self-management needs met when faced with a challenge. Self-advocating is hypothesized to improve patient outcomes, but it is unclear if self-advocacy interventions are feasible and/or efficacious. A serious game intervention was designed to improve female advanced cancer survivors' self-advocacy skills, including informed decision-making, communication with healthcare providers, and strength through connection to others. The study aims are to evaluate the feasibility and preliminary efficacy of the intervention. We analyzed baseline and 3-month data from a randomized clinical trial (RCT) evaluating a self-advocacy intervention (NCT03339765) piloted at a comprehensive cancer center in the Northeast. Eligibility criteria included ≥ 18 years old; female; new diagnosis of metastatic breast or advanced gynecologic cancer; ≥ 6-month life expectancy; ability to engage in self-care; and English literacy. Participants were allocated (2:1) to receive a self-advocacy serious game for

3 months or a paper self-advocacy guide. At baseline and 3 months, we collected the following patient-reported outcomes: self-advocacy (Female Self-Advocacy in Cancer Survivorship Scale), quality of life (Functional Assessment of Cancer Therapy-General), and symptom burden (M.D. Anderson Symptom Inventory). Feasibility was assessed using recruitment (consent and randomization) and retention rates. Initial efficacy was assessed by comparing outcome measure change scores at 3-months between intervention groups. Between December 2018 and September 2020, we screened 282 patients, of whom 145 screened eligible, 121 were approached, 84 consented (69.4% approach:consent rate), and 78 were randomized (92.9% consent:randomize rate). Once randomized, 70 (89.7%) participants remained in the study at 3 months. Average time spent on the intervention was 73.9 minutes (range=0.4–610.3). Reasons for attrition (n=8) included active withdraw (n=5; 62.5%) and death (n=3; 37.5%). Compared to participants in the paper guide group (n=24), participants in the serious game group (n=52) reported greater improvements in self-advocacy and symptom burden at 3 months though these were non-significant. The groups had no difference in improvement of quality of life. This study demonstrates the feasibility of a self-advocacy intervention among women newly diagnosed with advanced breast or gynecologic cancer. A larger confirmatory trial is required to verify the intervention's immediate and long-term efficacy. If efficacious, this intervention stands to improve survivors' self-advocacy, advancing nursing science's goal of achieving patient-centered, holistic care.

PSYCHOLOGICAL IMPACT OF COVID-19 PANDEMIC ON INPATIENT ONCOLOGY NURSES: A CROSS-SECTIONAL STUDY

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Oncology nurses are at disproportionate risk for psychological distress due to increased exposure to medically futile treatments that subject patients to poor health-related quality of life. The COVID-19 pandemic may have heightened psychological distress for oncology nurses. We examined the association between psychological distress (i.e., depression, anxiety, stress, post-traumatic stress disorder [PTSD]) and work-related quality of life (WRQoL) in oncology nurses during the COVID-19 pandemic. A cross-sectional analysis examined the impact of psychological distress [IESR-22 (PTSD): Impacts of Events Scale Revised Scale; DASS-21: Depression, Anxiety & Stress Scale] on WRQoL (primary outcome) of inpatient oncology nurses at a single cancer center. Controlling for potential covariates, the impact of psychological distress on WRQoL was examined. Oncology nurses' (n=68) mean age was 34.8 ±9.8 years. Most were White (n=60, 88%), non-Hispanic (n=65, 95%) females (n=66, 97%), Bachelor's prepared (n=61, 89%) and less likely to be married (n=29, 42%). The mean years of nursing and oncology experience was 9.3 years (±8.4) and 7.9 (±7.3) respectively. The mean DASS-21 score was 33.4 (±21.9) with subscales showing normal levels of depression ($\overline{X}$=9±7.4), mild anxiety ($\overline{X}$=9.09±7.8) and mild stress ($\overline{X}$=15.3±9.4). The mean score for PTSD (28.4±15.47) suggested clinical concern. The mean score for WRQoL was 78.8±10.5. Nurses' anxiety, depression and stress were strongly correlated to PTSD (r=.81, p<.0001). WRQoL was negatively correlated to PTSD (r= −.50, p <0.0001) and anxiety, depression and stress (r= −.59, p <0.0001). In multivariate regression analysis, depression, anxiety and stress were significantly associated with WRQoL after controlling for covariates (β = −.498; 95% CI, − .776 to −.219 4; [p = 0.001]). Oncology nurses are prone to psychological distress. Interventions to reduce depression, anxiety and stress may be important in improving WRQoL. Oncology nurses may benefit from psychological distress screening, especially for PTSD, anxiety and stress. Early identification of distress could allow for better support for nurses in the clinical setting.

EXPLORING CAREGIVER CHARACTERISTICS ASSOCIATED WITH COGNITIVE COMPLAINTS OF WOMEN WITH BREAST CANCER

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Up to 75% of women with breast cancer complain of changes in their cognitive function (i.e., cognitive complaints) during chemotherapy. Despite its high

prevalence, knowledge about contributing factors for cognitive complaints is limited. Several studies conducted in patients with neurocognitive disorders have reported relationships between patients' cognitive complaints and caregiver characteristics, which are poorly understood in the context of cancer. Taken together, caregiver characteristics appear to be associated with patient cognitive complaints. The purpose of this study is whether caregiver characteristics are associated with cognitive complaints reported by women with breast cancer undergoing chemotherapy, using a modified version of Bronfenbrenner's ecological model developed by the CDC as a guiding framework. An exploratory cross-sectional design study was conducted on 61 dyads of women with breast cancer and their caregivers. For this study, data on both patients and caregivers were collected one time: patients (cognitive complaints, anxiety, depression, fatigue, and sleep disturbance) and caregivers (coping, burden, self-confidence, and health). Patient cognitive complaints in this study were represented by cognitive impairment (CI) and cognitive ability (CA). Hierarchical multiple regression and stepwise regression were performed for this analysis. The findings from this study demonstrated two significant correlations: between patient CI and caregiver mental health, general health, and burden; and between patient CA and caregiver self-confidence and burden. Furthermore, caregiver burden, which showed correlations with both patient CI and CA, was found to influence patient CA. Also, patient depression played a mediator role in the association between caregiver general health and patient CI. In other words, better caregiver general health condition decreases patient depression, which in turn improves patient CI. This study demonstrated that patient cognitive complaints are influenced by caregiver characteristics. This heightens the necessity to consider caregivers when assessing and managing patient cognitive symptoms. Further, this study suggests the value of including caregivers when establishing interventions for patients who have cognitive complaints.

CURRENT PRACTICE PATTERNS AND GAPS IN GUIDELINE-CONCORDANT SURVIVORSHIP CARE FOR BREAST CANCER

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There are more than 3.5 million breast cancer survivors in the United States. While most of these patients survive the disease, they may suffer significant treatment-related consequences for years after completion of primary treatment. Breast cancer-specific guidelines for survivorship care have been developed, but implementation in clinical practice remains a challenge. This study examined current practice patterns and factors associated with guideline-concordant breast cancer survivorship care among medical oncologists. A comprehensive survey based on existing clinical guidelines for breast cancer survivorship care was developed and fielded to a national sample of medical oncologists. Survey questions queried current practice patterns in core areas of survivorship care: evaluating for recurrence, providing survivorship care plans, communicating with other clinicians, discussing follow-up care, screening for new primary cancers, assessing for adverse physical and psychosocial long-term or late effects, and counseling on diet, physical activity, and smoking cessation. A "survivorship care composite score" was then calculated for each respondent using the mean score across the core areas. Bivariate statistics were used to examine associations between physician and practice characteristics and survivorship composite scores, and compare groups with highest and lowest scores. Multivariable linear regressions were performed to explore associations between physician and practice characteristics and survivorship care composite score. Between October 2018 and April 2020, 217 medical oncologists completed the survey. A majority of oncologists reported always or almost always evaluating survivors for recurrence (78%); however, less than half reported providing survivorship care plans (46%), counseling on diet and physical activity (43%), assessing psychosocial long-term and late effects (34%), and screening for other primary cancers (34%). Length of pre-treatment consultations, duration of follow-up care, proactive discussions on late effects, and additional training in survivorship care were independently associated with survivorship care composite scores. Despite the availability of disease-specific guidelines, many barriers remain to providing comprehensive breast cancer survivorship care in clinical practice. The findings identify important gaps in the care of breast cancer survivors, particularly related to screening patients for new primary cancers and routine evaluation of adverse psychosocial long-term and late effects. To build on progress in this area, future research is needed to refine models of care intended for comprehensive guideline-concordant survivorship care for this growing population of long-term survivors.

INPATIENT ROTHMAN INDEX SCORE AND SUBSEQUENT UNPLANNED URGENT CARE VISITS WITHIN 7 DAYS OF DISCHARGE IN THE ONCOLOGY POPULATION

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Oncology patients frequently require unplanned care, either as inpatients or at the 24-hour Urgent Care Center (UCC) at our Comprehensive Cancer Center. While inpatient, the Rothman Index Score (RIS) is embedded in our electronic medical record (EMR) to reflect patient acuity and predict deterioration. The RIS ranges from –91 to 100, with 100 representing excellent clinical status and is calculated using 26 variables including vital signs, lab values, cardiac rhythms, and nursing assessments. Risk categories range from low (>65), moderate (40–65), and high (<40). Moderate and high risk scores are associated with likelihood of readmission. There is limited evidence on the RIS in oncology patients or relationships between RIS and subsequent unplanned care. This study aims to describe RIS and other characteristics of those patients who were discharged from the hospital and subsequently visited UCC within one week of discharge (a H+UCC event). We reviewed EMR data on all 2018 UCC visits to identify patients aged ≥18 with H+UCC. Clinical and demographic characteristics included age, sex, race/ethnicity, cancer type, first, last, highest, and lowest RIS during inpatient admission, and disposition from hospitalization and subsequent UCC visit. Of 23,567 total UCC visits in 2018, 9% (n=2,156) occurred within 7 days post-discharge. This cohort included 1,747 patients with a median age of 62 (range 18-95), and was 50% female, 73% white with 18% having ≥ two H+UCC events in 2018 (range 2–6). Most frequent cancer types were gastrointestinal (27%, n=421), hematologic (21%, n=335), and genitourinary (13%, n=199). During hospitalization, median inpatient days was 5 (1–216) and 6.3% (n=136) received ICU care. Median lowest RIS was 59.8 (–33.8–99.0) and highest was 90.4 (36.6–100). 87% of patient's RIS were low risk, 12% moderate and 0.7% high risk at the time of discharge and 93% (n=2,016) were discharged home. UCC visit data indicated 27% (n=591) and 5.4%

(n=116) received chemo or radiation respectively in the past 2 weeks. Notably, 70% of patients (n=1,442) were readmitted to the hospital after a H+UCC event. Nearly 1 in 10 discharged patients returned for urgent care within 7 days and almost three quarters of those were readmitted. Future work will explore the relationship of RIS to unplanned care to identify factors to decrease these events.

A QUALITATIVE STUDY OF MORAL DISTRESS EXPERIENCES AMONG ONCOLOGY TEAM MEMBERS

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Moral distress occurs when an individual faces a moral event (e.g. moral uncertainty or conflict) and experiences psychological distress. Oncology healthcare professionals may be at higher risk than other specialties for moral distress due to their frequent exposure to end-of-life and conflicts about goals of care. The consequences of unresolved moral distress include staff turnover and compromised care quality. Moral distress affects healthcare professionals, health care organizations, and importantly, patients and families. The purpose of this study was to describe moral distress in oncology practice as it is experienced by oncology teams. Oncology healthcare professionals, particularly nurses, experience moral distress. However, little is known about the impact of moral distress on oncology teams. Healthcare team perspectives on moral distress can guide development of targeted strategies to mitigate moral distress in oncology practice. This was a qualitative, descriptive study. Oncology team members (nurse, palliative care physician, case manager, physical or occupational therapist, certified nursing assistant, chaplain, advanced practice nurse, child life specialist) participated in focus groups. Content analysis was used to identify key themes. Two investigators collaboratively analyzed the data. Findings were independently reviewed by two additional investigators. Six themes emerged from eight focus groups (n = 32) of oncology team members: meaning of oncology care, rippling effects of cancer, decision-making barriers are central to the moral distress experience, other antecedents of healthcare professional moral distress, consequences of healthcare professionals' moral distress, and ways

to mitigate moral distress and burnout in oncology. Participants described deep connections with patients, families and colleagues, and highlighted the importance of skillfully navigating decision-making. These findings increase our understanding of moral distress from a team perspective. The deep meaning embedded in oncology work motivates healthcare professionals working in this specialty; however, the rippling effects of cancer, particularly decision-making barriers and professional hierarchy, can contribute to healthcare professional moral distress, burnout and compassion fatigue, and threaten the quality of patient and family-centered care. Potential interventions to improve the quality of oncology patient and family care that hold promise include those that aim to increase meaning in work and promote interprofessional shared decision-making. Practice recommendations include enhancing teamwork and communication; early palliative care involvement; and accessibility to mental health professionals on oncology inpatient units.

CAREGIVER-REPORTED OUTCOMES SPECIFIC TO EMOTIONAL CHALLENGES ACROSS THE COLORECTAL CANCER TRAJECTORY

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The cancer journey includes a long series of stressful events wherein primary caregivers, key family members or friends, experience high levels of caregiver burden. Beginning with the time of diagnosis and then at different points in the cancer journey, it is unknown which outcomes matter most to caregivers, and how and when screening for these caregiver-reported outcomes (CROs) would best be done. CROs refer to a caregiver's assessment of their own health status as a result of supporting a patient with cancer. Our purpose was to identify the CROs considered most important to caregivers of patients with colorectal cancer (CRC) and describe the importance of these CROs at different points in the CRC trajectory. Our

team of researchers, clinicians, and patient and caregiver partners conducted and analyzed semi-structured interviews with 25 caregivers and 37 patients with CRC using inductive coding and constant comparative techniques and guided by the applied analytic direction of Interpretive Description. CROs related to emotional challenges were prominent with shock, distress and fear notable around the time of diagnosis and beginning of treatment. As treatment progressed, worry, sadness in bearing witness to patient suffering, and feeling overwhelmed and exhausted by caregiving were emphasized, especially when ostomy or other medical issues persisted. While caregiver loss and grief were prominent when cancer progressed, these emotions were described throughout the cancer journey in relation to intimacy, social connectedness and future hopes. Similarly, ongoing caregiver guilt, and tension and conflict between the caregiver, patient and other family members were highlighted. The shifting and persistent emotional challenges described in this research provide direction for the assessment of specific CROs at different times in the CRC trajectory. Oncology nurses are optimally situated to assess CROs and direct care accordingly, and though some related CRO measures exist, others will require development. Despite the proliferation of evidence on patient-reported outcomes, our study is one of the first to examine CROs with an eye toward implementation.

ANALYSIS OF ADULT CODE RESCUE CHARACTERISTICS AND PREDICTORS IN THE AMBULATORY ONCOLOGY SETTING: A SINGLE-CENTER, RETROSPECTIVE STUDY

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In healthcare, the term 'code rescue' (CR) is used to describe unplanned events requiring emergency intervention. In the inpatient oncology setting, many of the factors that predict which patients will need CR assistance are understood. However, in the outpatient oncology setting, the factors that predict CRs are not well-described, making it difficult for nurses involved in code response to identify those most at-risk and develop interventions. The purpose of this project was to describe the factors associated with CRs and

CR-related outcomes such as transfer to ED, hospitalization, and hospital length of stay (LOS) in the outpatient oncology setting. Data for the single-center, retrospective study came from a database maintained by the nursing house supervisors (NHS) responding to codes. Code severity was rated by NHSs responding to CRs using a five-point rating scale based on NCI's Common Toxicity Criteria's levels/definitions (1='mild', 2= 'moderate', 3= 'severe', 4= 'life-threatening', 5= 'death'). Over a 2.6-year period between Jan, 2018 and July, 2020, NHSs in the outpatient oncology setting responded to 287 CRs. Patients with Stage IV cancer required CR assistance almost twice as often as patients with Stage I–III (67% vs 38%). More than 80% of patients requiring CR assistance were transferred to the ED afterwards, with 55.4% of these being admitted to the hospital. Hospital LOS varied widely (range: 1–41 days), averaging 5.8 days (IQR: 2.0–7.0). Regression models using patient age, sex, cancer type, number of pre-code symptoms, and nurse-rated code severity as predictors found that only nurse-rated severity significantly predicted CR outcomes. Patients whose CR was rated as 'severe' were more than three times more likely to be transferred to the ED (OR: 3.15; 95% CI: 2.34–6.65; p < 0.001) and more than five and times more likely to be admitted to the hospital following their code rescue (OR: 5.64, 95% CI: 2.03, 8.70; p = .0009) than patients with codes rated as 'mild'. Results provide insights into the factors associated with CRs in the outpatient setting, and highlight the need to monitor patients with advanced cancer carefully for shifts in clinical status that can trigger a code. Results also suggest that CR assessment by nurses may be effective in predicting CR-outcomes. Additional studies validating and extending these findings are needed.

BELIEFS, PRECAUTIONS, AND IMPACT OF THE COVID-19 PANDEMIC ON PATIENTS RECEIVING CANCER TREATMENT

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Since early 2020, cancer patients have navigated their treatment and everyday lives under the shadow of the Covid-19 pandemic. In the U.S. there are a range of beliefs about the virus and willingness to adopt Covid-19 precautions. It is important to understand the beliefs and impacts of the pandemic on cancer patients who are at increased risk for Covid-19 illness. Utilizing elements of the health belief model, the purpose of this study was to determine the beliefs and impacts of Covid-19 on cancer patients receiving active treatment. A telephone survey was conducted with 163 cancer patients receiving active treatment during the Covid-19 pandemic. Questions related to Covid-19 beliefs, precautions and impact utilized either 0–10 or 5-item Likert scale responses. A majority of participants were women, 60 years of age with a variety of cancers, most commonly breast or colorectal. While participants (77%) said it was unlikely they would contract Covid-19, most (80%) agreed that their cancer put them at greater risk for being infected and 86% thought it would be serious if they contracted the virus. Forty-three percent reported worry about dying from the virus, however more (57%) were worried about a family member or friend dying from the virus. Most (54%) reported that they used their experience of coping with cancer to deal with concerns about Covid-19. Most denied that their cancer care had been disrupted or delayed and most agreed they had received adequate information about the virus from their oncology team. Ninety-two percent reported that masking was important and 96% reported they sometimes or always masked when out in public. Thirty-six percent reported social isolation or loneliness and 70% reported significant disruption to their social interactions. In other life impacts, 31% reported difficulty or inability to perform work as usual, 12% were anxious about job lost and 18% were worried about maintaining health insurance. Oncology nurses and nurse practitioners should not only address patients' needs for Covid-19 information but also understand their patients' beliefs about Covid-19 susceptibility and how the pandemic impacts their daily lives. Drawing on positive coping strategies that have been useful to patients in dealing with cancer as a life-threatening disease, may also be useful in adjusting to the pandemic threat.

A COMPARISON OF THE EXPERIENCES OF FEMALE CANCER SURVIVORS WHO ARE HEALTHCARE PROFESSIONALS WITH NON-HEALTHCARE PROFESSIONALS: HOW ARE HEALTHCARE PROVIDERS' NEEDS DIFFERENT?

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Healthcare professionals (HCPs) who are diagnosed with cancer may have different healthcare needs than cancer survivors without medical training. Minimal research has been conducted to understand the self-management experiences of HCP cancer survivors, limiting providers' abilities to provide tailored self-management resources. The purpose of this study is to describe HCP cancer survivors' symptom burden, health information engagement, and self-advocacy relative to other cancer survivors. We conducted a national cross-sectional descriptive study among female cancer survivors. Participants were recruited from national cancer advocacy organizations, cancer registries, and cancer clinics. The eligibility criteria were: (1) female gender, (2) >=18 years old, and (3) prior diagnosis of an invasive cancer. Participants completed online or paper surveys including assessments of their symptom burden, including both symptom severity and interference with daily living subscales (M.D. Anderson Symptom Inventory (MDASI)), health information engagement (Health Information Orientation Scale (HIOS)), and self-advocacy (Female Self-Advocacy in Cancer Survivorship (FSACS) Scale). We compared HCPs and non-HCPs' disease experiences using Mann-Whitney U tests and descriptive statistics. Among the N=151 participants who identified a profession, 37 self-identified as HCPs (HCP group) and 114 self-identified as non-healthcare professionals (non-HCP group). The median age was 55 years old; most had a bachelor's degree or more (63.6%) and were a median of 5 years from their cancer. The most prevalent cancer diagnosis was breast cancer (41.7%), followed by ovarian cancer (24.5%). The HCP and non-HCP groups reported no differences in either symptom severity (Z = –.304 p = .76) or interference (Z = –.983, p = .33). The HCP group had significantly higher FSACS scores (Z = –2.119, p = .03) and lower HIOS scores (Z = –2.087, p = .04) compared to the non-HCP group. The study suggests that HCP cancer survivors experience similar symptom burden as other cancer survivors. While HCP cancer survivors had higher self-advocacy than non-HCP survivors, they had lower health information engagement. This suggests that HCPs may be better equipped to overcome challenges related to their cancer care but are less likely to seek out information regarding their cancer. Future research should explore the reasons for and implications of HCP cancer survivors' experiences so that specific self-management interventions can support their unique needs.

A DESCRIPTIVE, CORRELATIONAL, SECONDARY ANALYSIS OF RATES AND DETERMINANTS OF ORAL ENDOCRINE THERAPY ADHERENCE IN WOMEN WITH BREAST CANCER: RESEARCH PROTOCOL

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Breast cancer is the most prevalent cancer among females and is a leading cause of cancer deaths. About 80% of breast cancer patients take oral endocrine therapy (OET), which increases survival, improves quality-of-life (QOL), and decreases healthcare costs. Despite the positive implications of OET, many patients are non-adherent to their medication. The purpose of this study is to identify the rate of OET adherence and the multi-level determinants influencing OET adherence for women with breast cancer. The majority of existing research on OET adherence has been conducted on small samples at single sites and has focused predominantly on patient issues. Exploring multi-level determinants in large samples across diverse populations is critical for understanding OET adherence. The World Health Organization's model of factors that influence medication adherence (i.e., patient-related, condition-related, therapy-related, social/economic-related, and health care team/system-related factors), will be used to delineate multi-level determinants of OET adherence through the lens of Bronfenbrenner's ecological system theory. A cross-sectional, correlational study design will be used to conduct a secondary data analysis of Cerner's *HealthFacts* database, which is a proprietary clinical data warehouse, including data from over 158 million patients from across the United States. The *HealthFacts* database has been validated for 334,378 women with breast cancer prescribed tamoxifen, anastrozole, exemestane and letrozole medications. All women in the database with a cancer diagnosis will be identified using ICD-9 and ICD-10 codes. Data on OET adherence will be extracted for all women the first ten years after initiation of OET therapy. Multi-level determinants will be extracted including patient-related, condition-related, therapy-related, social/econom-

ic-related, and health care team/system-related factors. Findings and interpretation will be forthcoming. Determining rates and multi-level determinants of OET adherence will be the first step in developing and testing interventions to improve OET adherence with breast cancer, which has the potential to decrease morbidity and mortality and increase QOL. Emphasizing multi-level influences is critical for nursing research because nurses are uniquely positioned to assist in changing medication adherence behaviors in women with breast cancer, so quality of life and outcomes are improved.

IMPLEMENTING A VIRTUAL ART THERAPY PROJECT IN AMBULATORY ONCOLOGY PATIENTS DURING CORONAVIRUS DISEASE 2019 (COVID-19)

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Art therapy enables oncology patients to cope and express themselves during their illness, yet it is rarely incorporated in the ambulatory oncology care setting and research on its effects is limited. This ongoing study aims to evaluate the effects of art therapy among oncology patients' reported levels of anxiety and was adapted from in-person to a virtual format during the Coronavirus Disease 2019 (COVID-19) pandemic. Adult patients receiving chemotherapy and/or radiation in an ambulatory care cancer center were invited to participate in art therapy sessions directed by a certified art therapist; sessions were delivered over a 4-week period using an online video conferencing platform. Each 90-minute art session incorporates multimedia painting using a weekly theme. Perceived level of anxiety was assessed each week prior to art therapy session using a Generalized Anxiety Disorder 7-item survey (GAD-7). Additionally, anxiety before and after each art therapy session was assessed using a single item visual facial anxiety scale (VFAS), categorized as none, mild, mild-moderate, moderate-high, and highest anxiety. Participants completed surveys using an online survey platform. Data were analyzed using descriptive statistics and percent change. Among the 4 enrolled participants, all were female, aged 56 ± 1.8, 75% were diagnosed with breast cancer and 25% with colon cancer. There was a 100% art session attendance rate. The GAD-7 scores were 4.25 ± 3.0, 4.25 ± 2.6, 6.25 ± 5.3, 5.75 ± 2.6 respective-

ly, corresponding to a 35.3% change over time. With regards to the VFAS, most participants self-reported an overall reduction in anxiety each week when comparing pre- and post-session data; specifically, 75% of participants in weeks one and two, and 50% of participants in weeks 3 and 4, reported an overall reduction in anxiety. These preliminary findings suggest that art therapy can be delivered virtually and decreases the anxiety levels among this sample of ambulatory care cancer patients. Continued study enrollment is necessary before generalizing these preliminary findings.

COMPARISON OF CLINICAL OUTCOMES AND HEALTHCARE RESOURCE UTILIZATION IN BREAST CANCER SURVIVORS WITH AND WITHOUT TYPE 2 DIABETES

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The majority (75%) of breast cancer survivors (BCS) have at least one pre-existing comorbid condition, with diabetes (type 2) as one of the most prominent. The combined diagnoses of breast cancer and diabetes can exacerbate clinical outcomes, resulting in higher utilization of healthcare resources. Despite the high prevalence of diabetes among BCS, few studies comparing those with and without diabetes on outcomes have been conducted. As BCS are living longer post cancer diagnosis due to advances in treatment, and with the anticipated prevalence of diabetes expected to increase by 54% in 2030, it is important to understand the role of diabetes on clinical outcomes and resource utilization. The purpose of this study was to use data from the electronic health record to examine the differences in clinical outcomes (anemia, neutropenia, and infection) and healthcare resource utilization (inpatient, outpatient, and emergency visits) in BCS with and without diabetes. This was a descriptive cohort study. Structured and unstructured data were obtained from electronic health records from a large healthcare network linked to the State Cancer Registry in the United States. BCS diagnosed between January 2007 and December 2017 were included. Multivariable logistic regression and generalized linear models were used to determine differences in health outcomes and healthcare resources. The cohort included 6,851 BCS, of which 1,121 (16%) had a diagnosis of diabetes. BCS were on average 55 (SD=11.88) years

old, and the majority were Caucasian (90%) and had stage II (48.8%) breast cancer. BCS with diabetes were significantly older (x=60.6, SD=10.34) and obese (BMI ≥33; 66%). BCS with diabetes had higher odds of poor clinical outcomes, specifically anemia (OR 1.43; 95% CI 1.04, 1.96) and infection (OR 1.86; 95% CI 1.35, 2.55) and utilized more outpatient resources (p <.0001). Our findings demonstrate that BCS with diabetes had poorer clinical outcomes and higher healthcare resource utilization (outpatient) than BCS without diabetes. These findings highlight the need for survivorship models that include collaboration among multispecialty practitioners and guidelines to facilitate clinicians in the management of diabetes; in order to improve clinical outcomes and decrease resource utilization.

SLEEP DISTURBANCES AND ASSOCIATED FACTORS AMONG BREAST CANCER SURVIVORS: A 2-YEAR LONGITUDINAL STUDY

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Breast cancer survivors (BCS) often report poor sleep quality and staying awake throughout the night as the greatest challenges experienced. Sleep disturbances begin or worsen through treatment trajectories, and BCS continue to report sleep disturbances for as long as 10 years following the cessation of cancer treatment. This study aimed to elucidate characteristics of sleep disturbances and determine potential predictors that affect sleep disturbances in a cohort of BCS for two years post-chemotherapy. This is the secondary data analysis of a longitudinal, prospective study examining psychoneurological symptoms and epigenetic factors in BCS at baseline prior to chemotherapy (T1), the mid-point of chemotherapy (T2), 6-month (T3), 1-year (T4), and 2-year (T5) follow-up timepoints post-chemotherapy. Sleep disturbances as an outcome variable were measured with the General Sleep Disturbance Scale. Sociodemographic and cancer-related factors, telomere length, DNA methylation age, psychoneurological symptoms, perceived stress, and health-promoting lifestyle profiles were included as predictor variables. Temporal changes were obtained by linear mixed effects models (F-tests) with a random intercept. To check for significant predictors on sleep disturbances at each time point, a parsimonious linear regression model with backward selec-

tion was fitted with the sleep disturbance total score. In a total of 74 BCS, the average age was 51.32±10.27 years old, and 70% were of non-Hispanic Caucasian heritage. BCS experienced severe sleep disturbances at T2, which gradually improved over time. Significant temporal changes in mid-sleep awakenings, early awakenings, and fatigue at work were observed, with disturbances being elevated at T2. Higher levels of health-promoting lifestyle behaviors were associated with lower levels of sleep disturbances across all time points in the univariate analysis. Anxiety (T1, T2, T4), pain (T1), fatigue (T3, T4), and perceived stress (T3, T5) were included in the parsimonious models as significant predictors of sleep disturbances. Our results suggest that the optimal timing for managing sleep disturbances in BCS is prior to and during chemotherapy treatment. Tailored interventions and self-awareness of anxiety, pain, fatigue, and perceived stress could be beneficial for mitigating sleep disturbances throughout the cancer trajectory. Health-promoting lifestyle behaviors, such as nutrition and physical activity, are encouraged to improve sleep quality. Innovative: One of first longitudinal studies to examine multiple biobehavioral risk factors and temporal changes of outcomes.

POSTER ABSTRACTS

ADVANCED PRACTICE

DEVELOPMENT AND APPLICATION OF EDUCATIONAL VIDEO FOR IMPROVING BREAST SELF-EXAMINATION PRACTICE

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Breast cancer is the most common cancer in worldwide women. As a result, breast self-examination (BSE), clinical breast examination, and mammography were recommended to prevent secondary breast cancer. BSE is an easy, convenient, less costly than other methods, and effective method to early detect breast malignancy or abnormalities. However, the practice rate of BSE is low. Therefore, efforts are needed to encourage early detection of breast cancer and to improve the rate of BSE as breast cancer screening method. The purpose of this study is to develop educational videos for BSE and to verify the effectiveness of the BSE education program. The study design is one group pretest and posttest quasi-experimental research. We developed an online-based educational video of BSE and conducted content validation of

experts including oncology certified nurse and breast surgeons. A convenience sample of 98 women in Korea was recruited between July to November, 2020. We provided BSE education using an educational video and Q&A section. The pretest was conducted before the intervention and the posttest was conducted 3 months after the intervention. BSE alarm messages were sent for individually for each participant's menstrual cycle during the 3 months of the follow-up phase. We compared the differences in BSE practice, knowledge of BSE. The data used a total of 72 sample who participated in the pretest and posttest and analyzed using a t-test with the SPSS 25.0 program. The participants average age was 34.42±13.04 years ranged from 20 year to 62 years. The study findings showed statistically significant difference in BSE practice (t=–9.32, p<.001) and knowledge of BSE (t=–4.79, p<.001) based pretest. Before intervention phase, only 2 % of participants had monthly regular BSE, 55.1 % of participants had never practice of BSE. The other hands, post intervention phase, 23.3 % of participants had monthly regular BSE, 5.5 % of participants had never practice of BSE. The educational program of BSE has been found to have a significant effect. There was helpful to send an alarm message according to the menstrual cycle of each participant. We expect to increase the BSE practice rate through the providing BSE educational program. Also, community efforts should be followed to improve breast screening recognition.

PUBLIC HEALTH DISASTERS—THE ROLE OF THE ONCOLOGY ADVANCED PRACTICE REGISTERED NURSE

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COVID-19 has shown that national disasters are multifaceted and complex. While oncology practices may have been adequately prepared for weather related or chemical disasters previously, pandemic preparedness requires different ways of thinking. Because of the vital role in patient/family care, oncology advanced practice registered nurses (OAPRN) recognize the multidimensional needs of patient/families and are key stakeholders in ensuring the practice and patients/families are adequately prepared for any public health disaster. The purpose of this project was to describe how OAPRNs can utilize their knowledge, skills, and competencies to influence each phase of disaster response. Given their advanced knowledge and skills, relevant competencies, and close relationships with oncology patients and families, OAPRNs can be an integral component in disaster planning and response and can utilize multiple role competencies to impact patient safety. There is a paucity of studies addressing OAPRNs and disaster response. Sentinel literature from reputable national organizations and groups, including governmental and professional disaster response sources, was reviewed and applied to the role of OAPRNs. A crosswalk between disaster and public health crisis standards and OAPRN competencies was conducted to illustrate ways OAPRNs can influence all phases of public health disasters. Four phases of disaster response (i.e. mitigation, preparedness, response, and recovery) are described in relation to public health disasters. OAPRN competencies, particularly communication, leadership, health promotion and education, ethics and culturally congruent care, and outcomes assessment are valuable in disaster response. Specific examples of OAPRN activities in all four phases of disaster response are provided. The global COVID-19 pandemic has resulted in heightened awareness of the importance of public health disaster mitigation, preparedness, response, and recovery. OAPRNs are acutely aware of the relationship between disaster preparation and response and safe care for individuals with cancer and their families. Applying OAPRN knowledge, skills, and competencies to disaster planning and response can help address the multifaceted and complex issues involved in caring for oncology patients and families during disaster situations. This abstract addresses a timely issue and uses a novel approach in clarifying the role of OAPRNs in public health disaster mitigation, preparedness, response, and recovery.

CLINICAL PRACTICE

ONCOLOGY PATIENT CARE THROUGH THE PRACTICE OF NURSE COACHING

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Oncology nurses play a vital role ensuring patients needs are met from the time of diagnosis to the end of life. According to the American Cancer Society approximately 50% of oncology patients experience conditions that have a negative effect on their quality of life such as, pain, anxiety and fatigue. A patient centered approach is a core component of caring for cancer related distress. Nurses are well-positioned to explore new practices that may enhance the care

they provide to their oncology patients. Nurse coaching provides skills that can have a significant impact on caring for the oncology patient. The objective of this paper is to describe how nurse coaching practices provide holistic support to patients in a way that may help relieve cancer related distress and assist patients in achieving their own individual goals. The role of the nurse coach is unique, placing patients at the center of their focus. Not only does the nurse coach help establish health goals with their patients, they motivate them to concentrate on modifying lifestyle habits, managing health conditions, and incorporating integrative practices when appropriate, promoting healthier life styles. The nurse coach model has been acknowledged by the American Nurses Association (ANA) since 2010. According to the American Holistic Nurses Association (AHNA), nurse coaches concentrate on the whole person, utilize tools and strategies that integrate the mind, body, emotions, spirit and environment in promoting health and wellness. Likewise, Nurse coaches focus on their client's strengths rather than their weakness, knowing that the patient is the expert in their own personal desires and decisions. Additionally, the professional nurse coach scope of practice and competencies are American Nurses Association six standards of practice and ten standards of professional performance. The five core values of the professional nurse coach role are based on: (a) Nurse Coach Philosophy, Theories, Ethics, (b) Nurse Coaching Process, (c) Nurse Coach Communication, Coaching Environment, (d) Nurse Coach Education, Research, Leadership, and (e) Nurse Coach Self-Development (self-reflection, self-assessment-self-evaluation, self-care."

INCREASED PROGNOSTIC AWARENESS IN TERMINALLY ILL CANCER PATIENTS: AN INTEGRATED RESEARCH REVIEW

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Nearly half of all cancer patients do not accurately understand prognosis, although 78.6% to 96.9% of cancer patients desire to know and understand prognosis. A recent review of the literature was conducted to answer a question of how prognostic awareness can impact patients' decisions regarding treatment and effects on quality of life. Patients with prognostic awareness are more likely to have end-of-life care plans mapped out and less likely to end up in the hospital, intensive care unit, receiving end of life chemotherapy or coding with almost no chance of survival. Accurate prognostic awareness increases initiation

of early palliative care and can improve mood, quality-of-life, coping, communication, and prognostic awareness. Early initiation of palliative care can decrease chemotherapy at end-of-live, increase hospice entry, and decrease caregiver depression. The literature reveals multiple ways you can intervene to promote accurate prognostic awareness such as initiation the Heidelberg Milestones Communication Approach or a question prompt list.

ADVANCED PRACTICE PROVIDER PREOPERATIVE OPTIMIZATION OF SURGICAL ONCOLOGY PATIENTS DURING THE COVID-19 PANDEMIC

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The coronavirus disease of 2019 (COVID-19) spread quickly and had a devastating impact on life as it killed hundreds of thousands of people. During the lockdown for COVID-19, operating rooms across the state were closed for all procedures not deemed emergent, including oncologic resections. The resources used to support the surgeries such as ventilators, were shifted to intensive care units for COVID-19 care. Oncology care during the COVID-19 pandemic was impacted by the overwhelmed hospital systems. Many patients were delayed in their cancer treatments and surgical oncology resections, community resources including medical providers were limited and struggling to meet the challenges associated with COVID-19 care. In an NCI designated Comprehensive Cancer Center serving a large metropolitan area, a nurse practitioner run pre-surgical testing clinic effectively optimized surgical patients during and post the COVID-19 lockdown. In times of uncertainty, flexibility and communication are vital. The pre-surgical testing (PST) nurse practitioner (NP) conducted a comprehensive live in person visit, including a review of the systems, evaluation of the laboratory cardiology and radiology testing, physical exam, as well as an anesthesia evaluation. Risk assessment of patients was essential as well as education on, COVID-19, measures to improve conditioning, alleviate anxiety, and preparedness for the surgical procedure. Preoperative COVID-19 testing and the timing of the testing was an area of our plan that had changed based on the guidance from the Center of Disease Control. The PST was conducted using the known data to reduce the spread of COVID-19. Telemedicine visits with the surgeon, consultative providers were supplemented with an in-person NP visit during the PST. The PST NPs networking and communication to internal and exter-

nal medical providers was necessary and challenging during the pandemic. Surgical oncology patients postponed preoperatively had increased symptoms and debilitation related to untreated cancer. The patient's anxieties were escalated and expanded during the pandemic and included fear of contracting COVID-19, the isolation during hospitalization in addition to standard pre-operative anxiety. Telemedicine offers advantages especially liberating specialists to consult with patients during quarantines and pandemics. NPs were successful at safely, effectively assessing and optimizing surgical oncology patients delayed in treatment during the COVID-19 pandemic.

SCREENING MAMMOGRAPHY REMAINS EFFECTIVE AMONG OLDER WOMEN

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Currently there is an underrepresentation in understanding breast cancer diagnosis and treatment modalities in older women due to a lack of continued screenings, based off age. The purpose of this research is to prove that annual mammography should be ongoing in women after the age of 74 that do not have a limited life expectancy. Interventions include streamlining major guidelines to not jeopardize someone's morbidity and mortality just because one organization precludes there is no reason to screen for breast cancer in the is age group. Evaluations include to monitor and track all breast cancer, despite ones age, and to streamline guidelines such as National Comprehensive Cancer Network, American College of Radiologists, and US Preventative Services Task Force. Nurses and Advanced Practice Nurses are crucial in providing education to patients and other colleagues in the importance of screenings to promote optimal health outcomes in the ever advancing era of modern medicine.

A NURSE-IMPLEMENTED EVIDENCE-BASED ORAL CARE BUNDLE MAY DECREASE MUCOSAL BARRIER INFECTIONS

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Since 2013, Central Line Associated Blood Stream Infection (CLABSI) rates have included mucosal barrier infections (MBIs). Patients with cancer are at risk for blood stream infections in two ways, through breaks in central line care technique and by translocation of bacteria through injured mucosal lining. Prevention interventions must be expanded to manage both sources to decrease overall infection rates, morbidity and mortality. The purpose of this project was to implement an oral care bundle on an inpatient oncology unit as a nursing care intervention to prevent mucositis-associated mucosal barrier infections. An oral care bundle was established as a new standard of care. It included an oral care order set, a mouth care kit for patients to hang on their IV pole, and targeted patient education about mouth care and its importance for infection prevention. Nurses on the inpatient oncology unit received information about mucosal barrier infection definitions, the impact of MBIs, and evidence-based mouth care interventions. Accountability methods were implemented at each shift huddle to determine whether the oral care bundle orders were present and if patients had an oral care kit at the bedside. An accountable nurse addressed missing orders/kits. Oral care implementation rates in 2019 (pre-bundle) were compared to 2020 (post-bundle) rates based on the percentage of patients whose oral care was performed and documented, and MBI rates. Before oral care bundle implementation, oral care was performed and documented in 65% (N=1464) of inpatients compared to 84% (N=800) post bundle implementation (x^2=104.40, p<.001). MBI rates decreased from 14 in FY2019 to 11 in FY2020, showing a 21.43% improvement. The data provide preliminary evidence that a nurse-designed standard of care protocol for mucositis may decrease MBI rates. Future studies should control for neutropenia and other potential confounders. Oncology nurses addressed system barriers to implementing oral care for hospitalized patients with cancer at risk for MBIs. Standardized orders, routine accountability checks, and patient-accessible oral care kits could be effective strategies for translating evidence-based oral care into clinical practice, which has the potential to make a meaningful impact on patient outcomes.

DEVELOPING A MENTORSHIP PROGRAM TO ASSIST IN THE TRANSITION FROM A MEDICAL-SURGICAL NURSE TO AN ONCOLOGY NURSE

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Morristown Medical Center's, Outpatient Medical Oncology Infusion Center found the need to develop a mentorship program to help support medical-surgical nurses with a desire to pursue Oncology. This

program would assist in staff retention, clinical support and professional growth in nurses who were interested in pursuing Oncology. When adjusting from an inpatient nurse to a fast-paced, stressful, and autonomous atmosphere, even the most knowledgeable nurses experience insecurity and fear. Oncology mentorship programs, specific to the outpatient setting, can effectively support the emotional needs, professional growth, and well-being of non-oncology nurses. These special nurse to nurse relationships can assist in creating a healthy work environment and retain the specially trained staff for our unique patient population. Mentorship is also associated with increased career advancement and improved job satisfaction, which may increase nurse recruitment and retention. Nurses that had a desire to pursue Oncology, were interviewed for the mentorship program. The cost of taking the required ONS courses would be reimbursed by the institution. A mentorship guide was created to assist the mentor with understanding what it means to be a mentor and supporting the mentee throughout their journey. Nurses enrolled in the program better understood the complex care of the Oncology patient. Nurses developed the relationships that are needed with their mentor, able to bounce ideas off them, which in turn, allowed the mentee to develop the confidence needed to care for their patients. This program not only enhanced the mentee's development in oncology, but also the mentor, for they would continue to grow professionally, maintain their certification, increased job satisfaction and the overall standards of clinical practice. Nurses development was evaluated throughout the 18-month program and goals and/or objectives were adjusted as needed. A pre- and post-evaluation was performed to assist in building our program to fit the needs of our unit and building our mentee throughout. Innovation: Assisting novice nurses to make the transition to an oncology nurse without the worry of failing. This program provides nursing mentor and mentee support throughout an undetermined amount of time. Assists in staff retention and building trusting relationships with staff.

TREATMENT WITH ENZALUTAMIDE IN MEN WITH NON-METASTATIC PROSTATE CANCER FROM THE PROSPER TRIAL

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Non-metastatic castration-resistant prostate cancer (nmCRPC) is a disease state on the prostate cancer continuum, characterized by increasing prostate-specific antigen (PSA) levels, despite primary treatment with androgen deprivation therapy (ADT), and without evidence of obvious disease progression on conventional imaging. nmCRPC can evolve into metastatic CRPC (mCRPC) without appropriate intervention. Early and effective treatment is recommended to delay the development of metastases, prolong survival, and minimize loss of patient quality of life (QoL). Enzalutamide (approved for CRPC treatment, irrespective of presence of metastases), apalutamide and darolutamide (approved for nmCRPC treatment) are novel anti-androgens approved by the Food and Drug Administration. As treatment options expand, nurses will play an increasingly important role in informed decision-making, along with symptom and side effect management in patients with nmCRPC. Here, we review the role of nurses in the management of patients with nmCRPC, in particular those treated with enzalutamide. In the Phase 3 PROSPER trial (NCT02003924) of patients with nmCRPC, enzalutamide, in combination with ADT, significantly decreased the risk of metastasis and death by 71%, compared with placebo plus ADT. Enzalutamide treatment led to significantly longer time to metastasis-free survival (MFS), overall survival (OS), and time to PSA progression. MFS is a novel clinical trial endpoint, with a strong correlation with OS in patients with nmCRPC. Men treated with enzalutamide and ADT in the PROSPER trial remained on therapy for more than twice as long as those receiving placebo plus ADT. Although rates of cardiovascular events, fatigue, falls, and fractures were more common in patients receiving enzalutamide, overall, the side effects were similar across the two groups. The safety profile of enzalutamide in PROSPER was consistent with previous enzalutamide clinical trials in men across the disease continuum and expands the existing clinical experience of managing patients treated with enzalutamide. The oncology nurse is uniquely positioned to perform patient assessments, provide patient education (with particular attention to potential side effects and their management), coordinate care, and support men treated with enzalutamide. Additionally, the oncology nurse should offer supportive care advice and interventions, understand and recognize possible drug-drug interactions with

concomitant medications, and minimize risks or side effects associated with treatment. Enzalutamide has the potential to reduce the risk of progression to mCRPC, while maintaining patients' QoL.

ASSESSMENT OF GERMLINE RISK FOR DEVELOPING CANCER TO GUIDE SELECTION OF STEM CELL TRANSPLANT DONORS

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The selection of an appropriate donor for a stem cell transplant requires not only a strong HLA match and donor availability and consideration to transmission of germline pathogenic variants. In families with germline predisposition to solid tumor or hematologic malignancies there is a possibility that a donor may pass a pathogenic germline variant associated with an increased risk for developing cancer to a recipient. A review of three cases in which germline testing informed selection of a donor is presented. In the first case the patient was homozygous for two pathogenic variants in DDX41 associated with increased risk of myeloid malignancies. Testing her siblings enabled the selection of a donor without pathogenic variants in DDX41. In the second case, a man with acute myeloid leukemia had a sister who was a potential donor but she had a history of early onset endometrial cancer. Germline testing identified a pathogenic CHEK2 variant which can be associated with hematologic and solid malignancies. This donor was not selected. In the third case an identical twin wanted to donate to her twin but the potential donor had a diagnosis of breast cancer as did two maternal relatives. Germline testing did not identify a pathogenic variant; she became a donor. In each of these cases, efforts to understand if a potential donor had germline risk was a consideration in selecting a donor. The importance of upfront screening and early involvement of a genetics professional for transplant recipients and prospective donors is important to mitigate potential complications if germline predisposition is overlooked. The importance of a three generation pedigree and assessment for features that raise suspicion for germline predisposition as well as some of the challenges and barriers to genetic testing for patients with hematologic malignancies will be described. This evaluation can add another emotional stressor to families already coping with the stressors of the transplant. Nurses need to not only be aware of the myriad of stressors related to the transplant but the potential identification of hereditary risk that potentially impacts multiple family members.

This includes education that knowledge of genetic risk enables patients to select prevention and early detection strategies to decrease the morbidity and mortality associated with cancers as well as enable the selection of the best possible donor.

THE ROLE OF ONCOLOGY MASSAGE AND ESTHETICIAN THERAPY ON THE CANCER CARE CONTINUUM (ONCOLOGY MASSAGE AND SKIN CARE)

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"Oncology massage is the adaptation of massage techniques to safely nurture the body of someone affected by cancer or its' treatments." Society for Oncology Massage. Oncology Massage (OM) is recognized & practiced worldwide. OM and esthetician provided Skin Care (SC) have been clinically shown to positively impact side effects and quality of life during cancer therapy, recovery, survivorship. Ability to customize & innovate enables therapists to tailor each service to individual unique needs. Adaptations are made for the short & long term, late effects of treatment, radiation, surgery, low blood counts, blood clots, fatigue, bone pain, lymphedema, removed lymph nodes, medical devices and medications. Spa day retreats, infusion centers, in-patient facilities, in-home, therapist offices are care delivery venues. Clinical research reports massage increases natural killer cells, lymphocytes, reduces nausea, fatigue, improves sleep, eases feeling of isolation, enhances body image, promotes a greater sense of well-being. Reduced pain & anxiety the most noted benefits. Clinical research continues with practitioners remaining up-to-date with advancements in medical care. Oncology-trained massage therapists and estheticians safely assess, deliver treatment working within a clinical framework for those in or with cancer treatment history. Best practices encompass care initiated with release from treating physician, intake evaluation, patient informed consent, client contact follow-up, oncology team feedback. Informed, prepared, communicative therapists understand their role, importance of presence, providing the client space to share. Aromatherapy, accessing acupressure points, acupuncture can be incorporated. Skin treatments designed to sooth, replenish, for those in treatment; strengthen, restore for those well into recovery. Therapists work to preserve and promote the skins acid mantle by adjusting body work and strokes to not burden an interrupted/damaged/compromised immune system. OM and SC utilizes gentle touch ranging from station/weightless hand applications, to light lotion, to gentle mas-

sage. Using a too vigorous or deep massage pressure cause pain, trigger inflammation, damage tissue, cause or aggravate lymphedema, systemic side effects such as lead to the development of flu-like symptoms. OM and SC are accepted adjuncts to nurture the cancer patient, improving quality of life, contributing to symptom & side effect management when provided by oncology trained therapists. Incorporated as part of the oncology care team, oncology-trained, experienced estheticians & massage therapists contribute to the QOL where-ever children & adults are on the cancer care continuum.

STEERING THE WATERS OF SPECIALTY NURSE NAVIGATION

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Oncology Nurse Navigation (ONN) addresses the needs of the patient with clinical expertise by explaining treatment options and providing advice and support to the patient and family through guiding, educating, advocating, and encouraging patients and their families to participate in their journey. The role of the nurse navigator in the Outpatient Oncology Clinic is ultimately the single point of contact for every patient, providing all-inclusive coordination of patient care. This role includes comprehensive education, symptom management, and proactive patient follow-up and retention. At one cancer-specific facility, the role of the Specialty Oncology Nurse Navigation (SONN) was developed to assist with coordinating oncology care, as well as the specialized needs of the patient. SONN's are a team of registered nurses who provide a vital service for patients who have complex health conditions and require a high degree of comprehensive care. SONN are highly experienced and have an in-depth understanding of disease processes and use a multi-disciplinary approach to monitor patients' needs. Interprofessional collaboration is essential to providing high-quality care to patients, especially in the oncology population. The SONN provides care to the patient directly alongside the provider, specifically in Gastroenterology, Pulmonary, Urology, Cardiology, Radiation Therapy, Breast Surgery, and Plastic/Reconstructive Surgery. SONNs aid in outpatient procedures and education on a spe-

cific disease process, that can occur due to their oncology diagnosis or as result of side effects of treatment. The role of the SONN also includes comprehensive surgical education perioperatively and follow-up care. The SONN is accountable to coordinate care for a patient during the time of the specific specialty service collaboratively with the ONN. The nurse navigators provide a central point of communication and engagement to ensure optimal care and coordination of services throughout the entirety of a patient's journey. It is important for the SONN to have strong oncology knowledge along with specialty experience in order to provide optimal care to patients. At any given time, a patient may need multiple SONN throughout their cancer journey, along with the primary ONN. SONNs hold professional nursing certifications within their specialty including oncology, gastroenterology and critical care. This care model helps patients to better understand their multiple health conditions, participate in healthcare decisions, and improve their overall outcomes.

INTRARENAL MEDICATION INSTILLATION PROTOCOL

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Urothelial carcinoma (UC) of the upper urinary tract (UUT) is an uncommon oncologic diagnosis that involves the lining of the upper (kidney and ureters) and/or the lower urinary tract (bladder and urethra). Treatment of this cancer is challenging due to the location of the involved tissue. Standard treatment has been largely managed by surgical resection. European guidelines released in 2015 recommend either surgical resection and/or administration of topical or systemic chemotherapy. Instillation of chemotherapy or biotherapy using an antegrade approach via percutaneous nephrostomy (PCN) tube allows for targeted treatment while preserving kidney function. A literature search was conducted and a table of evidence created. Unfortunately, there are few publications about administration of intrarenal infusion for nurses. Because of this, the urology nurses at our academic medical center formed a multidisciplinary team consisting of physicians, pharmacists, and clinical nurses to create an evidence-based proto-

col to guide nurses on safe administration of intrarenal medications, in particular chemotherapy and Bacillus Calmette-Guerin (BCG). There are many factors to consider prior to scheduling infusion of intrarenal BCG or chemotherapy. Factors include, but not limited to, timing of the PCN insertion prior to treatment, ensuring strict adherence to our institutions Chemotherapy Administration Standard, preparation of medication by pharmacy allowing for no more than a 2-hour window for instillation once reconstituted, rate of infusion, level of medication delivery system, safe rate of infusion, assessment of PCN prior to infusion, and patient education. Patient education is critical to successful implementation and outcomes. Education material was developed, and each patient has a 1:1 education session with the clinical nurse prior to start of treatment. Patient comfort was a top priority, so the clinical nurses showed each patient the supplies that would be used and explained what they were for. Patients were encouraged to be involved with their care. We successfully treated our first two patients in January 2020. Antegrade intrarenal infusions for UC UUT are palliative rather than curative, so each patient is followed closely. Neither patient experienced infection during and post-treatment, the PCNs were removed, and kidney function preserved. We would like to publish this protocol for other urologic oncology teams to benefit from for the treatment of UC UUT and safe medication administration via an uncommon route.

INDUSTRY SUPPORTED

WHAT CAN PATIENTS WITH PROSTATE CANCER EXPECT FROM TREATMENT WITH APALUTAMIDE? HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH NONMETASTATIC CASTRATION-RESISTANT PROSTATE CANCER IN THE PHASE 3 SPARTAN STUDY

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Patient-reported outcome (PRO) and health-related quality of life (HRQoL) data from clinical studies help nurses and physicians manage patient expectations and potential side effects of new therapies. In patients with prostate cancer, pain, treatment side effects, and fatigue severely impact HRQoL. In the phase 3 SPARTAN study, apalutamide plus androgen-deprivation therapy (ADT) significantly improved metastasis-free and overall survival, extended time to metastasis, progression-free survival, and time to symptomatic progression versus placebo in patients with nonmetastatic castration-resistant prostate cancer (nmCRPC), while preserving HRQoL. We report on HRQoL, including pain, fatigue, and side-effect burden in SPARTAN after longer-term follow-up. 1207 nmCRPC patients were randomized 2:1 to apalutamide (240 mg QD) or placebo. HRQoL was assessed using Functional Assessment of Cancer Therapy-Prostate (FACT-P) and EQ-5D-3L on Day 1 of: cycle 1 (pre-dose), cycles 2–6, every 2 cycles from 7–13, every 4 cycles thereafter, end of treatment, and every 4 months post-progression for up to 1 year. Each cycle was 28 days. Responses to specific questions were evaluated post hoc: "I am bothered by side effects of treatment," "I have a lack of energy," "I have pain." Descriptive statistics and least-squares mean changes from baseline are reported. At median 52 months' follow-up, median treatment duration was 32.9 (apalutamide) and 11.5 (placebo) months. At baseline, patients were minimally symptomatic, with good HRQoL. >90% of patients completed questionnaires at each cycle. Change in FACT-P total score from baseline to cycles 21 and 25 significantly favored apalutamide versus placebo (p=0.0138 and 0.0009, respectively). Favorable FACT-P (total and subscales) and EQ-5D-3L scores were generally maintained for apalutamide, but tended to decline over time for placebo. Individual FACT-P item responses indicated most patients were "not at all bothered" by side effects, and bother, fatigue, and pain did not increase over time for either group. Final data from SPARTAN, with >4 years' follow-up, showed HRQoL was maintained in patients with nmCRPC receiving apalutamide plus ADT but declined after ~1 year with placebo plus ADT. Together with efficacy and safety data, these findings support early treatment intensification with apalutamide, highlight the value of monitoring HRQoL, and provide valuable information for nurses and physicians to help care for their patients with nmCRPC.

NURSING CONSIDERATIONS FOR THE USE OF MAGE-A4 TARGETED SPEAR T-CELLS IN PATIENTS WITH SYNOVIAL SARCOMA

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Sarcomas are rare malignant tumors, representing ~1% of all cancers in adults worldwide each year and ~2% of cancer-related mortality. Synovial sarcoma represents 5% of all soft tissue sarcoma and one third of the diagnoses occur in patients <30 years [NCI]. Effective treatment options for patients with advanced relapsed synovial sarcoma are limited, creating an unmet need for patients with advanced disease who have progressed after first-line therapy. ADP-A2M4, a specific peptide enhanced affinity receptor (SPEAR) T-cell therapy directed towards HLA-A*02-restricted peptides, is being tested in Adaptimmune clinical trials to evaluate safety and antitumor activity in patients with synovial sarcoma. The product safety profile and preliminary efficacy data from the ADP0044-001 Phase 1 trial are presented with a focus on the synovial sarcoma population. Patient considerations are highlighted with the intent to enhance nursing care and patient experience related to the administration of this investigational product in the synovial sarcoma population. This Phase I dose-escalation, expansion trial evaluated HLA-A*02 positive (excluding *02:05) patients with advanced cancers expressing MAGE-A4. Autologous T-cells were isolated, transduced with a lentiviral vector containing the MAGE-A4c1032 T-cell receptor, and expanded. Prior to infusion, patients received lymphodepletion with cyclophosphamide and fludarabine. This was a dose escalating study where patients received cell doses between 0.12×10^9 and 10×10^9. Disease was assessed per RECIST v1.1 by CT/MRI every 6 weeks up to month 24 and every 3 months thereafter until disease progression. Patients with multiple tumor types were treated in the trial, including data presented here from patients with advanced synovial sarcoma (n=16). ADP-A2M4 induced clinical and durable responses in patients with synovial sarcoma and had an acceptable safety profile. Based on this data, Adaptimmune is conducting an open-label Phase 2 trial (SPEARHEAD-1) to evaluate the efficacy, safety and tolerability of ADP-A2M4 SPEAR T-cells in 45 patients with advanced synovial sarcoma and MRCLS. Nurses play a key role when caring for synovial sarcoma patients receiving ADP-A2M4 SPEAR T-cell therapy. An understanding of clinical trial data will prepare nurses to provide evidence-based education on associated risks/benefits. In addition, clinical practice with the synovial sarcoma population can be enhanced when nurses are equipped with information associated with the administration of this novel therapy.

LONG-TERM EFFICACY OF NERATINIB IN HER2-POSITIVE EARLY-STAGE BREAST CANCER: OVERALL SURVIVAL AND CENTRAL NERVOUS SYSTEM OUTCOMES FROM THE PHASE 3 EXTENET TRIAL

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Neratinib (NERLYNX®) is an irreversible pan-HER inhibitor that significantly improves invasive disease-free survival (iDFS) vs placebo as extended adjuvant therapy in HER2-positive (HER2+) early-stage breast cancer (eBC) after trastuzumab-based therapy. In the phase 3 ExteNET trial (NCT00878709), there was an absolute iDFS benefit of 2.5% and distant disease-free survival benefit of 1.7% with neratinib after 5 years' follow-up. The brain is a common first site of metastasis after HER2-directed adjuvant therapy in eBC. To date, no HER2-directed therapy (i.e. trastuzumab ± pertuzumab, trastuzumab emtansine, lapatinib) has been shown to prevent central nervous system (CNS) metastases in the adjuvant setting. The objective was to provide nurses with an overview of the final protocol-defined analysis of overall survival (OS) from ExteNET, and CNS outcomes from this study. ExteNET evaluated neratinib in women with HER2+ eBC who had completed adjuvant therapy (± neoadjuvant therapy) with trastuzumab plus chemotherapy. Patients were randomized to oral neratinib 240 mg/day or placebo for 1 year. OS analysis was performed after 248 events and powered for the intention-to-treat population. CNS outcomes were cumulative incidence of CNS recurrences (defined as time from randomization to CNS recurrence as first distant recurrence) and CNS disease-free survival (CNS-DFS, defined as time from randomization to any CNS recurrence or death from any cause). Cut-off dates: 5-year (March 2017); OS (July 2019). 2840 patients were randomized (1420 per group). After a median followup of 8.1 years, 8year OS rates were 90.1% (95% CI 88.3–91.6) for neratinib and 90.2% (95% CI 88.4–91.7) for placebo (absolute difference –0.1%; stratified HR=0.95; 95% CI 0.75–1.21; p=0.6914). At 5 years, cumulative incidence of CNS recurrences was 1.3% (95%

CI 0.8–2.1) with neratinib and 1.8% (95% CI 1.2–2.7) with placebo, and CNS-DFS rates were 97.5% (95% CI 96.4–98.3) and 96.4% (95% CI 95.2–97.4), respectively (HR=0.73; 95% CI 0.45–1.17). No new safety signals were reported. There were fewer deaths with neratinib than placebo in ExteNET, but the results did not reach statistical significance. Long-term CNS outcomes at 5 years were also improved with neratinib. Neratinib is the first HER2-directed agent to show a trend towards improved CNS outcomes in HER2+ eBC, providing further support for current NCCN guidelines that recommend neratinibbased therapy for brain metastases from HER2-positive breast cancer.

DISCONNECTION EVENTS AND ASPIRATION OF AEROSOLIZED HAZARDOUS DRUGS— AN UNDERAPPRECIATED SOURCE OF OCCUPATIONAL HARM?

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Hazardous drug exposure is a leading cause of harm among healthcare workers. NIOSH states over 8 million US healthcare workers are exposed to hazardous drugs, with over 1 million chemotherapy infusions delivered each day. Exposure to carcinogenic, mutagenic and antineoplastic drugs is associated with acute health effects e.g., cancer, infertility, spontaneous abortions, and congenital malformations. Contamination of floors, table-tops, phones, chairs, and devices are a common source of unrecognised hazard. RNs exposed to antineoplastic drugs have an elevated risk of breast and rectal cancer. Common interruptions of IV therapy include both accidental dislodgement and aspiration of problem bubbles. Both result in opening of the chemotherapy infusion system leading to exposure of hazardous fluids and vapours. Existing solutions to these interruptions are suboptimal and manual focused. Dislodgement is a well-known reason for IV catheter failure. The problem is associated with need for catheter replacement, spillage, necrosis and loss of drug volume. A prospective cohort study by Larsen et al, 2020, found that catheter failure from dislodgement during cancer treatment is common. Study results of 200 participants found PIV failure incidence was 34.9%; the most common failure type was occlusion/infiltration (n = 74, 18.7%), then dislodgement (n = 33, 8.3%). Bubbles resulting from, e.g., chemical incompatibilities of certain chemotherapy drug formulations cause IV pump alarms. A study by Gelderblom et al., 2001, showed the formulation vehicle Cremophor EL (CrEL) used for various poorly water-soluble drugs, including the anticancer agent Paclitaxel (Taxol), cause the widely known problem of "outgassing". Some drug forms are more prone to volatility and sublimation, and the List needs to be updated accordingly (NIOSH, 2020). Alarms from IV pumps occur frequently (87%) and disrupt patient care (91%) (Vitou et al, 2018) and many pumps require the caregiver to break into the IV tubing with a syringe to aspirate the air. Unfortunately, existing in-line filters openly vent and cannot be considered CSTD (EU CMD3, 2020). Appropriate CSTD engineering controls are the preferred method to reduce occupational exposure. A proposed solution is a disposable device incorporating an automatic closed system vent to capture air-in-line combined with a double-valve breakaway connector to reduce disconnection. Studies of a proof-of-concept device are planned to evaluate the economic and safety benefits for healthcare providers.

USING PICC LINE COVERS TO IMPROVE CLINICAL OUTCOMES AND REDUCE PICC LINE MIGRATIONS

Chaitenya Razdan, MBA, Care+Wear, New York, NY; Amy Gregory, RN, MS, Mayo Clinic, Rochester, MN

Target Audience: Nurses, doctors, and other clinicians interested in solutions that improve the patient experience. Prerequisite: Basic knowledge of the needs of patients with Peripherally Inserted Central Catheters and Port-A-Caths. This presentation will present initial data from Mayo Clinic that showed the use of a PICC Line reduced migrations by 90%. Mayo Clinic provided PICC line Covers to patients following their PICC Line placement. Preliminary data from the research indicates that migrations were reduced by 90%, improving both clinical outcomes and patient experience. The speakers will provide details on study methodology, findings, and potential implications for financial savings from reduced migrations.

USING PICC LINE COVERS TO IMPROVE PATIENT EXPERIENCE

Chaitenya Razdan, MBA, Care+Wear, New York, NY; Anita Bell, RT(R), CRA, UVA Health, Charlottesville, VA

Target Audience: Nurses, doctors, and other clinicians interested in solutions that improve the patient experience. Prerequisite: Basic knowledge of the needs of patients with Peripherally Inserted Central Catheters and Port-A-Caths. This presentation will demonstrate how using a PICC line cover instead of a stockinette to cover a PICC line improved patient experience. UVA Health provides a PICC line cover to inpatient and outpatient individuals following PICC line place-

ment. In this session, the speakers will discuss the following: (1) How PICC Line covers were evaluated for use, (2) How PICC Line Covers were operationalized with the health system, (3) How PICC Line Covers improved patient experience

LEADERSHIP/MANAGEMENT/EDUCATION

HARNESSING INNOVATIVE THINKING TO DESIGN NEW PRODUCTS TO IMPROVE PATIENT EXPERIENCE

Chaitenya Razdan, MBA, Care+Wear, New York, NY
Target Audience: Nurses, doctors, and other clinicians interested in solutions that improve the patient experience and the role of fashion in healthcare. Prerequisite: Basic knowledge of the needs of patients with Peripherally Inserted Central Catheters and Port-A-Caths. This presentation will demonstrate how a cross functional team improved patient experience by redesigning the stockinette. Historically, products in the healthcare industry have focused solely on function and not how they make patients feel. Chaitenya Razdan, Co-Founder and CEO of Care+Wear, explains the growing need to bring innovation and design to the healthcare industry to improve the overall patient experience. He will address the importance of applying a comprehensive design thinking process in partnership with hospitals, clinicians, and product designers to create patient-focused solutions that are both stylish and medically-compliant. The case study for this presentation will be the redesign of the stockinette by Chat Razdan and clinicians from Johns Hopkins and the University of Virginia Health System. The redesign led to the creation of the PICC Line Cover which had specific utility features that enhanced overall patient experience for PICC Line patients.

WORKSHOP ON HOW TO BRING A HEALTHCARE PRODUCT TO MARKET

Chaitenya Razdan, MBA, Care+Wear, New York, NY; Gregory Weingart, MD, Eastern Virginia Medical School, Norfolk, VA
Prerequisite: Clinicians that want to learn how healthcare products are conceived and brought to market. This workshop will explain how to bring a new healthcare product to market. Over the course of providing patient care, clinicians may see opportunities to improve the patient experience by developing new products or services. In this workshop, attendees

will be asked to bring their ideas for a new product that could improve patient experience and/or patient care. In collaboration with the group, the speakers will select a product and discuss the steps required to bring the product to market. The focus will be on the initial steps of development, where market viability is assessed to determine product-market fit.

QUALITY IMPROVEMENT

A QUALITY IMPROVEMENT PROJECT TO REDUCE WAIT TIMES ASSOCIATED WITH CHEMOTHERAPY ON AN INPATIENT ONCOLOGY UNIT

Kristin Soper, MS, RN, ANP-BC, AOCNP®, SUNY Upstate Medical University, Syracuse, NY
Literature suggests that the redesign of workflow can lead to a decrease in chemotherapy associated wait times. Long wait times can negatively affect patients, can also increase costs by increasing length of stay, as well as consume unnecessary hospital resources. The significance lies in putting the emphasis and concentration back on delivering patient-centered care for the inpatient oncology population. The purpose of this study is to reduce wait times associated with chemotherapy and to examine the link between reducing wait times, anxiety, and length of stay while increasing satisfaction. The aim of this study is to redesign the workflow related to the elective chemotherapy program. Objectives of this study are to determine wait times associated with chemotherapy. Next, to redesign the workflow associated with the elective chemotherapy program and to measure and compare pre and post data on the patient factors of satisfaction, anxiety and length of stay. A redesign of the inpatient elective chemotherapy program to decrease wait times associated with chemotherapy by preparing patients prior to admission. All laboratory values, necessary testing and central line placements will be obtained prior to admission. A mixed method design will be utilized with a Plan-Do-Study-Act quality improvement framework to measure short term outcomes. Length of stay will be evaluated quantitatively. Satisfaction and anxiety will be measured both quantitatively and qualitatively by way of a patient survey. Quantitative and qualitative results will help guide further quality improvements to improve patient satisfaction related to the inpatient elective chemotherapy program. The impact of decreasing wait times associated with chemotherapy on cost, length of stay,

anxiety and patient satisfaction will be evaluated and discussed. The redesign of the elective chemotherapy program will allow cancer patients' time to be better respected and protected. This study will hope to reduce anxiety and improve patient satisfaction by way of a quality improvement project.

CLOSTRIDIOIDES DIFFICILE SCREENING IN CELLULAR THERAPY PATIENTS

Kathryn Moreno, RN, MSN, OCN®, BMTCN®, AOCNS®, Mayo Clinic, Jacksonville, FL; Heather Parth, MPH, CIC, Mayo Clinic Florida, Jacksonville, FL

Cellular therapy cancer treatment (blood/marrow transplants, Chimeric Antigen Receptor T-cell infusions) patients experience neutropenia and have often undergone exhaustive antibiotic regimens for opportunistic pathogens, increasing risk for *Clostridioides difficile* colonization. During 2019, the Hematology Oncology unit at a small Southeastern US academic hospital identified an elevated number of Bone Marrow Transplant (BMT) patients positive for *C. difficile*. This was despite environmental service best practices (bleach disinfection, UV technology), hand hygiene improvements, and stewardship efforts. Colonized patients are a *C. difficile* reservoir. Screening asymptomatic BMT patients upon admission identified colonization for management and prevented the need for later testing, which could delay treatment and affect quality metrics. In 2020 patients admitted under BMT service were screened for *C. difficile* colonization by PCR, and empirically placed on appropriate transmission-based precautions. If negative, precautions were discontinued. If positive, precautions were maintained and therapy was immediately initiated if a clinically compatible presentation developed. During Q4 2019 baseline, 3 *C. difficile* tests were performed ≤ 3 days of admission; 6 were positive (66.7%). After pilot implementation, 96 *C. difficile* tests were performed ≤ 3 days of admission; 11 were positive (11.5%). *C. difficile* screening for newly admitted BMT patients showed 11.5% are colonized. This is within the average 3 to 21% community colonization range per Crobach et al. While routine *C. difficile* testing is not advised in asymptomatic general populations due to low pretest probability, there is a role for active screening in high-risk cohorted patients. Benefits include patient safety and quality performance. Transmission risk is decreased by ensuring there are no gaps between *C. difficile* identification and initiation of appropriate infection prevention precautions. Additionally, if clinically compatible signs and symptoms develop the colonized patient is immediately escalated to thera-

py, without delay. In BMT patients, any infection is serious and can quickly lead to life-threatening complications. Finally, early identification of colonization prevents later *C. difficile* infections from being inaccurately attributed to nosocomial transmission, thereby negatively impacting national quality metrics due to test timing artifacts.

MESSAGING TURN AROUND—CLINICAL POOLS

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Our cancer center experienced an 11% volume growth for new and established patients as well as increased clinical call volumes during 2017-2019. Incoming calls were not always handled in a timely manner and there were errors or delays in processing the calls. Additionally, we discovered fluctuating workloads, patient volumes, and processes for handling incoming messages. A current state process analysis was completed to identify gaps in managing calls by the administrative and clinical teams. A multidisciplinary committee was formed to review the challenges in timely response which included the limited number of administrative assistants dedicated to teams. In the current state, there were four small administrative teams answering these calls with incoming calls randomly assigned to available personnel regardless of knowledge of the disease specialty. Clinical teams were only addressing calls that pertained directly to their individual providers leaving some team members overwhelmed and others with much less workload. Individual disease groups were consolidated into 2 larger teams, consisting of solid tumor oncology and hematologic disease states. An algorithm was developed to instruct administrative assistants on call management or message transfer to the clinical team via clinical disease pools in the electronic health record. The clinical teams moved towards utilization of these disease clinical pools to help each other manage all calls and messages when not in clinic. Roles and responsibilities were clearly defined and education was provided during a successful pilot in two initial disease teams. After the pilot, the workflow was rolled out to all teams. Some of the benefits of the updated workflow is increased patient experience, better clinical caregiver coverage for incoming calls, decreased stress and increased em-

ployee satisfaction. The administrative assistants are receiving less messages due to the standardized work and streamlined algorithm which has led to increased productivity within the administrative group. There are now standardized metrics available that portray volume, workload and trends allows for continual monitoring and accountability to the new processes. A patient survey with an n=58/100 respondents. 89% of patients were =/> Satisfied with their experience

EARLY SYMPTOM MANAGEMENT IN THE OUTPATIENT SETTING

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Oncology patients receive treatment(s) that carry significant toxicities affecting their quality of life. Developing a proactive approach to managing these toxicities is key to providing quality care and optimal outcomes. The project objective was to create a standardized approach to address early symptom management of patients receiving chemotherapy in an outpatient infusion setting. A need was identified to develop a consistent process across all outpatient infusion sites that would address treatment follow-up. Implementing a follow-up phone call to patients after administration of initial chemotherapy in the outpatient setting by an Advanced Practice Provider (APP), would support early symptom management of potential side effects, as well as provide an opportunity to address any psychosocial concerns or questions. To streamline the process, a script was created for the APPs to use during their phone calls with patients. The script ensured all possible symptoms and potential issues the patient may encounter post treatment were addressed by the APPs and provided a measure of compliance that was able to be tracked. A post-call dashboard was created and built within the Electronic Medical Record, EPIC to allow for ease of reporting and tracking. The dashboard was linked to the master infusion schedule and logic was built to automatically identify patients that needed a call post treatment. The use of the dashboard helped track compliance among the infusion center locations. To further understand the benefit of early intervention, a patient reported outcome survey was created using Qualtrics. After the APP completed a follow up post-call, the survey link was sent to the patient via their electronic health record. Forty-eight responses were recorded in Qualtrics. Eighty percent strongly agreed or agreed, they were informed by the APP of the possible side effects of the medication they received and 86.6% strongly agreed or agreed, the instructions received on how to manage those side effects were adequate. Overall, 93% stated the services provided from the APP met their needs and expectations extremely or very well. Establishing a process that addresses early symptom management post initial treatment has shown benefits to the organization in improving the patient experience and addressing treatment related symptoms early on. Future considerations will be to understand the impact of this process on hospital admissions.

OPTIMIZING OUTPATIENT NURSES' RESOURCES IN ORAL CHEMOTHERAPY MANAGEMENT: KNOWLEDGE GAPS ON THE ROLE OF THE CLINICAL PHARMACY SPECIALIST IN A NEURO-ONCOLOGY CLINIC

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Oncology registered nurses (RN) and oncology Clinical Pharmacy Specialists (CPSs) collaborate in both inpatient and outpatient chemotherapy units. Oncology CPSs are Doctors of Pharmacy with specialty training and certification in oncology, affording them a high-level understanding of chemotherapy management, chemotherapy-drug interactions, supportive care, and often with the ability to prescribe. Despite being a valuable resource for RNs, knowledge on and utilization of a CPS can vary. The purpose of this quality improvement project was to identify gaps in knowledge on the role of the CPS among RNs to improve resource utilization and collaboration. A Neuro-Oncology Clinical Nurse Specialist (CNS) and 2 Neuro-Oncology CPSs met to review literature on the core functions of the CPS role. The authors developed a survey for RNs evaluating the self-rated knowledge, skills, and attitudes towards the CPS role. Additionally, the survey evaluated the likelihood of the RN to consult the CPS on core functions within their scope of practice. The survey used a visual analog scale from 1 to 5. The survey was distributed to 11 RNs in an out-

patient neuro-oncology clinic, with a final response rate of 73%. On average RNs reported high levels of understanding of the CPS role, ability to place consults to the CPS, and comfort in collaborating with the CPS. RNs reported they were most likely to consult for chemotherapy or medication counseling, general drug information, and drug-drug interactions. The RNs reported they were least likely to consult for supportive medication prescriptions or refills of prescriptions, assistance with complex medication histories, and supportive care management. The final presentation will include a review of the tool and all data collected. As practice models innovate to deliver oncology care, quality improvement projects aimed at expanding the RNs knowledge of available resources is essential. We identified knowledge gaps among RNs that may hinder utilization of CPSs. Standardized nursing education on the role and support services afforded by CPSs should be considered. This may be accomplished during orientation or continuing education, highlighting how nursing care is strengthened by pharmacy consultation. Further evaluation is warranted to better understand barriers to nurse-driven consults in certain CPS functions, including the ability to prescribe and enhance supportive care management.

RESEARCH

WELL-BEING, JOB STRESS, AND RESILIENCE AMONG ONCOLOGY NURSES DURING COVID-19 PANDEMIC

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The year 2020 is synonymous with the COVID-19 pandemic. With more than 18 million cases, and three hundred deaths reported as of December 27, 2020. Professionals who provide care to others during the COVID-19 pandemic can face stress and other strong emotions, and the ability to cope with these emotions can affect their well-being. This dissertation research examined a sample of professionals who provided care during the COVID-19 pandemic. The purpose of this quantitative descriptive study is to determine the well-being, the level of job stress, and the resilience profile of oncology nurses during the COVID-19 pandemic. A descriptive and exploratory data analysis was used for the research. The research used three survey questionnaires for oncology nurses' self-assessment, measuring well-being, stress, and resilience. The research collected data through a

self-assessment questionnaire from oncology nurses. The research was guided by three research questions along with three null and three alternate hypotheses. The research method and design is a descriptive quantitative method and non-experimental survey design. The materials and instruments used were Well-Being Index (WBI), Perceived Stress Scale (PSS-10), and Predictive 6-factors resilience scale (PR6). The results of the average WBI equals M = 3.55, SD = 1.89, a higher score compared to the national average where M = 2.59 (SD = 1.85), with scale reliability α = .718. The average score on the PSS scale is M = 20.0, SD = 5.44, indicating a moderate level of perceived stress. Correlation between pairs of items shows P<.01, α= .716. A lack of well-being has negative implications on the personal and professional consequences. Poor job performance, lack of sense of accomplishment, patient safety issues including medication error, absenteeism, nurse turnover, and overall quality of life. Higher perceived stress is also positively correlated with two protective resilience factors: reasoning and tenacity. Investing in training, development, and job resources rooted in the 6 distinct domains of resilience would be helpful for offers opportunities to nurses to develop vision (i.e. purpose, goals, and congruence) and health improvement (i.e. nutrition, sleep, and exercise).

CHANGES IN SUBJECTIVE MEASURES OF COGNITIVE FUNCTION IN OLDER ADULTS FROM PRIOR TO THROUGH 12 MONTHS AFTER THE RECEIPT OF CHEMOTHERAPY

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Cancer-related cognitive impairment (CRCI) occurs in 12% to 75% of patients receiving chemotherapy. Little is known about the changes in and the predictors of cognitive function in older oncology patients receiving chemotherapy. Evaluate for inter-individual differences in two subjective measures of cognitive function and determine which demographic, clinical, and symptom characteristics, and subjective and objective measures of physical function were associated

with initial levels as well as with the trajectories of each of these measures of cognitive function. Older (>60 years of age) oncology outpatients (n=112) were recruited prior to chemotherapy. Cognitive function was evaluated using the self-reported European Organization for the Research and Treatment of Cancer Quality of Life Questionnaire–C30 (QLQ-C30) and Attentional Function Index (AFI) a total of six times over one year. Additional questionnaires evaluated demographic, clinical, and symptom characteristics (i.e., Center for Epidemiological Studies–Depression scale, QLQ-C30 symptom scales) and subjective and objective measures of physical function (i.e., QLQ-C30, Short Physical Performance Battery). Hierarchical linear modeling based on full maximum likelihood estimation was performed. Characteristics associated with lower levels of QLQ-C30 cognitive function prior to chemotherapy included; more years since time of diagnosis and higher depressive symptoms. Characteristics associated with lower AFI scores prior to chemotherapy were: lower education and higher depressive symptoms. No characteristics was associated with the inter-individual variability in the trajectories of QLQ-C30 cognitive function and AFI scores over the 12 months of the study. A large amount of inter-individual variability exists in cognitive function in older oncology patients from prior to chemotherapy to one year after treatment. The modifiable and non-modifiable characteristics found in this study can be used by clinicians to identify older oncology patients who are at increased risk for CRCI during and following chemotherapy and provide early interventions and referrals.

EFFECTS OF AURICULAR ACUPRESSURE ON PERIPHERAL NEUROPATHIC SYMPTOMS IN PATIENTS TREATED WITH CHEMOTHERAPY FOR BREAST CANCER

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Chemotherapy-induced peripheral neuropathy (CIPN) is commonly reported as acute or prolonged symptoms in breast cancer patients treated with antineoplastic agents such as taxanes. Due to lack of ideal treatment for CIPN, a key need in healthcare professionals and patients is to develop safe, cost-effective, and promising interventions to reduce peripheral neuropathic symptoms. Auricular acupressure (AA), a low-risk complementary treatment, has been widely used to manage treatment-related symptoms in cancer patients. This study aimed to evaluate the effect of AA on peripheral neuropathic symptoms in chemotherapy-treated breast cancer patients. This study is randomized, double-blind, sham-controlled trial (RCT) of 44 eligible patients who were randomly assigned to the experimental AA or sham AA group. The final sample included 38 patients (retention rate=87%). The duration of the AA intervention was 3 weeks with weekly cycles. Each weekly cycle included one visit, 5-day AA application, and 2-day rest period. All participants were instructed to apply pressing technique to the targeted ear points. CIPN symptoms were evaluated before, during, and immediately after intervention by using patient-reported outcomes and physician-assessed test scores. Safety was confirmed via routine monitoring during and after intervention. The repeated measures analysis of variance, the generalized linear regression, and independent t-test were performed to examine study aims. The experimental AA group showed significantly greater improvement in patient-reported symptoms in upper and lower extremities than the sham AA group over time. A significant group by time interaction was found (p<.001), indicating that this intervention developed in the study was effective in managing CIPN symptoms. Also, the experimental AA group showed a wide difference in physician-assessed test scores between pre- and post-assessment compared to the sham AA group. However, this difference remained at an insignificant level. Auricular acupressure has beneficial effects on symptom management in patients with peripheral neuropathic symptoms after chemotherapy for breast cancer. As a complementary nursing intervention, auricular acupressure can contribute to oncology nursing performance in the area of symptom management in clinical settings. This is the first RCT study to investigate the effectiveness of auricular acupressure as a nursing intervention for breast cancer patients with CIPN.

DISPARITIES IN COMORBIDITIES IN LUNG CANCER: FINDINGS FROM THE BEHAVIORAL RISK FACTOR SURVEILLANCE SYSTEM (BRFSS)

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In persons with lung cancer, sex and race are independent predictors of comorbidities and are associated with survival. It is unclear, however, how comorbidity profiles may differ across sex and race and what groups may specifically have a higher risk for certain comorbid conditions. Thus far, little is known about the intersection between comorbidities, vulnerable populations, and lung cancer. Prior to the development of targeted and personalized interventions, we must first identify what groups with lung cancer have a higher risk for specific comorbid conditions. The objective was to examine, in a nationally representative sample of individuals with lung cancer, 1) differences by comorbidity between men and women and blacks and whites, and 2) which groups were more likely to have certain comorbidities. Data from the 2014, 2016, 2017, and 2018 Behavioral Risk Factor Surveillance System (BRFSS) were analyzed using descriptive statistics, chi-square test of independence, and multiple logistic regression. Variables included sociodemographics and reported comorbid conditions: kidney disease, myocardial infarction, angina or coronary artery disease, stroke, chronic obstructive pulmonary disease, depressive disorder, and diabetes. Among individuals with lung cancer (N=594), men were more likely to suffer from heart attack (OR = 3.59, 95% CI 1.62, 7.96) and diabetes (OR = 2.83, 95% CI 1.57, 5.10) and less likely to suffer from a depressive disorder (OR = .360, 95% CI .203, .637). Black men (OR = 28.57, 95% CI 9.22, 88.55) and women (OR = 2.48, 95% CI 1.02, 6.05) were more likely to have a history of stroke. Findings show there may be differences in patterns of comorbid conditions among individuals with lung cancer with some groups showing an increased risk for certain conditions. As we continue to move towards individualized medicine in cancer care, future work in this area should examine social determinants of health and how they may influence the patterns of comorbidities, specifically in individuals with lung cancer. Nurses should be familiar with what groups of individuals have a higher risk for certain comorbid conditions and screen for those conditions as well as how well the conditions are managed.

KNOW ME AS THE PERSON I AM: THE LIVED EXPERIENCE OF YOUNG WOMEN WITH ADVANCED BREAST CANCER

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The purpose was to describe and interpret the meaning of the experience of young women living with advanced breast cancer. Limited research suggests young women with advanced breast cancer face unique challenges that differ from those of women at other life stages as well as with early stage breast cancer. A larger study described and interpreted the lived experiences of young women with advanced breast cancer. Ambivalence and conflicting feelings of wanting to be known in all of one's complexity emerged as a significant theme. Main Research Variable: Phenomenon of young women living with advanced breast cancer. Design: Longitudinal qualitative study using a hermeneutic phenomenological approach. Setting: Participants were recruited from private Facebook groups for women with breast cancer. Sample: Women aged 25-39 with Stage III or IV breast cancer. Methods: A secondary qualitative analysis of 21 structured interviews was conducted. In the parent study, data were collected through one or more semi-structured interviews over 6 months. Data were drawn from interviews about daily life experiences. Analysis was conducted using NVivo for Mac software. Results: Twelve women (mean age 35.9) were included. Twelve participated in the first interview, 9 in a second interview, and 6 in a third interview. Three returned journals. Wanting to be known as the person I am captured their experience of how they wanted to be understood by others. Four subthemes were identified. Conclusions: Wanting to be known as the person I am is the ambivalent and sometimes conflictual feeling of wanting to be known in all of one's complexity, including as an individual and as someone who is living with a life-threatening illness. Participants wanted to be known as a person with a disease, but also as a person apart from the disease. Ambivalence about appearance and dealing with the implications of incorrect assumptions were experienced by all as well as no longer being 'known' in the same way as they had been prior to their diagnosis of advanced cancer. Implications for Practice: Findings provides an understanding of the essential aspects of being known as a person living with advanced breast cancer. This study provides important insights and implications for education and psychosocial support, as well as a foundation for future research to inform interventions.

AROMATHERAPY: STUDYING THE EFFECTS OF PEPPERMINT AND LAVENDER IN OUTPATIENT ONCOLOGY

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The purpose of this research study is to determine whether using aromatherapy during chemotherapy infusion treatments in the outpatient oncology setting promote relief of nausea and anxiety. American Cancer Society states, approximately 1 in 3 people will get nausea during chemotherapy (www.cancer.org). There is a growing interest in using Complementary Alternative Methods (CAM), specifically, aromatherapy to reduce nausea and anxiety among oncology patients who are receiving chemotherapy. Literature review suggests that using aromatherapy has been used in several patient populations however, has not been studied in outpatient oncology. Through this study, researchers are determining whether using aromatherapy in outpatient settings promote relief of nausea and anxiety. This is a Quasi-Experimental Study in which patients meeting the inclusion criteria are offered an essential oil for symptom management. One to 2 drops of peppermint and/or lavender aromatherapy oil was placed on a 4x4 gauze and offered to the patient. The gauze was placed in a sealed plastic bag. The patient was instructed to use one sniff at a time. Pre and post nausea and anxiety rating was recorded by co-investigators of the study on a questionnaire at the end of infusion visit. Currently we have enrolled 23 patients in our study. The results are favorable and all patients stated that they will use aromatherapy again. The results will be depicted in a graph format based on the questions. Though we have not collected all of our initial patient population, we feel that the knowledge obtained from this study will help us gain a better understanding of patients' acceptance of this intervention and whether this intervention is effective as an adjunct treatment in this patient population. Some suggestions for future research would be to expand to other cancer centers in our system and possibly add other essential oils. This research study will be presented in a poster format that will depict our process, collaboration among all three cancer centers and our data analysis. This study was approved through IRB and also had to receive a FDA exemption. Utilization of essential oils is an innovative way to treat symptoms. Collaborating with three centers and disseminating during this Covid time also forced them to be innovative with their delivery methods.