Clinical Posters From JADPRO Live 2023

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JL1101C: A Financial Toxicity Screening and Care Coordination Quality Improvement Program in a Gynecology Oncology Urban Practice

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Background: There are considerable variations regarding financial toxicity (FT) screening programs and services offered, which is often a significant gap in patient-centered care (Khera et al., 2020). Research reveals barriers exist, like the lack of patient FT screening (74%), clinician time constraints (67%), and lack of staff training (66%), which are leaving critical gaps in care, with 59 % showing that a multicomponent-implemented program could improve outcomes (Fradgley et al., 2019). Esselen et al. (2021) found that 52 percent of stage III and IV gynecologic cancer patients had FT, with 49 percent reporting high FT, correlating to poor quality of life. To envision providing patient-centered care, the advanced practice nurse (APN) leader of this quality improvement project (QIP) educated a multidisciplinary team on FT risk, patient screening flow, and care coordination, leading weekly team meetings to meet the overall objectives. **Objective:** The QIP goal was to identify newly diagnosed patients with stage III or IV gynecological cancer who may be experiencing FT, providing insights for the following objectives: (1) Increase the rate of FT screening where there was no baseline screening; (2) Increase referrals for resource care coordination among patients experiencing FT; (3) Evaluate the relationship between FT and selected demographic identifiers during the 8-week project. **Methods:** The Plan-Do-Study-Act (PDSA) model was adopted for learning and leading the change. PDSA cycle one of the QIP began with the "Planning" followed by the "Doing, Studying, and Acting" phase, leading to a description of the solution (Q.I. Essentials Toolkit, n.d.). FT screening focused on utilizing the COmprehensive Screening Tool (COST) score and resource care coordination for newly diagnosed participants with stage III or IV gynecological cancer. The screening tool is commonly used in research and has proved reliable and valid in measuring FT (de Souza et al., 2017). After the QIP team's collaboration, the COST Score of below 23 (0-44 score range) was selected as the cut-off for resource care coordination referrals. **Results:** 52 patients were invited to participate. Of those invited, 42 patients consented and completed the surveys for a response rate of 80.8 percent. Of the 42 participants (80.75%) consenting, twenty-six participants (61.90%) were experiencing FT with a COST score below 23. One hundred percent of the 26 participants received referrals for resource care coordination, meeting the first and second objectives of the QIP. Many variables are unobserved in this QIP and may impact the FT COST Score. After examining all possible relationship models, linear regression analysis was completed to examine the relationships between the independent variables Age and Cervix (Yes) and the dependent variable

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FT COST Score. No other variables under review revealed significant influence over changes in the FT score ($p < 0.05$). An F-test score of 5.844 means this model is significant at the $p < 0.01$ level; model significance denotes that the variables fit well together and proper analysis is supported. The adjusted R square of .191 explains that the model is moderately strong. Regression findings are as follows: controlling for Cervix (Yes), positive changes in Age drive positive changes in the FT COST Score ($p < 0.05$). Plus, controlling for Cervix (Yes), the FT COST Score increased by .251 points for every one-year increase in Age. Separate modeling reveals that Age alone explains approximately 15% of the observed changes in FT COST scores, and controlling for more variables may refine the model. However, it seems unlikely by this analysis that Age would disappear as a driver of change in the FT COST score. **Conclusion:** The APN leader of the QIP team successfully incorporated a PDSA model roadmap screening program to identify the participants experiencing FT and promptly referred 100% for resource care coordination. After evaluating the relationship of FT with the demographic identifiers, Age was the driver of the change in the FT-COST score found in this QIP. The QIP, with repeated PDSA cycles, could supply a structured process for standardized FT screening and a care coordination program.

JL1102C: A Nurse Practitioner-Led Lutetium 177 Treatment Program

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Background: Neuroendocrine tumors (NETs) are rare and can arise anywhere in the body. Most NETs occur in the lungs, appendix, small intestine, rectum, and pancreas. Diagnosis and treatment of NETs depend on the type of tumor, location, if it produces excess hormones, how aggressive and if it has metastasized. Lutetium 177 (Lu-177) is a radiolabeled somatostatin analog, that was FDA approved in 2018 for the treatment of somatostatin receptor-positive (SSRP) gastroenteropancreatic neuroendocrine tumors (GEP-NETs). Clinical studies have shown that Lu-177 is highly effective in symptom control, quality of life and progression free survival (PFS). NETTER-1 trial exhibited PFS of 28.4 months. We discuss a Lu-177 program at a large academic center led by a nurse practitioner (NP) that has demonstrated skillful coordination of care between medical oncology, nuclear medicine (NM) and the Chemotherapy Unit (CTU) as well as improvement in symptom control, enhanced quality of life (QL), prolonged overall survival (OS) and excellent PFS rates. **Methods:** From August 2018 to June 2023 at a large academic cancer center 38 individuals (35 with SSRP NET's and 3 with off label diagnosis), who followed with 1 medical oncologist and 1 oncology NP who progressed on other treatments were treated with Lu-177. Coordination of care both clinically and logistically were led by the NP. Patients were seen in clinic and educated about the treatment which would be infused every 8 weeks on a Friday for 4 cycles. PET CU 64 dotatate scan was performed approximately 4 weeks prior to C 1 D 1 and 8 weeks after the completion of Cycle 4. Somatostatin analog injections were scheduled for day 5 and day 27 of each cycle. Clinic visits with lab tests were conducted on Day minus 2 and Day 27. The patients were also seen in the CTU by the NP on Day 1 of each cycle. Demographics, response, symptom control, QL, OS and PFS were determined. **Results:** Thirty-eight patients, all with progressive, heavily treated disease, were treated. Sites of tumor origin were pancreas, small bowel, rectum, and off label; median Ki-67 was with in standard. Thirty-seven patients (97%) completed all four Lu-177 dotatate cycles. Complete response, partial response, stable disease, and disease progression were all evaluated. Median PFS and OS were analyzed. Symptom control improved in 96 %, QL increased in 97 %. Treatment related toxicities were minimal as compared to NETTER-1. **Conclusions:** This case highlights the success of an APP led treatment program. Our APP led program fostered strong collaboration and superb patient outcomes such as evidenced by response to treatment, improved symptom control and survival rates. **Recommendations:** Looking forward there is a need for further expansion of the role of APPs to lead treatment program development, continuity of care and coordination guidance between multidisciplinary groups especially amongst medical oncology, nuclear medicine and the infusion center.

JL1103C: A Peek Into Productivity of an Oncology Advanced Practice Provider: Lessons Learned

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Background: With the growing number of cancer patients and survivors in the United States, there is a need to assure that all individuals receive timely access to care. Current challenges in cancer care include shortages of oncologists, nurses, and other allied staff, increase administrative burden, accreditation, and regulatory requirements, and more. As a result, the integration of the advanced practice provider role (APP) has become a critical component in filling the gaps in oncologic care. APPs support patients in many areas that are patient as well as non-patient facing. Consequently, it may be difficult to capture all this productivity in the electronic medical record (EMR) to show the value of the APP. At the University of Miami (UM)/Sylvester Comprehensive Cancer Center (SCCC) we sought to understand APP productivity being captured directly from the EMR as well as self-reported information to be able to provide some assumptions and insights on the daily productivity of an oncology APP. **Methods:** At UM/SCCC, APPs practice collaboratively with oncologists and the State of Florida scope of practice is restricted. As a result, independent billing opportunities are limited. In this analysis, we aimed to make some assumptions regarding productivity by utilizing a report from the EMR that included all the productivity that could be tracked for 32 APPs in various roles within the oncology service line. This report included the number of independent in-person and telehealth encounters, medications, labs, and referrals ordered, and treatment plans entered. The APPs included in this analysis focused on the outpatient and research clinics and infusion centers. Then we surveyed the same APPs and asked for time spent on patient and non-patient facing time to make some assumptions regarding total productivity in a day. Areas surveyed were time spent on patient communication, administrative tasks, research, and inpatient rounds per patient encounter. **Results:** Utilizing information from the EMR as well as feedback from surveys administered to the APPs at UM/SCCC it was found that 32 APPs spent 12.5% on independent encounters (inpatient and outpatient), 61.1% on order entry, 3.0% on treatment plans, 8.9% on patient communication, and 14.4% on non-patient facing activities such as administrative tasks and research activities. **Conclusions:** The role of the APP is becoming essential in filling in gaps of care. However, they continue to be underutilized. From this analysis, we can conclude that APPs have a critical role in care coordination and in the clinical healthcare delivery of cancer patients. However, due to limitations in scope of practice (state dependent), most of the time seen was spent on order entry rather than independent patient encounters. **Recommendations:** APPs are crucial team members in the care of oncology patients, but many continue to practice below their scope of practice. Future directions include utilizing these assumptions to encourage shifting APPs to function to at higher scope of practice and providing more independent patient encounter opportunities as well as exploring how non-patient facing activities can be captured as a productivity measure and financial return on investment.

JL1104C: A Sexual Health Survivorship Program for Female Patients With Lower GI and Gynecologic Cancers Undergoing Pelvic Radiation Therapy

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Introduction: Pelvic radiation among women has been associated with significant long term side effects including vaginal stenosis, vaginal shortening, and vaginal dryness. Sexual dysfunction is a common long- term effect of cancer treatment, affecting about 50% of all patients treated for pelvic malignancies and over 25% of patients treated for other types of cancer (Schover, 2014). It is one of the most distressing long-term effects of pelvic radiotherapy. Sexual health is infrequently addressed in follow-up visits. Patients often lack information regarding the impact of radiation on sexual function after cancer treatment (Brissette, 2021). This quality improvement project examined longitudinal assessment of post pelvic radiation sexual function and sought to determine the feasibility of establishing a sexual health survivorship program

for female patients undergoing radiation for lower GI and gynecologic cancers. **Methods:** From July 2016 to December 2018, a sexual health survivorship program consisting of at least three visits was implemented. A nurse practitioner performed assessment, education, and recommendations for vaginal dilator use. The first visit occurred prior to radiotherapy, the second, at treatment completion, and the third, 6 to 12 weeks later. Subsequent visits occurred every three to six months. Each visit consisted of an interview, completion of the PROMIS sexual function survey, education, vaginal dilator size, and adherence. All patients could decline follow-up at any point. The proportion of eligible patients who scheduled and attended each visit, vaginal dilator adherence, and vaginal sexual activity were measured. **Results:** Seventeen patients met eligibility for this program. All attended the first visit, 16 attended the second, and 14 attended the third. All patients completed the sexual function survey. 8 patients reported vaginal measurement using a dilator and 6 completed dilator diaries. Of the 8 who underwent baseline vaginal measurements, 7 were able to increase the size of the dilator. Of 14 patients who attended the third visit, 11 were using dilators 3 months after the first visit, 8 were using dilators 6 months after the first visit, 8 were using dilators 9 to 12 months after the first visit, and 5 were using dilators, 12-15 months after the first visit. At the third visit, 5 patients had resumed vaginal sexual intercourse and this number remained consistent. **Conclusion:** A continuity of care sexual survivorship program is feasible in managing sexual effects of pelvic radiotherapy through vaginal dilator adherence.

OUTSTANDING POSTER AWARD WINNER

JL1105C: Advanced Practice Provider Impact on Days to First Appointment

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Background: American Society of Clinical Oncology (ASCO) created a Workforce Information System (WIS) with analysis that projects a shortage of oncologists, estimated to be 2,250 by 2025. Advanced Practice Providers (APPs) can have significant impact in bridging this shortage gap in order to serve patients in a timely manner. In a large, statewide community oncology practice with over 200 sites of service, physician's new patient appointment availability had stretched to nearly 30 days in some clinics with benign hematology patients experiencing longer wait times. Our practice focus was to improve patient time to first appointment which included APPs as part of the solution allowing for top of license practice. The primary goal was to create more new patient appointment availability for both physicians and APPs therefore decreasing the days to first appointment by 20%. Data presented here represents focused effort to involve APPs in the process. **Methods:** In collaboration with physician, APP and practice leadership, a specific region of the state participated as a pilot site for implementation. APP leadership developed a guideline to help APPs and practices implement "APP Benign Heme Consult" visits. 7 tenured and experienced APPs within the select region were identified to participate in efforts of seeing new benign hematology consults. Participating APPs met with physician and practice leaders in a multi-disciplinary approach to discuss program development and implementation. Informational flyers were created for referring physicians/practices outlining the enhanced process that were distributed by liaisons. New patient schedulers were provided parameters to easily determine appropriate patients for APPs based on diagnosis. APPs and physicians collaborated to create algorithms for diagnostic work up and appropriate follow up. **Results:** At the beginning of the pilot, the average days to appointment for a new patient with presumed benign hematologic disease was 24.2. One year after implementation of the APP Benign Heme Consult initiative, the average days to appointment for this patient population was 13.9, equating to a 42.6% reduction. In addition, more physicians and APPs in the region have shown interest in participating in the initiative, providing enhanced support and impact on patient care. **Conclusions:** Contrary to some belief, referral patterns increased after implementing the APP Benign Heme Consult clinic correlating with high patient satisfaction scores and increased satisfaction amongst referring providers. This initiative has significantly and positively impacted the goal of reducing days to first appointment. APPs continue to provide excellent patient care in an efficient manner. Overall job satisfaction has improved by allowing

APPs to practice top of license and contribute to this practice goal in a meaningful way.

JL1106C: Advanced Practice Providers in Oncology Care: Consensus Principles for Clinical Practice Utilization

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Background: As the oncology workforce continues to evolve, Advanced Practice Providers (APPs) fill an increasingly important role. While needs vary across disease and specialties, a comprehensive set of principles for utilization of APPs in cancer care are lacking. The National Comprehensive Cancer Network (NCCN), through its Best Practices Committee (BPC), has explored the organizational needs, utilization, and impact of oncology APPs over the past decade, and more recently convened a multi-stakeholder workgroup to review all available BPC data surrounding APP utilization to develop consensus-based principles for APPs in cancer care. **Methods:** The NCCN Best Practices Committee, which is composed of physician, APP, and administrative leaders from NCCN's 33 Member Institutions, is invested in understanding optimal utilization of oncology APPs. Since 2017, they have conducted nine surveys, solicited six presentations, and convened two workgroups on APPs. The most recent APP workgroup is comprised of APP, administrative, and physician leaders representing 23 NCCN centers. They reviewed BPC survey data in conjunction with expert opinion to develop a list of key principles related to the utilization of APPs in cancer care. The principles were consolidated and prioritized through a facilitator-led discussion until consensus on the four principles below was reached. **Results:** The following principles for utilization of APPs in oncology care are particularly relevant for academic practices and apply to both individual and team-based care models. (1) Empower APPs to utilize the full extent of their education, training, and clinical expertise to practice at top of skillset and license/certification. APP scope of practice is variable and informed by a broad range of factors, though largely by state laws/regulations. APPs should be supported in practicing at the highest state level and certification if skillset aligns. (2) Strive to implement advanced practice leadership, allowing APPs to report to and be evaluated by APPs. From a clinical standpoint, the APP/physician relationship is extremely important, however, due to the idiosyncrasies of APP operations it is important that APPs are managed by APPs when possible. This is best accomplished through APP representation through all levels of cancer center operations. (3) Encourage a comprehensive approach to measuring APP productivity and value. APPs fill a unique role within cancer care, performing many activities that may not translate to traditional clinical metrics such as relative value units (RVUs). Impact of APPs should be measured broadly, accounting for quality and coordination of care, and patient satisfaction. (4) Promote the advancement and professional development of APPs through support of high-quality training, continuing education, research, and scholarship. Providing such resources demonstrates an investment in APPs, which not only serves to improve quality of cancer care but also job satisfaction. **Conclusion:** This abstract sets forth the NCCN Principles for APPs in Oncology. This work reflects current best practices around utilization of APPs primarily at large academic practices. The applicability of the principles to smaller community practices requires additional exploration. The BPC intends to create a toolkit with the option to expand and enhance these principles as oncology and team-based care models evolve.

JL1107: Beyond Treatment: The Impact of a Multidisciplinary Advanced Practice Provider-Lead Head and Neck Survivorship Clinic

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Background: Head and neck cancer (HNC) is a complex disease that affects various structures in the head and neck region, including the oral cavity, throat, voice box, salivary glands, and nasal passages. The treatment of HNC typically involves a combination of surgery, radiation therapy, and chemotherapy. While advancements in treatment have improved survival rates, survivors face numerous long-term challenges that require ongoing support and care. Survivorship care has emerged as a crucial

aspect of comprehensive cancer management. Survivorship care addresses physical, emotional, and psychosocial needs of individuals who have completed their cancer treatment. This abstract highlights the establishment and success of a specialized HNC survivorship clinic. Through this clinic, HNC survivors receive support and guidance to navigate the challenges they face after completing treatment. **Materials/Methods:** The specialized HNC survivorship clinic operates within an affiliated tertiary care medical center. The study participants included individuals who completed HNC treatment and were referred to the clinic for survivorship care. Inclusion criteria specified that participants should be disease-free and at least one year out from treatment completion. The clinic follows a multidisciplinary approach, led by a team of experienced healthcare professionals including advanced practice providers (APPs) from medical oncology, radiation oncology, and otolaryngology surgery. The team also includes a nurse navigator, speech-language pathologists (SLPs), prosthodontists, and physical therapists (PTs). Patients see all members of the multidisciplinary team in an afternoon setting. Data collection involved the use of standardized questionnaires, medical records review, and demographic information to provide a comprehensive understanding of the survivorship experience. **Results:** 166 unique HNC survivors were seen in this clinic over 271 visits from November 2021 – June 2023. The participant population was 92% male and 8% female. The mean age was 62 years, with a range of 27 to 92 years. The most common primary tumor site was oropharynx (92%), with remaining sites including the larynx, hypopharynx, submandibular gland, oral cavity, nasopharynx, and lacrimal gland. Treatment regimens included surgery and adjuvant chemoradiation (83%), surgery and adjuvant radiation therapy (7%), and primary chemoradiation (10%). Participants expressed high levels of satisfaction with the survivorship care received, with 98% electing to return to this clinic for future survivorship care. **Conclusion:** The HNC survivorship clinic serves as a model of care that promotes the well-being of survivors, enhances the patient-provider experience, and promotes efficiency. The high levels of satisfaction reported by participants emphasize the importance of a multidisciplinary approach as well as the positive impact it has on the overall well-being of HNC survivors. By addressing the comprehensive needs of individuals post-treatment, these clinics can contribute to improved long-term outcomes and enhance the overall survivorship experience for HNC survivors. These results support the integration of survivorship care as an essential component of comprehensive cancer care. Future research should focus on the long-term impact of survivorship interventions and develop evidence-based guidelines for survivorship care in this population. Strategies to improve access to survivorship care for underserved populations should also be investigated.

JL1108C: Bridging the Gap: A Systematic Approach to Developing Advanced Practice Provider-Driven Educational Initiatives at a Major Metropolitan NCI-Designated Comprehensive Cancer Center

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Background: Gaps in knowledge have become evident as Advanced Practice Providers (APPs) expand their role in the oncology setting. Historically, these learning gaps have been challenging to bridge. Much of the continuing education (CE) offerings are set to address the learning needs of oncology nurses and oncologists leaving APPs struggling to find the right programs and lectures that allow continued growth in their practice and knowledge. **Methods:** The division of APP Professional Development administered a survey to >900 APPs at an NCI-Designated Cancer Center assessing the current perceived gaps in education. The survey measured disease-based content, cancer treatments, novel therapies, oncologic emergencies, radiologic interpretation, supportive and end-of-life care, symptom management, population-based oncology, onco-critical care, and surgical oncology proficiency. The results of this learning needs assessment were evaluated by a core group of APPs trained in content development and the Continuing Education (CE) office. **Results:** APPs cited basic radiologic interpretation as their largest gap in learning that led to the creation of an

all-day radiologic interpretation CE course with > 600 registered participants. The program was offered virtually, and post completion results showed > 99% of participants felt the content was relevant to their clinical practice and the learning format effective. Achievement of course objectives was rated excellent by > 90% of participants. Nearly 100% of APP participants noted a commitment to practice change as a result of attending this course and improved proficiency in knowledge. To date, > 1,500 APPs have attended the course. Knowledge gaps were also identified in neuro-oncology, geriatrics, supportive care, and onco-critical care and additional programs were created in these areas. The group created a handbook that outlined a structured approach to developing, reviewing, and producing these symposia. The group coached speakers to organize presentations that would meet the unique learning needs of APPs. In addition to the symposia, thirteen regularly scheduled series with monthly CE lectures were developed in a variety of oncology sub-specialties. **Conclusions:** The primary APP learning needs assessment survey as well as the course and lecture evaluation results demonstrate that APP led educational initiatives are bridging the gaps in CE for APPs practicing in the specialized, high acuity, rapidly changing field of oncology. The systematic approach established in the handbook by the APP expert content developers empowered APPs in the institution to take initiative in cultivating and executing their own professional development. By doing so, the institution's APPs now have increased access to APP lead and directed CE initiatives. **Recommendations:** Utilizing a learning needs assessment survey coupled with a systematic approach to developing APP led CE programing has successfully met the learning needs of APPs based on program evaluation surveys. A follow up learning needs assessment survey is currently underway and results to be shared at the time of the poster presentation.

JL1109: Bridging the Gap; Implementing an Advanced Practice Provider led High-Risk Cancer Prevention Clinic

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Background: Pathogenic germline variants (PVs) are often associated with hereditary cancer syndromes and play a critical role in defining cancer risk. The need for genetic counselors (GCs) has substantially increased due to expansion of germline testing guidelines, increased accessibility and affordability of testing, as well as better provider awareness of the important role PVs play in cancer risk. GCs are a critical component of access to this service, yet there is a shortage of GCs as well as limitations in their scope of practice, which vary by state. At an academic outpatient cancer center, the High-Risk Prevention and Wellness Program (HRPWP) was developed to improve access to these services. The HRPWP utilizes Advanced Practice Providers (APPs) to evaluate patients that are concerned about their cancer risk, discuss genetic testing, and support patients with PVs. The HRPWP utilizes triaging to identify patients that can be seen by an APP (such as patients who have been counseled by a GC previously), and leverages partnership with GC when clinically necessary (patients with identified PVs without previous genetic counseling). **Approaches:** The HRPWP encompasses two different APP led clinics: High Risk (HR) and Genetic Predisposition Syndrome (GPS). Both clinics work together by identifying and managing those with an increased risk of cancer. HR focuses on patients with family history of cancer, patients with higher-than-average cancer risk and identifying those that meet criteria for genetic testing. If a PV is detected, the HR APP directs patients to GPS for the establishment of care with a GC and APP. The GC provides formal counseling and recommends a personalized cancer prevention plan, that the APP can then execute. If negative, HR APP develops a cancer screening plan that aligns with their risk. GPS APP and GC also provide predictive testing services, to identify relatives who may also be carriers of PVs. HRPWP APPs provide physical assessments, initiate diagnostic screenings, ensure continuous follow-up care and provide education and support. **Results:** When comparing June 2022 and June 2023 data, the implementation of APP-led HRPWP has reduced wait times to see a GC by 35%, from 57 days to 27 days. Additionally, within the same time

frame, there was an 83% increase in the number of patients overall in Cancer Genetics, including GCs and the HRPWP. The HRPWP has also allowed GCs to focus on more complex cases, generating a 26% decrease in cases seen by GCs where patients only have a family history of cancer. **Conclusions:** The HRPWP continues to evolve, and early evidence has shown it to be effective in supporting the demand for GCs, as well as the identification and management of high-risk patients. By utilizing APPs, the program has helped bridge the gap between GC recommendations and the implementation of screenings, risk reduction plans, and specialty referrals. The APP's licensure allows for immediate execution of management plans and aids in continuity of care by decreasing the risk of GC recommendations getting lost to follow-up. It also allows for consistent long-term multidisciplinary management for their cancer risk.

JL1110C: Chemotherapy Care Companion: How Advanced Practice Providers Can Enhance Healthcare With Digital Remote Monitoring

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Background: Patients receiving oncologic care are predisposed to acute issues that are potentially preventable with proactive monitoring and management. To manage therapy complications at a large academic hospital in Louisiana, Chemotherapy Care Companion (CCC) was developed as a way for advance practice providers (APPs) to remotely monitor vitals of patients undergoing cancer treatment. This abstract highlights the impact of APPs utilizing digital remote monitoring (DRM) to proactively manage patient care, increase patient satisfaction and reduce healthcare costs in oncologic care. **Methods:** Starting in January 2020 to December 2022, enrolled CCC patients received digital monitoring devices, including a scale, blood pressure cuff, and ear thermometer, at no cost. Vitals were automatically uploaded to the Epic electronic medical record, and APPs monitored escalations exceeding predetermined limits. As needed, APPs provided appropriate interventions and utilized urgent care slots embedded in the APP's schedule for same-day follow-up appointments. Tracking of interventions began in May 2021. In August 2022, a patient satisfaction survey comprising of nine questions was distributed to all enrolled patients. **Results:** From this data, a comprehensive analysis was conducted including 450 enrolled participants ranging from 23 to 86 years old and accounted for 445 documented APP interventions. The most common reasons for interventions were related to hypertension, hypotension, weight changes, and questionnaire responses. Regarding questionnaire responses, diarrhea, pain, fever, and dizziness were the mostly frequently intervened issues. Data analytics demonstrated that CCC resulted in a 33% reduction in emergency room (ER) visits and admissions compared to non-enrolled patients. By decreasing the total ER visits for enrolled patients by approximately 810 visits, CCC has saved enrolled patients a total of $2.1 million. The patient satisfaction survey (131 responses) indicated that 90% of patients found CCC instructions clear and easy to understand, 85% were highly satisfied with the ease of daily questionnaires and vital submissions, over 80% reported feeling a sense of security and well-being knowing they were being monitored, 90% expressed overall satisfaction with CCC, and more than 90% would recommend CCC. Barriers to this study include the need for patient engagement, timing of patient submissions, consistent APP documentation, and limited clinical time to intervene. **Conclusion:** These findings demonstrate how APPs can play a significant role in DRM in cancer care and help effectively decrease healthcare costs while improving patient care and satisfaction. The cost savings achieved through CCC demonstrate the potential for DRM to optimize resource utilization and aid in healthcare expenditure. Additionally, this study highlights high patient satisfaction and engagement with DRM which further supports the feasibility and acceptance in oncology care. **Implications:** APPs are poised to be leaders in DRM in cancer care, extending beyond data monitoring data and interventions. Their role encompasses other vital aspects including staying updated on technology integration in cancer care and actively participating in the development and customization of patient monitoring based on clinical expertise. They can

communicate the benefits of DRM and its potential to enhance the overall cancer care experience, which can improve patient engagement and treatment plan adherence.

JL1111C: Development and Implementation of an Advanced Practice Nurse-Driven Telemedicine Project for Preoperative Evaluation

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Context: A large urban oncology hospital needs to meet the increasing need for surgical options for cancer care management. Pre-implementation Data: High surgery cancellation rate (7.15% in 2021, 7.06% in 2022). Quality Improvement (QI) programs in healthcare aim to improve cost-effective and efficient healthcare delivery while ensuring patient safety and well-being (Pattnaik et al., 2022). This QI project examines whether implementing preoperative telemedicine evaluations in an APRN-led clinic could positively impact healthcare cost, efficiency, and access and their impact on surgery cancellation rates. The developed inclusion criteria include patients over 18 years old proceeding with a low-risk gynecologic surgical procedure and scheduled for a Preoperative evaluation. Exclusion Criteria are ASA level III, IV, and V patients with symptomatic or severe systemic disease, a history of airway-related anesthesia complications. **Methodology:** Project Setting: PST clinic, Rockefeller Outpatient Pavilion. Project Design: Telemedicine or in-person visit for a preoperative evaluation. Sample Size: N= 50 patients (25 in-person and 25 telemedicine patients). Participants: PST APRNs, the APRN manager, and care coordinators. Descriptive statistical analysis: Retrospectively compared the cancellation rate among both visit options. **Result:** The result revealed that 94% of all 50 patients seen with both visit options did not cancel their surgery. Data analysis using chi-square showed a significant relationship between age and the visit options, indicating that different age groups were associated with varying visit options. However, the two-tailed Wilcoxon signed rank test revealed that random variation explains the differences between the surgery cancellation and visit types. Linear regression also showed that the type of PST visit did not explain a significant proportion of variation in surgery cancellation. **Conclusion:** With secure buy-in and support from the hospital leadership, the institution integrates telemedicine seamlessly into its existing clinic workflows by designing a workflow that guides providers and patients through the completion of the telemedicine visit. The clinical significance examined revealed positive statements from staff and patients regarding travel cost savings and improved clinic workflow. **Recommendation:** Project sustainability by expanding the telemedicine service as a PST visit option to other low-risk surgical and intermediate-risk surgeries. APRNs will continue quality assurance and outcomes evaluation to assess the impact of telemedicine on preoperative evaluation on clinical outcomes, patient experience, resource utilization, and cost-effectiveness and disseminate knowledge about the benefits of APRN-driven telemedicine within the oncology healthcare community.

JL1112C: Development of an Advanced Practice Provider-Led Virtual Anemia Consult Clinic

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Background: In the summer of 2022, Hematology Oncology new consult access exceeded our organizational goal of 7-days. Anemia consults were a significant contributor to access delays, with patients waiting over 3 weeks for evaluation. Though Advanced Practitioners (AP) were trained to see new anemia consults, utilization of AP consult slots was suboptimal. Scheduling challenges and inefficiencies played a significant role. In addition, practice location relative to patient location contributed to longer waits. This placed more demand on already strained practices with limited room availability and support staff. **Methods:** Anemia assessment and diagnosis is largely based on laboratory results and patient history, making the virtual setting an ideal platform to see patients and maximize resources. The AP team, in partnership with administrative

leaders, developed a virtual anemia consult clinic (VACC), offering triage, assessment, diagnosis and treatment for anemia related ICD10 codes. One shared clinic template was created to optimize the scheduling workflow and overcome inefficiencies. Seasoned APs staffed the VACC 5 days per week, with 5 new consult slots daily. APs led a biweekly huddle, addressing clinical and scheduling concerns like barriers to scheduling, consult appropriateness, utilization, and volumes. APs organized and regularly attended huddles with a staff Hematologist, collaborating on complex cases. Access, volumes, and utilization were tracked for VACC and compared with AP visit data outside of the VACC. Implications of outcomes for this initiative include AP top of scope practice and autonomy, productivity, and alternative practice models. **Results:** The VACC saw 610 consults between September 2022 and May 2023. With the addition of the VACC, Benign Hematology AP revenue increased 276%. The VACC utilization from September 2022 to May 2023 averaged 91%. With the scheduling and template changes, AP new consult slot utilization, outside of VACC, also improved from 62% the previous year to 75%. Access improved from its peak of 20 days just before the VACC started, to 8 days as of May 2023. VACC access is consistent at 7 days. **Conclusions:** APs were crucial in the creation, maintenance, and staffing of the VACC to meet a critical access demand, with limited resources. APs cultivated and maintained collaborative relationships with staff physicians, schedulers, and colleagues to ensure success. Not only was the initiative successful in its main goal of improving access for anemia patients, but the AP led VACC also resulted in improved AP utilization, productivity, increased autonomy, professional growth, and top of licensure practice. The VACC reduced patient travel and parking costs, time away from work, and expedited evaluation and management of their health concern. **Recommendations:** The virtual platform allowed patient convenience and satisfaction, expedited evaluations, and required minimal staff and facility resources. Patients with diseases able to be evaluated and treated virtually can benefit from a consultation clinic via virtual platform. Hematology provider shortages are expected to continue. Given this, APs are a crucial resource for providing quality hematology directed care for patients. Future directions include evaluating other diagnoses for potential to development into consultative clinic, such as thrombocytopenia.

JL1113C: Dialing Down the Dex: Reviewing the Role of Dexamethasone in the Treatment of Multiple Myeloma

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Background: Historically, with limited options for the treatment of multiple myeloma, dexamethasone was a necessary therapeutic partner to treat the disease. Although dexamethasone demonstrates initial efficacy, especially at robust dosing, it also demonstrates significant and problematic toxicity over time. With the exponential increase in number effective myeloma therapies, the role of ongoing dexamethasone has not been formally addressed in many treatment practices. In our consultancy practice, we have noted many myeloma patients remain on dexamethasone 40 mg weekly as part of long-term treatment, often despite steroid-induced adverse effects. The advanced practice provider can help identify patients who may benefit from dexamethasone dose reduction. We have developed a strategy of dose reduction to reconcile initial efficacy and long-term toxicity of dexamethasone in this patient population. **Hypothesis:** Based on prior studies and our clinical experience, we hypothesize that multiple myeloma patients do not need more than 6 months of dexamethasone after starting combination therapy. Evidence to support the limited use of dexamethasone in myeloma treatment includes the ECOG E4A03 trial, which demonstrated inferior overall survival with use of high dexamethasone versus low-dose dexamethasone, with evidence that lower dosing is still effective. In addition, a randomized trial of lenalidomide plus dexamethasone versus lenalidomide plus fixed duration dexamethasone demonstrated reduced toxicity and an improved event free survival in patients receiving less dexamethasone. Furthermore, NCCN guidelines recommend limiting steroid use to the lowest possible effective dose in older adults. **Methods:**

To optimize the use of dexamethasone in our patients, we have adopted the following recommendations. First, assess the starting dose of 40 mg versus 20 mg weekly based on patient age, performance status, and comorbidities. Second, limit the initial starting dose to 2 to 3 months. Third, taper dexamethasone each month over the course of 3 to 4 months with a plan to stop dexamethasone after 6 months. Fourthly, careful and continuous assessment of potential toxicities should be performed throughout the process. This strategy can be adopted for most long-term myeloma treatment plans and can be adjusted in circumstances such as transplant eligible induction therapy, for supportive care needs, or if significant initial dexamethasone toxicity. **Results:** Subjectively, we note consistent positive reports from patients and their care partners regarding quality of life. Objectively, we see improvement and most often resolution in steroid induced toxicities such as insomnia, emotional lability, atrial fibrillation, hypertension, increased blood sugar, swelling, and weight gain. **Conclusions/Recommendations:** Limiting the role of dexamethasone can reduce steroid induced toxicity and allow patients to continue long-term myeloma treatment with improved quality of life. This topic has clearly been on the mind of myeloma experts as studies are increasingly being designed to limit the role of dexamethasone. Our experience provides background for future studies to better define the scope of dexamethasone in the treatment of multiple myeloma and limit toxicity when possible.

JL1114C: Enhancing Tumor Marker Utilization in Early Phase Clinical Trials: An Advanced Practice Provider-Led Education Initiative

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Background: When monitoring the response to treatment for oncology patients, clinicians consider radiographic, clinical, and laboratory findings. Advanced practice providers (APPs) play a vital role in treatment decision making, including evaluating the trend of a patient's tumor marker. In an early phase clinical trial clinic, the clinical and research teams collaborate to coordinate patient care. Initially, the research team drafts protocol-related orders for the APP's signature. However, the clinical team observed that these orders frequently omitted tumor markers, resulting in the team being unable to obtain crucial information about the patient's treatment response when baseline measurements were unavailable. This study assesses the effectiveness of an APP-led education initiative in improving the utilization of tumor markers. **Methods:** The author surveyed APPs and research teams to understand their preferences for ordering tumor markers. All APPs agreed that it was important to order tumor markers before the patient starts a new treatment. Most APPs believed that it was the responsibility of the research team to order the tumor marker. Most members of the research team agreed it was their responsibility to order tumor markers. Two main barriers to ordering tumor markers were lack of knowledge regarding which tumor markers to order and the absence of a requirement in the protocol to order tumor markers. The author developed an educational presentation on tumor markers for both research and APP teams. It covered their use in treatment decision-making and gave a list of tumor markers by disease site. **Results/Conclusion:** Patient charts were reviewed for the 3-month period preceding the education initiative. Out of 236 patients, 73% had their tumor marker drawn within 2 weeks of cycle 1 day 1. The objective of this project was to increase this percentage to 90% or higher. Following the education initiative, charts were analyzed for another 3-month period. Among 199 patients, 92% had their tumor marker drawn within 2 weeks of cycle 1 day 1. **Study Limitations:** The study focused on tumor markers obtained before or on cycle 1 day 1 due to differing opinions among APPs regarding post-cycle 1 day 1 marker collection. Some APPs preferred to obtain tumor markers with each new cycle, while others preferred to do so only during re-staging cycles. To ensure comprehensive data collection, tumor markers drawn within two weeks of cycle 1 day 1 were included in the analysis as tumor markers might be checked during the study screening period, which typically lasts for two weeks. Ideally, tumor markers should be drawn as close to cycle 1 day 1 as feasible. **Future Implications:** In a dynamic early phase clinical trial clinic,

new protocols with distinct requirements are continually introduced, along with a frequent influx of new study team members, including unlicensed personnel. Therefore, it is crucial to ensure that the APP-led education initiative for tumor markers is not a one-time occurrence. When writing protocols, clinicians may improve comprehensive patient assessment by including tumor marker measurement in protocol laboratory requirements.

JL1115C: Evaluating the Use of an Amino Acid Food to Alleviate Chemotherapy-Induced Toxicity in Cancer Patients

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Background: Patients with cancer on a chemotherapy regimen may experience global gastrointestinal (GI) mucosa damage and are at risk for diarrhea, nausea, poor oral intake, and/or weight loss. Symptomatic patients often require unplanned visits to healthcare practitioners, outpatient IV electrolyte fluid infusions, hospitalizations, and delays or alterations of cancer treatments. Quality of life and survival are negatively impacted by altered cancer treatments. Enterade is a commercially available amino acid-based, glucose-free, oral rehydration medical food that demonstrates statistically significant improvements in diarrhea, dehydration, and weight loss. Enterade offers an additional tool for the oncology advanced practitioner to minimize GI symptoms and avoid unplanned healthcare practitioner visits, hospitalizations, or IV electrolyte fluids infusion chair time in patients receiving chemotherapy and/or radiation to treat cancer. **Methods:** This quasi-experimental research project evaluated chemotherapy patient GI symptoms, weight loss, and number of unplanned healthcare system encounters after receiving Enterade. Patients scheduled to receive FOLFOX, FOLFIRI, FOLFIRINOX, or TCHP chemotherapy treatment regimens (participants) were invited to enroll in this study prior to initiation of their first chemotherapy treatment. Participants completed a survey recording baseline symptoms, and they self-reported symptom experiences prior to each additional chemotherapy treatment cycle. Patients reporting GI symptoms differing from the baseline assessment were provided 16 bottles of Enterade for each of their next three chemotherapy treatment visits with instructions for use. Retrospective data were extracted from 12 patient charts in each of the four chemotherapy regimens (n=48) before Enterade was introduced. These "control group" data were compared with data from participants receiving Enterade. **Results**: The control group data is the pre-data: data of those patients receiving the four chemotherapy regimens "prior to" introduction of the Enterade intervention. On average, mean scores for nausea ($p \leq .001$), vomiting ($p=.07$), and diarrhea ($p \leq .001$) were lower in patients who consumed Enterade. Additionally, patients who consumed Enterade had significantly fewer hospital days (M=1.03 vs. 2.08 ($p=.037$)) and fewer stopped treatments (M=.11 versus .24 ($p< .001$)). Although not statistically significant, the Enterade group experienced less weight loss (2.09 vs. 2.88, $p=.131$) and fewer unplanned healthcare practitioner visits (.38 vs. .68, $p=.138$). **Conclusions:** Control of GI Symptoms means fewer stopped treatments, improving overall survival and quality of life. Significant cost savings may be realized by organizations that order Enterade for patients receiving chemotherapy regimens that are likely to cause GI symptoms when unplanned provider visits, IV hydration, and hospitalizations are avoided. This evidence can be used by cancer centers when evaluating whether to add Enterade orders to chemotherapy treatment plans and by oncology advanced practitioners as another option to manage GI symptoms. **Recommendations:** Oncology advanced practitioners should consider adding Enterade to chemotherapy treatment regimens that carry a high risk of producing GI symptoms. Based on our findings, incorporating Enterade into standardized treatment plans may prevent unnecessary utilization of resources (oncology advanced provider visits, infusion chair time, and hospitalizations), potentially reducing associated health system costs. The ability to complete chemotherapy treatment without interruptions could improve cancer control, survival rates, and enhance quality of life in patients diagnosed with cancer.

JL1116C: Hematology and Oncology Advanced Practice Provider Role in New Patient Visits and Impact on Satisfaction

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Background: The Advance Practice Provider (APP) role in cancer care has been widely accepted as a standard, though there continues to be significant variation in function, with emphasis on follow-up care [1, 2]. Models vary whether outpatient APPs follow primarily shared visit models (SVM) or independent visit models (IVM) [3]. Utilizing APPs to the top of their scope is an APP satisfier and improves access [2, 4, 5]. Literature is sparse regarding which visits should be shared and how that impacts staff satisfaction. Our study evaluated care team satisfaction and explored the relationship of care team satisfaction with the use of APPs in shared new visits. **Methods:** This project was completed in an outpatient Hematology and Oncology practice at a large academic medical center. A 21-question anonymous satisfaction survey was sent to physicians, APPs, nurses, pharmacists and support staff. 294 staff were survey, 29 of which were APPs. Responses were segregated for team-based analysis. Data was evaluated by care team responses and roles. New patient visits utilizing the SVM were extracted if clinical notes for the encounter were entered by both an APP and physician. Additional qualitative stakeholder input was obtained through interviews with staff, cross-team observations, and survey comments. **Results:** Across the practice, only 9% of new visits in 2022 were shared physician and APP visits. Three teams were identified as strong adopters of the shared new patient clinic: the gastrointestinal (35%), breast (33%) and gynecologic (31%) care teams. Compared to moderate and low adopters of the SVM, these teams had 29% higher satisfaction with efficient scheduling, 28% higher satisfaction with defined team roles, and 24% higher satisfaction with ability to share information among team members. All three teams had ≥90% satisfaction on defined roles, obtaining information, team collaboration and culture. For APP-specific satisfaction, all responding APPs in strong adopting teams reported 100% satisfaction with having a well-defined role, compared to 62% of APPs in the other teams ($p< 0.05$). In qualitative feedback, strong adopters reported that the SVM allowed the APP role to be introduced early in the patient's care and fostered APP involvement in formulation of the plan, which improved continuity of care. **Conclusions:** The use of new patient SVM in cancer positively impacts overall staff satisfaction, team collaboration, and culture. Early introduction of the APP role to the patient fosters patient acceptance and understanding of the team model of care. SVM enables collaborative discussion when developing treatment plans and ensures all team members have a complete understanding of the plan moving forward. Adopting a new patient SVM allows APPs to work to top of scope and maintain independence in follow up. **Recommendations:** Further evaluation is needed to better understand the balance between new patient SVM and independent follow up visits. However, this evaluation highlights that the use of new patient SVM correlates with high care team satisfaction in multiple domains.

JL1117C: Highlighting the Importance of Genetic Testing in Prostate Cancer: A Case Report

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Background: Prostate cancer is a prevalent disease, affecting approximately 1 in 8 men, and is the second leading cause of cancer-related deaths in American men. Recent advancements in prostate cancer treatment have prompted national guidelines and societies to endorse genetic testing, both somatic and germline, for patients with advanced/metastatic prostate cancer. Genetic testing plays a pivotal role in guiding treatment decisions, enabling trial participation, and assessing patient/family risk. Oncology advance practice providers (APPs) play an essential role in ordering and interpreting genetic tests. **Case Report:** In December 2009, an 88-year-old male was diagnosed with a Gleason 6 prostate cancer. Despite receiving definitive radiation therapy, he experienced rising prostate-specific antigen (PSA) levels in February 2017, indicating metastatic disease with lung and bone involvement. The patient exhibited disease progression on abiraterone/prednisone and enzalutamide, ex-

hausting available treatment options except for chemotherapy as of December 2020 with a PSA of 20.9. The patient chose to prioritize his quality of life and made the decision to continue with androgen deprivation therapy (ADT) alone, as he was reluctant to consider chemotherapy as an option. At the suggestion of the oncology APP, a Guardant 360 test was drawn in June 2021 showing a tumor mutational burden (TMB) level of 13.4 mutations/megabase (mut/MB), which qualified him for high TMB treatment (≥10 mut/Mb solid tumor) with pembrolizumab. The patient and his family were counseled by the APP on the significance of this result, but patient declined due to concern about potential side effects. After several discussions and a PSA of 44.2, the patient chose to receive his first dose of pembrolizumab in March 2022. After one dose, his PSA decreased to 19.3 and continued to decrease to a nadir of 0.29 in May 2022. After a second dose, further immunotherapy treatment was held due to vertigo and fatigue. The patient opted to continue ADT only and had a PSA of 10.9 as of April 2023. **Discussion:** In this case, the patient had recurrent metastatic prostate cancer nearly eight years after initial prostate cancer diagnosis. In only three months, his PSA had an astounding 99% reduction and with less toxic side effects as compared to chemotherapy. During the most recent visit, which occurred approximately eight months after discontinuing further immunotherapy, the patient's PSA was 10.9 and still represented a substantial reduction of approximately 75% from starting PSA level. Given that data suggests median survival of metastatic castrate resistant prostate cancer is only 2.5-3 years, the ability to halt and delay PSA progression is invaluable. **Conclusion:** For optimal comprehensive cancer care, it is imperative that all oncology APPs working with prostate cancer patients acquire knowledge about genetic testing and integrate it into their practice. With their specialized knowledge and expertise, oncology APPs can navigate genetic complexities and incorporate them into personalized treatment plans thus improving patient outcomes. By utilizing genetic testing, oncology APPs have the potential to discover additional treatment options, which offer patients hope with more effective and tailored therapies.

JL1118C: Identifying Factors Associated With Radiation-Related Adverse Events

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Background: Radiation therapy (RT) is an effective oncologic treatment; however, it is known to cause toxicities which can lead to adverse events like emergency department (ED) visits, hospitalizations, or death. Advanced practitioners (APs) play an important role in patient care throughout the oncology experience, including managing RT-related toxicities. There is limited research identifying patients at risk for these RT-related events. The purpose of this evaluation is to identify factors associated with these RT-related events in the "short-term," defined as: during or within 30 days of RT. **Methods:** Patient information was retrieved from electronic records for RT patients treated during January 2022 at one large academic center, who subsequently experienced a short-term ED visit or hospital admission. Data were manually abstracted on patient characteristics, RT courses, ED visits, and hospital admission courses. Events were attributed to radiation based on the National Cancer Institute (NCI) Likert scale (1-5) for attributing causality of toxicities. Events were separated into control group and test group, respectively, by NCI attributions of 1-3 ("definitely not", "unlikely", or "indeterminately" related to radiation) and 4-5 ("likely" or "definitely" related to radiation). Categorical data were analyzed with chi-squared test, utilizing Yates' correction as applicable, with standard p-value ($p< 0.05$). **Results:** 88 radiation courses were identified in January 2022 for 88 unique patients with a short-term hospitalization or ED visit. 67 (76%) experienced one hospital admission, 13 (14.8%) experienced two, and 6 (6.8%) experienced three, totaling 86 admission events. 41 (46%) experienced one ED visit, and 7 (8%) experienced two, totaling 48 ED visits. In the short-term, none died, 3 (3.4%) were enrolled in hospice, and 2 (2.3%) did not complete their RT course. 64 (72.7%) of RT courses were curative-intent, 23 (26.1%) were palliative-intent, and 1 (1.1%) was non-oncologic. Factors significantly associated with a short-term radiation-related hospitalization or ED visit were: RT to lung metastasis (p=0.006), palliative brain RT (p=0.016), and

head/neck primary malignancy (p=0.002). Several other factors approached a significant association: multiple ED visits or admissions (p=0.063), RT for dysphagia (p=0.052), RT to bone metastases (p=0.061), primary skin malignancy (p=0.052), comorbid liver disease (p=0.075), and comorbid pulmonary disease (p=0.067). Other unassociated factors (p>0.10) included performance status, treatment intent, heart disease, renal disease, diabetes, other treatment sites, or other malignancies. **Conclusions:** RT patients with head/neck cancer, palliative brain RT, or RT to lung metastases were more likely to experience an ED visit or hospitalization related to radiation. Numerous other factors had some association approaching statistical significance including RT for dysphagia, RT to bone metastases, primary skin malignancy, or comorbid liver disease. **Implications:** These new findings can improve awareness in current oncology practice, informing APs to better identify and intervene with high-risk RT patients. It can also guide larger multivariate analyses in the future, for the development of a comprehensive predictive tool for patients at high risk of RT-related events. This, in turn, should prompt research on evidence-based preventive interventions, with the goal of minimizing RT-related adverse events.

JL1119C: Implementation of Tumor-Infiltrating Lymphocyte Therapy for the Treatment of Advanced Melanoma

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Background: Limited treatment options exist for patients with advanced melanoma (metastatic or unresectable) despite advances in immunotherapy with CTLA-4, PD-1, and LAG-3 agents, as well as targeted BRAF/MEK inhibitors. Many advanced melanoma patients are left without treatment options upon progression. Tumor Infiltrating Lymphocyte (TIL) technology, a novel cellular therapy, may soon decrease this treatment gap. TIL offers hope for melanoma patients as Iovance seeks FDA approval for lifileucel. The phase I and phase II data reports a 31.4% and 36% response rate respectively, with median duration of response not reached after 18.7-month median phase II study follow-up. TIL is a one-time living drug but is exceptionally more complex than currently approved treatments. Many steps are required to see a patient through completion. Given the complexity of this new cellular therapy, advanced practice nurses (APNs) serve an integral role in the coordination of care throughout the process and providing optimal patient outcomes. **Methods:** At our community-based research institution, we have worked with a multidisciplinary team to implement lifileucel, a TIL therapy for treatment of advanced melanoma patients through an expanded access program. The multi-step process to successfully treat patients with lifileucel includes appropriate patient selection, tumor harvesting, manufacturing by the manufacturer (Iovance), oncologic management of the patient during the manufacturing process (approximately 3 weeks), administration of non-myeloablative lymphodepleting chemotherapy, appropriate infection prophylaxis, TIL administration requiring specialized handling and thawing of the cellular product, administration of up to six doses of IL-2, monitoring and management of cytokine release syndrome/capillary leak syndrome, and follow-up including supportive care during recovery from treatment. Operationalizing this process within our institute has required intense staff education, with months of essential planning and coordination between multiple stakeholders, including the manufacturer, the outpatient cutaneous oncology program, our inpatient and outpatient pharmacy teams, inpatient and outpatient cellular therapy, and nursing teams. Following implementation, ongoing evaluation and debriefing meetings help to identify successful processes and areas for improvement. **Results:** Our institution has successfully implemented TIL cellular therapy with lifileucel and is offering this treatment to patients with advanced melanoma. This effort has required a multidisciplinary approach. Our APNs have been integral in creating and assisting with patient education, staff education, development of electronic treatment plans, and the coordination of care across the healthcare system to bridge inpatient and outpatient care. **Conclusions:** The APN role in management of melanoma patients is expanding from managing patients receiving historically "off-the-shelf" therapies, to coordinating increas-

ingly complex care with new advancing cellular therapies including TIL. While offering patients a unique and promising treatment option, TIL also presents new opportunities and challenges for APNs involved in the management of these patients. **Recommendations:** As centers begin operationalizing TIL and other cellular therapies, having APNs present to participate in the process is essential. Specialized education for nursing, pharmacy and APNs is necessary to ensure successful outcomes and minimize adverse events. Further, it will be important to establish guidelines for best practice and identify resources to support the APN role for management of patients receiving TIL therapy.

JL1120C: Improving Patient Safety: Encouraging Preemptive Lab Draws for Timely Clinical Results

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Background: Timely delivery of laboratory results is critical in clinical settings, especially when considering patient safety and treatment efficacy. However, delays in receiving lab results can hinder physicians' ability to safely clear patients for treatment. This study aimed to investigate the impact of encouraging study coordinators to prompt patients to undergo lab draws a day ahead of their scheduled physician appointments, with the goal of achieving more timely lab results. This, in turn, we hypothesized, would lead to fewer patients being held or turned away during their in-clinic appointments due to abnormal or absent lab results, as these patients would have been redirected prior to their scheduled appointment, given earlier lab results. **Methods:** Two cohorts of patients from two specific clinics were studied. Group A (Pre-Implementation) included patients with usual lab draws on the day of the physician appointment, charted from September 1, 2021, to November 30, 2021 (n=160). Group B (Post-Implementation) had study coordinators actively encouraging patients to have their labs drawn a day in advance, charted from September 1, 2022, to November 30, 2022 (n=162). The primary outcome compared the percentage of patients in both groups to determine if labs drawn the day before the appointment increased. Secondary outcome measured if treatments held due to lab abnormalities decreased with prior-day lab draws. **Results:** Surprisingly, our study did not yield any statistically significant differences between Group A and Group B in either measured outcome, although there was noted improvement post-implementation of the study coordinator intervention. Overall lab draws on the day prior to any patient visit increased from 26% to 34%, and lab draws on the day prior to restaging scans jumped even more, from 23% to 39%. As well, patients held or discontinued during their visits due to lab abnormalities dropped from 27% to 21%, although we do not have the data to determine if that is because more of these patients were caught prior to coming in for their appointment (and therefore not being discontinued on the day of their visit), rather than random factors due to low sample size. **Conclusion:** Encouraging preemptive lab draws a day ahead of scheduled physician appointments showed promising improvements in patient engagement, leading to increased prior-day lab draws and potential benefits in patient safety and treatment efficiency. Although not statistically significant, the study coordinator intervention holds value in encouraging desired patient behavior. **Recommendations:** Given the lack of significant differences observed in our study, we propose redirecting the focus of investigation towards the role of attending nurse practitioners in expediting lab results and patient clearance. Nurse practitioners play a pivotal role in patient care and communication with the laboratory. Factors such as communication protocols and coordination between nurse practitioners and laboratory staff may warrant further examination to identify potential bottlenecks affecting timely lab results and patient clearance. Investigating the involvement of attending nurse practitioners in the process may offer valuable insights for optimizing patient safety and treatment efficiency in clinical settings.

JL1121C: Improving Work-life Balance With Implementation of Administration Time

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Background: Since the COVID-19 pandemic we have seen a significant shift in the healthcare labor market where it has become increasingly

competitive. Several factors have influenced unsatisfied healthcare workers such as burnout, compassion fatigue, inadequate support, and escalating workloads. In a large community oncology practice with over 200 sites of service, Advanced Practice Providers (APP) were experiencing burnout which was contributing to turnover resulting from APPs seeking job opportunities with flexible schedules offering better work-life balance. Proulx (2021) found that APPs with dedicated administration time are 17% less likely to leave. To reduce APP burnout and subsequent turnover, we sought to create a new initiative to implement flexible scheduling options focusing on dedicated administration time. **Methods:** In September 2021, a comprehensive APP satisfaction survey was conducted with focus on seeking feedback and data to build a business case for implementing administration time. At the time of the survey, our organization employed 180 APPs spanning across the state in myriad clinic settings. 105 APPs responded to the survey indicating 81% worked 5 days per week with 56% working more than 40 hours per week, 71% reported not having administration time and 71% reported high or very high levels of stress. Comments throughout the survey indicated APPs were seeking flexible scheduling options specifically dedicated administration time. An APP self-reported non-billable time study was then conducted in December 2021. The study found that, on average, APPs were spending 9.42 hours per week on non-billable tasks. This further validated the need to implement APP dedicated administration time. **Results:** Over the course of a year, APP leadership collaborated with practice leadership to create and implement an APP Flexible Schedule Guideline including 4 hours of dedicated administration time per week for APPs working a 5-day work week. Key components of the guideline included eligibility criteria of 2 years of APP experience within the organization as well as meeting individual productivity metrics. For eligible APPs we applied a 3-month implementation plan to ensure minimal effect on patient scheduling and provider availability. Eligibility is re-evaluated by APP leadership at regular intervals and communicated with all key stakeholders. Less than a year after successful implementation, 100% of eligible APPs now have dedicated administration time with 11 APPs opting out. **Conclusions:** Dedicated administration time has been shown to decrease APP turnover. Decreased APP turnover may have a positive effect on job satisfaction, increased productivity, improved patient care, enhanced recruiting efforts, and improved work-life balance. In our organization, we have seen a positive shift in allowing increased flexible scheduling options including some practices providing dedicated administration time from the date of hire. Anecdotal data from our internal talent acquisition team and feedback from APPs and practice leadership indicates higher APP satisfaction rates, improved work-life balance, and increased retention.

JL1122C: Investing in Your Newest Investment: Creating a Quality, Efficient, and Cost-Effective Advanced Practice Provider Orientation

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Purpose: The demand for Advanced Practice Providers (APPs), far exceeds their supply, especially in specialty areas of healthcare such as Hematology-Oncology. Ideally, APPs participate in a specialty fellowship or orientation program, which often require considerable time and financial investments. The purpose of this initiative is to design and implement a comprehensive, stepwise orientation program for APPs that is both time and financially efficient to meet the demanding needs of healthcare, while providing APPs with a quality orientation experience that adequately prepares them for autonomous practice. **Interventions:** In a large academic medical facility, a 14-week stepwise, multiphased, immersive orientation program for APPs in Hematology-Oncology was implemented. New-hires oriented to a team of more than 30 APPs who care for hematology-oncology patients in virtually all aspects of care from diagnosis through survivorship. The program was a phased approach to clinical experience exposure, wherein an APP is immersed in each area of care before moving to subsequent experiences, incrementally building upon clinical skills, responsibilities, and knowledge. Experiences included inpatient, outpatient, procedural, and tri-

age care, including admissions and night shift. Non-clinical experiences included department onboarding, educational didactics, prospective goal setting and progress tracking monitored by means of virtual orientation notebooks and regular in-person reviews. Prospective preceptor support provided included preceptor training, regular preceptor and orientee support meetings and patient census caps for those precepting new-hire APPs to allow focus and dedication to the orientee APP and preceptor. Post-orientation support included limited patient census thresholds immediately following orientation, quarterly evaluations with leadership, which included goal setting and tracking. The orientation program implemented did not require formalized financial support. **Discoveries:** A total of 11 APPs oriented between May 2021 and December 2022. Median experience level at the time of hire was 0-1 years of experience. The majority of APPs had 0-1 years of prior experience. One hundred percent of APPs felt that orientation adequately prepared them for independent practice as a Hematology-Oncology APP. The majority of APPs, 81.8%, felt that orientation was an appropriate length and rated their experience as 5/5. **Conclusions:** Implementing a 14-week stepwise, multi-phased, immersive orientation program for APPs resulted in unanimous positively perceived readiness for independent practice, regardless of experience level. The majority were satisfied with their orientation experience. While a significant amount of organizational support and time investment are required to implement and maintain the program, no formalized financial investment is necessary. Once designed and implemented, the orientation is self-sufficient, but requires constant self-evaluation and improvement to meet rapidly evolving patient care needs and growing APP responsibilities. **Recommendations:** An orientation program of this kind can successfully prepare APPs to provide comprehensive hematology-oncology clinical care under the time and financial constraints, as well as mismatched provider supply-demands in healthcare, without compromising APP orientation quality and experience. In contrast to fellowship experiences or shorter, less-comprehensive orientation experiences, implementing a stepwise, multi-phased, immersive orientation program is a quality and cost-effective option that can prepare APPs to provide exceptional, autonomous patient care.

JL1123C: Logistics of Intravenous Iron Administration and Adherence to Therapy: Results from a Patient Survey

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Background: Iron deficiency anemia (IDA) affects approximately five million people in the United States and has a significant impact on health and quality of life. Iron stores can be replenished through oral iron tablets or, if ineffective or poorly tolerated, through intravenous iron (IVI). Despite the effectiveness of IVI treatments, patients do miss or delay their appointments leading to incomplete IVI treatment response. This study was conducted to evaluate IVI treatment logistics from the patient perspective. **Methods:** In early 2023, adult patients (>18 years) in the United States with a confirmed diagnosis of IDA who were currently receiving or recently completed a course of IVI therapy were asked to respond to a ten-minute, 46–question, online survey conducted by The Harris Poll. Questions selected for this analysis covered patient demographics, appointment logistics, IVI infusion experience, impact of infusion on daily activities, reason(s) for missing any doses, and ways to improve adherence. **Results:** In total, 323 patients completed the survey, of which 193 reported being prescribed ≥ 2 IVI infusions/month. Of these patients (n=193), 71 (36.8%) reported having missed a dose. These 71 patients had an average age of 34.9 years, were mostly female (76.1%) and Caucasian (64.8%), most (54.9%) lived with a partner, and had an average household size of ≥ 3. Patients resided in an urban area (45.1%), near a city (38.0%), or in a rural area (16.9%). Leading causes of IDA were heavy menstrual bleeding (36.6%) and inflammatory bowel disease (18.3%). Respondents received an average of 2 IVI infusions/month. The average reported time (minutes) spent on appointment logistics included: scheduling the infusions (45.8), traveling to the infusion center (75.7), arrival to start time of infusion (51.0), and infusion chair time (88.7). Patients agreed that IVI treatment impacted their productivity (63.4%), attendance at important events (64.8%), and scheduling their life around treatment (80.3%). For negative impact on daily activities, > 30% reported missing: events, spending time with loved ones, work, and

time for responsibilities. Reasons for missing a dose (> 25%) were: "due to a conflict", "fitting the scheduled appointment", and "transportation difficulties". Patients agreed (84.5%) that fewer IVI infusions would improve their adherence to the full prescribed course of therapy. Overall, 38.0% (n=27) of patients were not satisfied with the infusion frequency and 85.9% (n=61) would have preferred a single dose option. **Conclusion:** Despite the therapeutic benefits of IVI treatment, more than one-third of patients prescribed ≥ 2 IVI infusions/month reported having missed an infusion. Time spent on arranging and receiving IVI treatment negatively impacted patient's perspective on their treatment and their daily activities. Of these variables that contribute to IVI treatment logistics that can negatively impact adherence, patient preference for a single dose treatment option may improve adherence and QOL. **Recommendations:** Based on patient feedback, convenience should be factored in and discussed when determining an IVI treatment choice, as it plays an important role in adherence.

JL1124C: Novel Web-Based Education for the New-to-Practice Hematology Oncology Advanced Practitioner

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Background: APs are traditionally trained as generalists. The education criteria put forth by the accrediting bodies for both nurse practitioner and physician assistant degree programs do not require didactic or clinical rotations in oncology (ARC-PA,2022)(APRN Consensus Work Group, 2008). There is currently limited data regarding subspecialty training for oncology APs with the following three studies contributing meaningful information. The first study surveyed oncology nurse practitioners in the workforce and demonstrated 16% of nurse practitioners had completed a degree program with focus in oncology prior to practice (Nevidjon et al., 2010). A second survey asked nurse practitioner graduates to rank their preparedness for the management of oncology patients. These graduates reported a lack of confidence in their understanding of cancer care (Rosenzweig et al., 2012). A survey of physician assistant programs revealed comparable results. Polansky et al. 2014, found that although most programs dedicated approximately four didactic hours to cancer screening and diagnosis, the majority spent less than two didactic hours on the evaluation and management of oncologic conditions. **Methods:** To address the gap and provide educational resources, our academic medical center's hematology oncology AP team created web-based education modules. The central focus of each module was specific to the care of the hematology oncology and bone marrow transplant populations. To create this content, an initial survey was distributed to the inpatient hematology oncology AP team with a 69 % completion rate. Providers were asked to rank how helpful they would find educational content specific to leukemia, lymphoma, myeloma, stem cell transplant, cellular therapy, oncologic emergencies, treatment related side effects and diagnostics. A free text portion was included for additional ideas for content. Volunteers from the inpatient team were split into working groups to create documents containing information on the concepts outlined above. The second phase of development included peer review and clinical pharmacist input. Final input was obtained from attending hematologists. An online learning program was developed from the content within the medical center's existing online education platform. The program was divided into five modules with an introduction. The five modules covered lymphoma, myeloma and autologous stem cell transplant, leukemia, allogeneic stem cell transplant, cellular therapy, and oncologic emergencies. Each "module" includes pre and post testing, pre-recorded power point lectures and a reference list. The modules are assigned during the eight-week orientation of the new to practice APs with expected self-directed completion within eight weeks. **Results:** To date four APPs have completed the modules with an additional five newly hired APs expected to complete the modules by December of 2023. Formal program evaluation will begin in January of 2024 to evaluate for increased understanding of oncologic concepts and improved self-efficacy post module completion. **Conclusions/Recommendations:** Existing AP teams can be used as content experts to develop oncology relevant learning materials for those who are new to practice. Oncology specific education should be included in AP orientation to ensure providers can provide competent care given current gaps in oncology education. Existing institutional learning platforms can be utilized for implementation of new materials.

JL1125C: Oncology Advanced Practice Provider Mentorship and Paired Clinical Research Coordinator Support to Enhance Accrual to National Cancer Institute Supportive Care Trials

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Background: The Hawaii Minority Underserved NCI Community Oncology Research Program (HI M/U NCORP) is part of the NCORP national network that brings cancer clinical trials to the community. This network develops and supports many national supportive care trials. In 2020, new NCORP guidelines were developed to enhance the roles of Advanced Practice Providers (APPs) in clinical trials, including serving as enrolling investigators and site primary investigators (PIs). The APP workforce is growing rapidly, but education lacks research focus. There is a need to bridge the gap in between clinical practice and clinical research to optimize APP contributions to clinical trials that match their clinical expertise. The primary objective of the project is to determine whether a strategy of formal APP mentorship and paired clinical research coordinator (CRC) support can increase accrual for NCORP supportive care trials within the HI M/U NCORP. **Objectives**: To increase accrual to supportive care trials by participating APPs; To increase the number of APP enrolling investigators; To increase the number of APPs serving as site PIs; To increase the number of APPs participating in scientific and feasibility review; To assess whether the intervention was acceptable and feasible at community sites. **Methods:** Over a staggered one-year period, the project lead implemented a formal mentorship program for 6 participating Oncology APPs and 3 CRCs with the HI M/U NCORP. The project paired teams of APP/CRCs for weekly-targeted screening and accrual to supportive care trials based on current patient panels. Monthly site meetings between the mentor and teams were conducted to discuss barriers, problem solve and adjust the intervention as needed. **Results:** Prior to the intervention, 7 unique accruals were obtained, whereas 26 unique accruals were obtained by the APP/CRC teams over the staggered 1-year project period. Prior to the intervention, 2 APPs were actively enrolling in supportive care trials while after the intervention, 6 APPs are now serving as enrolling investigators. 2 of the participating APPs are now serving as site PIs on NCORPs trials for the HI M/U NCORP as compared to none in 2019. 4 of the 6 participating APPs are now routinely reviewing protocols for the HI M/U NCORP for feasibility and scientific review. Prior to the intervention, only 2 APPs participated in protocol reviews. 8 of the 9 participating APPs & CRCs found the intervention to be acceptable and feasible. One participant was lost to attrition. **Conclusions:** Mentorship of APP/CRC teams can be a successful strategy in to increase engagement and leadership of APPs in clinical research. Measuring increased accruals based on this strategy is more complex and dependent on the current trial portfolio, APP patient panel and clinical interest, as well as the expertise of the APP. **Recommendations:** This approach and pilot data from a single NCORP can be utilized to enhance APP contributions in clinical research in terms of participation, accrual and leadership across the NCORP and beyond to other practices participating in clinical research.

JL1126C: Opioid Risk Reduction Practices of Advanced Practitioners in Oncology

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Primary Objective: To explore the risk mitigation practices of oncology Advanced Practitioners (AP) for the nonmedical use of opioids in people with cancer. **Background:** People with cancer may be at risk for nonmedical opioid use, including opioid use disorders (OUDs) and diversion.[1] **Methods:** An anonymous, cross-sectional descriptive survey was emailed to eligible multidisciplinary oncology providers over four weeks at a large, midwestern Comprehensive Cancer Hospital and Research Center. The survey asked about experiences and knowledge related to OUDs. This abstract focuses on risk reduction strategies used by APs, including advanced practice nurses, physician assistants, and pharmacists. **Results:** The final sample included 180 advanced practice nurses (APNs) and physician assistants (PAs), and

33 pharmacists. More APNs and PAs were older (mean age 40.2, standard deviation 10) and female (n = 159, 88.3%) compared to pharmacists, who were younger (mean age 34.2, standard deviation 7.9) and 50% female (n = 16). A greater percentage of APNs and Pas had practiced >5 years (n = 112, 62.3%), whereas a greater percentage of pharmacists had practiced < 5 years (n = 20, 60.6%). A third of APNs and PAs (n = 54, 30.9%) answered that they were not confident addressing medication diversion issues. A smaller percentage of pharmacists (n = 5, 16.7%) responded that they were not confident. As expected, more pharmacists rarely reviewed patients' current or past opioid use (n = 16, 55.2%) compared to APNs and PAs responding most of the time (n = 75, 43.1%), as this is not in most pharmacists' usual responsibilities. More than half of APPs (n = 98, 56.3%) and most pharmacists (n = 24, 80%) rarely or never ordered urine toxicology screens. Participants were asked to provide three strategies that minimized risk when prescribing controlled substances. The most common response was "checking the prescription drug monitoring program (PDMP)," followed by limiting the prescription (examples such as amount, duration, and dose). Other mitigation strategies participants provided included using a medication management agreement (contract), patient education, referrals, and alternatives such as nonopioid and multimodal therapies for pain control. **Conclusions:** People with cancer are not exempt from the opioid epidemic, and nonmedical opioid use, including OUDs, may negatively impact outcomes.[1] A cancer diagnosis represents another opportunity to recognize, prevent and assist patients in negotiating the challenges associated with nonmedical substance use. APs are integral to multidisciplinary healthcare teams that navigate patients through complex oncology journeys. Improved awareness includes implementing risk reduction strategies with every patient, focusing on mitigating risk versus abstinence, and representing an opportunity to prevent and minimize potential harmful consequences. Harm reduction strategies not mentioned in the survey or responses but important to mention are naloxone and buprenorphine. **Recommendations:** Risk reduction focuses on minimizing the harmful consequences of drug use and maybe a more feasible approach for oncology APs to support patients through the completion of treatment for their cancer and into survivorship.

JL1127C: Provider Education to Improve Biomarker Testing for Patients With Resectable Non-Small Cell Lung Cancer

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Background: Biomarker testing to identify genomic alterations in epidermal growth factor receptor (EGFR) and programmed death ligand 1 (PD-L1) for patients undergoing surgical resection for non-small cell lung cancer (NSCLC) can help to determine if the patient is a candidate for adjuvant systemic therapy. These recommendations have been adopted into national treatment guidelines, however, there has been incomplete adherence to biomarker testing guidelines at an institutional and national level. Advanced practice providers (APPs) in the department of thoracic surgery cited knowledge gaps related to updated NSCLC treatment guidelines and ordering biomarker testing the in electronic health record (EHR) as barriers to biomarker testing. This quality improvement (QI) project sought to identify if a structured staff education on biomarker testing for thoracic surgery APPs would improve biomarker testing rates for patients undergoing surgical resection for NSCLC. **Methods:** This QI project utilized a retrospective chart review to compare biomarker testing rates pre- and post-implementation of an APP education intervention. Biomarker education in the format of a virtual lecture with small group discussion was delivered to all APPs working in the department of thoracic surgery at a large academic medical center. The in-service content included information on previous and current standard of care adjuvant therapy after NSCLC resection, clinical trial data supporting recent changes in practice, when to order biomarker testing, and a tutorial on how to order and locate biomarker testing within the EHR. Additionally, all 15 APPs received electronic and hard-copy tools to aid them in ordering biomarker testing for eligible patients. Data collection occurred in the 14-weeks following the

delivery of the education intervention. A patient tracking dashboard helped to facilitate ongoing data collection, including de-identified patient demographics, surgery date, tumor histology, pathologic cancer staging, and information on biomarker testing including dates, results and ordering team. **Results:** Analysis of the data suggests that post-intervention, there were non-statistically significant, but measurable increases in biomarker testing rates for eligible patients undergoing surgical resection, improving from 73.7% to 88.9%. Additionally, the percentage of biomarker testing initiated by the department of thoracic surgery providers improved post-intervention from 10.5% to 38.9%. As a secondary finding, there was a statistically significant decrease in the mean rank of the distribution of days elapsed between the surgery and biomarker test results post-intervention, decreasing from 40 to 27 days (N 21, MWU 19.500, p = 0.005). **Conclusions:** With current information on best practices related to biomarker testing in early-stage NSCLC treatment, thoracic surgery APPs were able to effectively initiate biomarker testing for eligible patients. Post-education intervention, there was a measurable increase in biomarker testing rates, and the thoracic surgery providers ordered a higher proportion of testing when compared to pre-intervention. Empowering surgical oncology APPs to initiate biomarker testing can help to ensure patients receive standard of care treatment, may reduce delays in initiating adjuvant therapy after surgical resection, and may impact patient survival. **Recommendations:** Targeted education for surgical oncology APPs has the potential to help bridge the knowledge gaps to boost biomarker testing in the management of early-stage NSCLC.

JL1128C: Revamping Advanced Practice Provider Recruitment: Structure, Efficiency, and Diversity

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Background: Advanced Practice Provider (APP) Executive leadership at a large metropolitan academic cancer center identified a lack of diversity and standardization in the recruitment process, and a prolonged fill-time for open APP positions. Evidence suggests that creation and adherence to standardization guidelines when recruiting may eliminate bias, increase candidate diversity, create a consistent, fair, inclusive, and equitable process, enhance the candidate's experience and satisfaction, improve communication, provide interviewee confidence and a clear understanding of the proposed role. These principals ascertain best-in class candidate experience, acceptance of positions by qualified outstanding candidates or desire for candidates to apply in future. **Methods:** A distinct group of APP Managers from the inpatient and outpatient settings were selected in partnership with the Talent Acquisition Group (TAG) to improve the lack of diversity and absence of standardization in the process. The selected group met, reviewed the current state of recruitment, and presented a new process agreed upon by consensus to Executive Leadership. The new recruitment process was piloted by the APP managers and extended to additional APP managers with open positions. TAG identified potential candidates by expanding searches through a diverse talent pipeline, met with hiring managers, presented an average of 3-5 candidates to the APP Manager, and assisted in scheduling the top candidates for a panel interview with pre-selected trained interviewers. All interviewees, regardless of hire, were provided with feedback within 24-48 hours from their panel interview. **Results:** The recruitment process was piloted from April – July 2023. During that time, there were 40+ unique job openings with greater than 150 candidates interviewed. These openings were in both inpatient and outpatient settings in various departments including solid tumor medicine, hematology oncology, and critical care medicine. The national APP average for time-to-fill open positions is 62-days and our institution was found to hold a longer than average time-to-fill open positions at 67-days. After the implementation of this new workflow, the time-to-fill a position was 36-days resulting in a 31-day decrease in length of time from interview to filling the position. Interviewers reported feeling more prepared and confident in mitigating bias and experienced an increase in the diversity of their candidate pool. **Conclusions:** One key performance indicator for hiring

teams is the duration of time taken from when a position is opened to hiring the candidate. A prolonged process may increase hiring costs and has a greater risk of losing high-quality candidates. The benefit of a standardized recruitment process increases overall satisfaction, by interviewer and interviewee, and increases diversity in the workforce. **Recommendations:** A structured hiring process is recommended to speed up time of hire, find qualified diverse candidates, and provide measurable data for future decision making. Further research on hiring practices for APPs should be conducted to elicit further efficacy of this innovative approach to soliciting candidates.

JL1129C: Skills Up! Raising the Bar on Advanced Practice Provider Skills at a Major Metropolitan National Cancer Institute-Designated Comprehensive Cancer Center

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Background: Advanced Practice Providers (APPs) play a crucial role in providing high quality patient care and improving the overall health outcomes of patients. Adequate initial and ongoing skills training is imperative to assure procedural competency of APPs. One method that can be incorporated is the utilization of simulation-based training programs. Simulation have been shown to help mitigate errors, maintain a culture of safety, and provide opportunities for practice and learning (Vitale et al., 2022). **Methods:** A team of APPs at a National Cancer Institute designated major medical center in New York City, in collaboration with key stakeholders, developed an educational program designed to train APPs in a core set of essential skills and procedures relevant to their practice in order to promote proficient delivery of exceptional comprehensive care to patients with cancer. The curriculum was designed to address specific needs and challenges faced by clinical APPs. A unique eight-hour workshop allowed APPs to perform hands-on training on nine different skills and procedures, many of which require advanced privileges. Objectives of this innovative program included: strengthening clinical competence of APPs within the organization, improving patient outcomes, fostering professional collaboration, and enhancing knowledge sharing among peers. A team of APPs representing a wide range of services throughout the organization served as members of the APP Skills Day Committee. The committee developed goals and objectives for the program, selected the essential procedural skills to be included, recruited content experts to teach, and curriculum development through the use of evidenced based practice resources and educational materials. Skills stations, led by content experts, utilized multimodal educational delivery strategies including the use of manikins, simulators, and hands-on return demonstration training opportunities. Experts provided one-on-one instruction, reviewed best practices, and provided written resources if applicable. **Findings:** A total of 30 APPs attended the inaugural skills day. Of the 29 attendees, 100% (n=30) attended at least 1 skills station, 93% (n=28) attended > 2 skills stations and 16% (n=5) attended > 3 skills sessions. The top 3 attended procedures were central venous line insertion and/or removal 31% (n=9), suturing 24% (n=7), and arterial line insertion/arterial blood gas measurement 24% (n=7). Post-program evaluations were reviewed, and survey data showed, 93% of participants strongly agreed practicing the skill beneficial to their clinical practice, 87% strongly agreed simulation equipment met their learning needs, 90% expressed satisfaction with the quality of hands-on training and expert facilitators, and 87% strongly agreed the program increased confidence in APP skills and procedures. **Conclusion:** This curriculum will serve as a roadmap for healthcare organizations seeking to develop skills days for APPs. By investing in professional development opportunities and fostering a culture of learning, APPs are given the opportunity to be equipped with the skills necessary for safe patient care and be empowered with confidence to navigate the increasing acuity of healthcare to deliver safe, high- quality patient care. **Recommendations:** This presentation highlights the successes, challenges, and lessons learned from the implementation of an APP Skills Day and outlines strategies for developing future iterations of similar programs.

JL1130C: The Challenges of Establishing a Survivorship Program in a Malignant Hematology and Cellular Therapy Practice

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Objective: To describe the challenges encountered in developing a survivorship program for patients treated for hematological malignancies at a comprehensive cancer center. **Background:** Cancer survivorship spans from diagnosis through various stages of life after treatment. Survivorship care aims to address the quality of life and long-term effects of cancer treatment. Survivorship programs are well established in various types of solid tumor malignancies. However, guidelines specifically tailored to hematologic malignancies are limited. The survival rates for hematological malignancies vary, but a significant percentage of patients are long-term survivors, indicating the need for specialty survivorship care. **Methods:** A committee was formed to evaluate the feasibility and guide the implementation of a survivorship program in the Malignant Hematology and Cellular Therapy (MHCT) Program in August 2022. The committee consisted of a physician, an advanced practice provider (APP) supervisor, and an APP from the MHCT program. The initial tasks included completing and disseminating Survivorship Care Plans (SCP) for patients treated with curative intent, requesting resources which included staffing, and creating clinical guidelines for the MHCT Survivorship Program. The APP was assigned dedicated time to work on survivorship projects, including composing SCPs, reviewing SCPs with patients, making referrals, and conducting a literature search. In order to obtain approval for survivorship program staff, the APP manager presented data to hospital administration regarding the volume of patients that would be eligible for referral to the MHCT Survivorship program. **Results:** The literature search revealed that there is no established recommended timeline for providing SCPs or referring patients to survivorship care. Provider perceptions regarding timing of SCP provision and referral to the survivorship clinic varied within the MHCT program. The complexity and heterogeneity of malignant hematology diagnoses and therapies further complicated the development of such guidelines. Since the inception of the committee, a SCP was provided to 30 patients in 2022 and to 47 patients in the first quarter of 2023, with the majority of patients having a diagnosis of lymphoma. An estimated annual pool of 400 potential patients has been identified, and with approval for a dedicated survivorship APP, the survivorship program can expand into a comprehensive MHCT survivorship clinic. **Conclusions:** Establishing a survivorship program for patients with hematological malignancies presents several challenges, including determining the optimal timing for SCP provision and referral to survivorship care, addressing provider perceptions and concerns, and accommodating the complexity and heterogeneity of diagnoses and therapies. Additionally, providing comprehensive survivorship care for patients remains a challenge due to resource limitations. Advanced practice providers play a crucial role in overcoming these challenges. Further research should be conducted to better understand the perceptions of survivorship in hematological malignancies and to develop strategies for long-term follow-up.

JL1131C: The Incidence and Prevalence of Rheumatologic Autoimmune Diseases in Chronic Lymphocytic Leukemia Patients: A Pilot Study

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Background: Autoimmune diseases such as systemic lupus and Sjogren's syndrome are among common symptomatic primary antibody deficient disorders occurring in patients with chronic lymphocytic leukemia (CLL). It is known that CLL patients have significant immune dysregulation that may lead to occurrence of autoimmune complications. Autoimmune hemolytic anemia (AIHA) and immune thrombocytopenia purpura (ITP) commonly occur in 7-10% of CLL patients. The exact incidence and prevalence of autoimmune events in CLL are difficult to figure out due to limited evidence in the literature. Rheumatological autoimmune diseases are still under-diagnosed. Due to the extreme variability, autoimmune events are challenging to study comprehensively. At clinical presentation, patients often describe experiencing rheumatological

symptoms that are also common in CLL making diagnosis elusive. Even with limited strong evidence of a clear predisposition to rheumatologic autoimmunity in CLL, the association between CLL and non-hematological autoimmune phenomena exist and is supported by co-occurrence of CLL progression and autoimmune disorders. Increased seropositive markers of autoimmunity, such as antinuclear antibodies (ANA), rheumatoid factor (RF), C-reactive protein (CRP), and cyclic citrullinated peptide antibody (CCP), and anti-SSA antibodies are common. **Objectives:** (1) To examine CLL patients with a concurrent or suspected diagnosis of autoimmune disease. (2) To summarize the number of CLL patients referred to rheumatology. **Methods:** This was a retrospective review of electronic health records (EHRs) of patients with CLL from an academic medical center. Upon obtaining IRB approval, we extracted data from the EHRs of 7,308 CLL patients who were ≥18 years with a diagnosed autoimmune disease or those referred to rheumatology using ICD-10 and CPT codes. Defined study variables included RF, ANA titer, CRP, CCP and, demographic data. Autoimmune hemolytic anemia and ITP was excluded. Data analysis included descriptive statistics to summarize findings. All analyses were performed in SAS 9.4. **Results:** Demographic data revealed that of 152 patients who were diagnosed with rheumatological autoimmune disease, eighty (52.5%) were male, 135 (90%), Caucasian, 116 (76.3%). The median age at diagnosis was 60 years. There were 7,308 patients who were diagnosed with CLL between 1958 and 2022. Among those, 203 CLL patients had confirmed autoimmune disease and, 137 patients were referred to rheumatology between 2008 and 2022. Amid those diagnosed with CLL, there were 57 different autoimmune diseases identified. The most prevalent rheumatologic autoimmune diseases found included: systemic lupus erythematosus (1.8%), rheumatoid arthritis (5.3%), Sjogren syndrome (3.5%), sarcoidosis (3.5%), polymyalgia rheumatica (8.8%), Raynaud's syndrome (3.5%), undifferentiated diffuse connective tissue disease (15%), which was the most prevalent of rheumatologic autoimmune diseases. **Conclusion:** Rheumatologic autoimmune diseases are known to occur in CLL patients. The frequency and types of autoimmune disease varies. The study discovered the existence of several autoimmune diseases and frequency of occurrence based on seropositive markers. **Implications/Recommendations:** The implications for advanced providers (APs) are tremendous. To ensure early recognition of rheumatological symptoms and prompt referral to rheumatology, APs need to be knowledgeable of common rheumatologic autoimmune diseases in CLL patients. Given the sparsity of evidence in the area of rheumatological autoimmune diseases in CLL, further research is recommended.

JL1132C: Utility of the MammaPrint 70-Gene and BluePrint-80 Gene Expression Signatures in Providing Personalized Treatment Decision in Early-Stage Breast Cancer and the Role of the Advanced Practice Provider: A Case Study Approach

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Background: Precision medicine in breast cancer is possible with the advancement of genomic assays. Each tumor has a unique gene expression profile which can be analyzed to identify tumor types associated with different prognostic outcomes. The 70-gene signature, MammaPrint, assesses the risk of distant metastasis in early-stage breast cancer. The 80-gene signature, BluePrint, identifies the activated pathways of early-stage breast cancer that is driving its growth. This valuable information aides breast cancer care teams in crucial decision-making. Advanced Practice Providers (APPs) are often tasked with discussing the indication for and interpretation of genomic assays and engaging in shared decision-making with their patients. We aim to provide and aid in the interpretation of MammaPrint and BluePrint through case reports. Understanding the utility of gene expression profiles is of the utmost importance to APPs. **Methods:** Two case studies were identified by oncology APPs each from community-based clinics utilizing MammaPrint and Blueprint results for treatment decision making. Clinical risk was determined by evaluating the grade, tumor size, estrogen-

receptor (ER), human epidermal growth factor receptor (HER2) and lymph node status. The MammaPrint assay evaluates 70 genes associated with metastatic potential; based on up- or down-regulation of genes, an index is produced ranging from –1.0 (High Risk) to +1.0 (Low Risk). A sub-set of results >0.355 on the index are classified as Ultra-Low Risk. **Results:** In case one, a 45-year-old pre-menopausal woman with a clinically high-risk tumor, had a core biopsy of the left breast, revealing a Grade 2, node-positive invasive lobular carcinoma with ER 90-95%, progesterone receptor (PR) 90-95% and HER2 negative. A MammaPrint Index of 0.398 classified the tumor as Ultra-Low Risk and BluePrint classified the tumor as Luminal A. In case two, a 66-year-old post-menopausal woman had a core biopsy of the right breast revealed Grade 3 invasive ductal carcinoma, node-negative, tumor size < 2 cm, ER 40-50%, PR 0%, HER2 negative. MammaPrint Index of –1.00 classified tumor as High Risk and BluePrint classified the tumor as Basal-Type. **Conclusions:** In case one, when considering clinical features alone, this pre-menopausal, clinically high-risk patient would have been recommended chemotherapy. Ultra-Low Risk Luminal results by genomic assay suggest this patient could safely forgo chemotherapy and receive endocrine therapy alone. Women aged 50 or less had a distant metastasis free interval at 5 years of 97.1% and 8 years of 95.6%, independent of treatment. In case two, clinical features middling estrogen-receptor positivity and high grade may lead a provider to recommend chemotherapy. The addition of genomic results, confirming a High Risk Basal-Type tumor, now provide clear indication for neoadjuvant chemotherapy. Among ER+ tumors that are MammaPrint High Risk, approximately 29% are classified as Basal-Type. These tumors demonstrate greater chemosensitivity and pathological complete response rates. **Recommendations:** As frontline providers engaging in shared decision-making with patients at every point in the care continuum, APPs must stay educated on the plethora of information surrounding genomic assays. The MammaPrint 70-gene signature and BluePrint 80-gene signature are valuable tools that should be utilized by APPs caring for breast cancer patients.

JL1133C: Utilization of Oncology Advanced Practice Providers in Early Phase Clinical Trials: A Call to Publish

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Background: The success of early phase clinical trials in oncology is crucial to improving cancer treatment. Historically, phase 1 & 2 clinical trials have relied heavily on physician involvement. The oncologist's clinical role is currently limited by the inherent leadership responsibilities associated with being a Principal Investigator (PI). These barriers restrict physician ability to follow up on complex clinical issues and perform extended clinic visits (Patterson & Barber, 2020). The role of the oncology Advanced Practice Provider (APP) in early phase clinical trials is pivotal to fill these gaps and ensure trial success. APPs are highly trained professionals capable of performing many trial-related activities and are especially proficient in assessment and symptom management. There is no standard clinical practice model outlining the utilization of APPs in early phase clinical trials with roles of APPs varying between institutions. This literature review was conducted to evaluate the different care models and outcomes that currently exist in early phase clinical trials. **Methods:** A systematic literature review was conducted to understand current utilization of APPs in oncology research and current metrics for evaluating clinical impacts across the United States. We searched PubMed, JADPRO, and ASCO databases using keywords "outpatient", "oncology clinical trials", "role", and "advanced practice provider" from 2017 to 2023. **Results:** The search yielded more than 300 results with only three articles and three abstracts clearly outlining the roles of the oncology APP in clinical trials. Of these, two articles and one abstract measured clinical outcomes. The literature identified 21 trial-related tasks that are performed by APPs across institutions. The most common tasks were routine follow-up protocol visits, screening for trial eligibility, toxicity evaluation and management, patient education, and coordination of care, including coordination of protocol-related assessments and coordination with sponsors. In

three articles, APPs also functioned as sub-investigators on clinical trials. Barber, et. al (2022) found that an APP led symptomatic care clinic for clinical trial patients resulted in low rates of emergency room visits and hospitalizations, as well as a decrease in dose interruptions (2022). Lastly, clinics utilizing APPs saw increased productivity of physicians by 50% (Pierce & Matrana, 2019). **Conclusions:** The literature search highlights the lack of oncology APP utilization and standardized roles in early phase clinical trials and the dearth of evaluation of clinical outcomes. The data that is currently available suggests APP managed care for patients on clinical trials is efficient and results in improved patient outcomes. **Recommendations:** Future care models should clearly define APP roles and include scope of practice and standardized metrics to measure clinical impact and patient outcomes. In the next few years we hope to see increased publications describing care models in oncology clinical trials that utilize APPs to the full scope of licensure.