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# International medical graduates (IMG) representation at international oncology conference meetings.

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Background: Despite IMGs accounting for up to one-third of all practicing oncologists in the United States, little is known about their contributions to presentations at international oncology meetings, such as the American Society of Clinical Oncology (ASCO). Therefore, we investigated the representation of IMGs in invited faculty roles at ASCO Annual Meetings. Methods: Speaker presentation details at ASCO 2022 and 2023 Annual Meetings were collected using publicly available program guides. We collected presentation-level variables of invited faculty roles (discussant, moderator, chairmanship, session topic presenter) and original research type (oral abstract, poster discussion, plenary session). Speaker-level variables comprised presumed gender, academic rank, and institution. Speakers were categorized into the following groups - American Medical Graduate (AMG): currently affiliated with a US institution, completed medical school in the US; IMG: affiliated with a US institution, completed medical school outside the US; non-US based speakers: affiliated with an institution outside the US; non-MD speakers. Univariable and multivariable analyses were employed to assess factors associated with the selection of presenters for invited faculty roles. Results: A total of 3337 presentations (1649 from 2022, 1688 from 2023) were included. 71.6% of the speakers were USbased, 56.6% were male and 40.5% were full professors. The highest proportion of podium presentations was by AMGs (48.5%), followed by non-US based (28.3%), IMGs (14.1%), and non-MD (9.1%) speakers. 57% of IMG presentations consisted of original research compared to 48.7% for AMGs (Table). Notably, compared to AMGs, IMGs were significantly less likely to be included in invited faculty roles (odds ratio [OR] 0.72 [95% CI 0.58 - 0.88], p <0.01), a finding that remained significant after accounting for gender and academic rank (adjusted OR 0.75 [0.61 - 0.94], p= 0.01). Conclusions: Relative to IMGs' original research output, IMGs appear to receive less invitations for ASCO Annual Meeting invited faculty roles compared to AMGs. Our findings suggest potential under-representation and under-recognition of IMGs in these roles, despite their contributions to the oncology workforce in the US. Research Sponsor: None.

Speaker characteristics at the 2022 and 2023 ASCO Annual Meetings.						
Group	AMG (N=1617)	IMG (N=472)	Non-US based (N=944)	Non-MD (N=304)		
Invited faculty Original research	829 (51.3%) 788 (48.7%)	203 (43.0%) 269 (57.0%)	224 (23.7%) 720 (76.3%)	99 (32.6%) 205 (67.4%		
Female		134 (28.4%)	317 (33.6%)	187 (61.5%		
Professor	599 (37.0%)	213 (45.1%)	480 (50.8%)	61 (20.1%)		
Associate Professor	417 (25.8%)	101 (21.4%)	115 (12.2%)	43 (14.1%)		
Assistant Professor	271 (16.8%)	71 (15.0%)	42 (4.4%) (12.7%)	36 (11.8%) 102 (33.6%)		
	Group Invited faculty Original research Female Professor Associate Professor	AMG (N=1617)	Group         AMG (N=1617)         IMG (N=472)           Invited faculty Original research Female Professor         829 (51.3%) 203 (43.0%) 269 (57.0%) 269 (57.0%) 213 (45.1%) 269 (57.0%) 213 (45.1%) 269 (57.0%) 213 (45.1%) 271 (15.8%) 271 (15.8%) 271 (15.8%) 271 (15.8%) 271 (15.0%)	AMG (N=1617) IMG Non-US based (N=944)  Invited faculty 829 (51.3%) 203 (43.0%) 224 (23.7%) Original research 788 (48.7%) 269 (57.0%) 720 (76.3%) Female 777 (48.1%) 134 (28.4%) 317 (33.6%) Professor 599 (37.0%) 213 (45.1%) 480 (50.8%) Associate Professor 417 (25.8%) 101 (21.4%) 115 (12.2%) Assistant Professor 271 (16.8%) 71 (15.0%) 42 (4.4%)		

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# Going back home: Understanding the challenges of international medical graduates (IMGs) in oncology.

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Background: With an increasingly diverse patient population in the U.S., the need for a diverse clinician workforce has been exemplified. In 2021, 28% of the practicing physicians in the U.S. were born/trained outside of the continental U.S. Though strides in promoting diversity among oncologists have been made, continuous longitudinal assessments and improvements are important to ensure goals are met. We conducted the first cross-sectional study to understand the challenges and experiences of IMGs and Puerto Rican (PR) medical graduates in oncology in the U.S. Methods: An anonymous online questionnaire via Survey Monkey was developed. Non-U.S. IMGs and PRMGs who trained and/or practicing independently in the U.S. were eligible to participate. The study launched on Twitter with promotional materials, inviting participants to complete the survey. A list of IMGs and PR medical graduates was also compiled and an email invitation with the survey link was sent to. The enrollment period was from Sept-Dec 2023. Data was analyzed using descriptive statistics. Results: 97 participants from oncology-related fields completed the survey. Most were attendings (62.9%), and women (50.5%). 95.9% were IMGs and 5.2% PRMGs. 79.4% participants migrated after medical school and 90.7% were still living In the U.S. The main reasons for migrating were looking for better training (63.9%), seeking professional gains (57.7%), and lack of opportunities in their home country (49.5%). Most had to adapt to new cuisine (51.5%), community (53.6%), traditions (54.6%), and celebrations (58.8%). Participants expressed the need to change their dress code (33%), tone of voice (39.2%), the way they spoke (51.5%), and conducted themselves (49.5%). Participants faced racial/ethnic (54.5%), gender (29.7%), and language (41.9%) discrimination during training in the U.S. Similarly, they experienced racial/ethnic (46.8%), gender (32.8%), and language (24.6%) discrimination during independent practice in U.S. Most participants reported moderate personal (57%), yet extreme professional (57.4%) satisfaction in the U.S. 10.5% of participants had returned to their home country, 27.4% planned to, and 53.7% did not plan to return. The main reasons for going back home were family (67%), quality of life (28.9%), and feelings of isolation/lack of community (22.7%). Conclusions: Our study reveals that the main reasons physicians migrate to the U.S. is for education and professional opportunities. Yet these could come at a high cost, leading foreign-born physicians to compromise their true identities. Despite increasing representation of IMGs and PRMGs in the medical field in the U.S., they remain victims of discrimination at frequent rates. It is imperative to implement changes beyond diversifying the work field and strive for equity to create a more conducive environment for minority physicians. Research Sponsor: None.

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# Depicting oncologists' perceptions and knowledge of global disparities in conflicts of interest reporting: The ONCOTRUST-1 study.

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Background: Conflicts of interest (COI) between oncologists and the pharmaceutical industry might considerably influence how the presentation of the research results is delivered, impacting treatment decisions, and policy-making. While there are regulations on reporting COI in high-income countries (HICs), little is known about their reporting in low- and middle-income countries (LMICs).ONCOlogy TRansparency Under Scrutiny and Tracking (ONCOTRUST-1) is a pilot global survey to explore the knowledge and perceptions of oncologists regarding COI. Methods: We designed an online 27-question-based survey in English language to explore the perceptions and knowledge of oncologists regarding COI, with an emphasis on LMICs.Illustrative examples of COI were proposed, based on definitions from the American Society of Clinical Oncology (ASCO) and published literature. Descriptive statistics and the CROSS guidelines were used to report the findings. Results: ONCOTRUST-1 surveyed 200 oncologists, 70.9% of them practicing in LMICs. Median age of the respondents was 36 (range: 26-84) years; 47.5% of them were women. The median number of years of clinical practice was 9 (range: 1-51). 40.5% of respondents reported weekly visits by pharmaceutical representatives to their institutions. Regarding oncologists' perceptions of COI that require disclosure, direct financial benefits, such as honoraria ranked highest (58.5%), followed by gifts from pharmaceutical representatives (50%) and support for attending conferences (44.5%). In contrast, personal or institutional research funding, sample drugs, consulting or advisory board, expert testimony, and food and beverage funded by pharmaceutical industry were less frequently considered as COI. Moreover, only 24% of surveyed oncologists could correctly categorize all situations representing a COI. Regarding support received from industry, 51.5% of respondents acknowledged trips to conferences as the most common form of support, followed by sample drugs (20.5%). Despite recognizing these interactions, 15% of respondents admitted feeling pressured to prescribe specific drugs due to their COI. Regarding COI reporting, a notable portion of participants indicated they report COI in their presentations (59%) or when publishing their research (30%). The presence of local regulations to manage COI were reported by 35.5% of respondents. The majority advocated for clearer policies and regulations (65%), training and education (63.5%), and an open COI database (55%) to improve COI reporting in oncology. Conclusions: These findings underscore the importance of clear guidelines, education, and transparency in reporting COI in oncology. This hypothesis-generating pilot survey provided the rationale for ONCOTRUST-2 study which will compare perceptions of COI among oncologists in LMICs and HICs. Research Sponsor: None.

### A multicenter analysis evaluating educational resources utilized by hematology/ oncology fellows (HOF).

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Background: Hematology/oncology (HO) is a complex, fast-paced specialty. Similarly, the approach to medical education continues to evolve, with a shift to electronic educational resources, which was accelerated by the COVID-19 pandemic. Limited studies exist to evaluate what resources trainees utilize to learn HO topics. Here, we evaluate how HOF utilize supplemental resources for self-directed education and clinical decision making. Methods: We included HOF from 27 HO fellowship programs in the US from September to October, 2023. Each fellow received an invitation from a local site coordinator to complete an optional anonymous survey via REDCAP. The survey contained a series of questions to better understand the HOF baseline knowledge of various HO topics, how they utilize supplemental resources when approaching new disease topics, and how they rate these resources for clinical decisionmaking using a 7-point Likert scale ("1-extremely unhelpful", "4-neutral", "7-extremely helpful"). Pairwise chi-squared analysis was used to assess differences by PGY status. Results: A total of 222 HOF completed the survey (53% response rate) including 82 PGY4 (37%), 72 PGY5 (32%), and 68 PGY6 and above (31%), The most utilized resources were reference websites (92%), such as UpToDate and Medscape, and National Comprehensive Cancer Network (NCCN) guidelines (92%). The majority also utilized question banks (q-banks, 72%), faculty lecture slides (66%), and online review series videos (videos, 65%). Over half integrated journal articles (60%) and podcasts (55%). The least utilized platforms include textbooks (25%), social media (23%), and online discussion boards (5%). Upper year HOF used videos and qbanks more than PGY4 (p<0.001). There were no statistically significant differences in utilization of other resources by PGY status. Amongst HOF who trialed each resource for clinical decision-making at any time, the most helpful resources (Likert mean  $\pm$  SD) were reference websites  $(6.2 \pm 0.9)$ , NCCN guidelines  $(6.1 \pm 1.0)$ , videos  $(5.8 \pm 1.1)$ , and q-banks  $(5.8 \pm 1.1)$ . HOF found journal articles (5.4  $\pm$  1.2), podcasts (5.2  $\pm$  1.3), and faculty lecture slides (5.1  $\pm$  1.3) moderately helpful. HOF found little utility in textbooks (4.2  $\pm$  1.4), social media (Twitter, 4.0  $\pm$ 1.6), and discussion boards (3.8  $\pm$  1.4). Conclusions: To our knowledge, this is the first largescale analysis to identify what resources HOF use to study and aid in clinical decision making. Reference websites and NCCN guidelines are frequently used to study by HOF and are most helpful for clinical decision-making. The least utilized and least helpful resources are social media sites and online discussion boards. Prospective multi-institutional randomized research studies in medical education are necessary to assess effective and preferred learning modalities and identify ways to improve and standardize educational opportunities for all trainees. Research Sponsor: None.

# Longitudinal curriculum to address wellness and professional development in a hematology/oncology fellowship program.

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Background: Many trainees, including Hematology/Oncology (HO) fellows, face burnout throughout their training. Here we implemented a longitudinal curriculum to help fellows with a focus on professional development and burnout mitigation skills. **Methods:** Interventions to address wellness were initiated in our HO fellowship program in academic year (AY) 2022-2023 based on a needs assessment, including faculty-led sessions, fellow debrief sessions, and social activities (data previously reported). In AY 2023-2024, a new baseline needs assessment was distributed to fellows to determine topics of interest for developing a fellowship retreat and for discussion throughout the year. This assessment also included the Mini ReZ survey to evaluate learning environment, the Patient Health Questionnaire 2 to assess for depressed mood, and the Generalized Self-Efficacy Scale. Surveys were completed anonymously in person and online and were sent throughout the year (data to be fully analyzed by June 2024). T-test and Chi-square test were used for statistical analysis. Results: 22 out of 27 fellows (81.5%) completed the baseline assessment in July 2023. Topics of interest for further discussion included work-life balance, management of scholarly expectations, and professional boundary setting. A day-long, off-site fellowship retreat was designed to address these concerns, with a specific focus on fellow strengths, leadership skills, boundary setting, and communication. Retreats were divided into senior and first-year fellows. Of the 27 fellows who attended the retreats, 22 responded to post-retreat surveys, with 21 of 22 fellows indicating they found the retreat helpful (95.4%). When asked what the most meaningful part of the retreat was, fellows responded "connection with colleagues," "sharing what inspires/ motivates [them]," and "discussing methods to try and prevent burnout." Scores of selfefficacy and perception of positive learning environment did not significantly differ before and after retreats, and levels of depression remained low. Additional faculty-led didactic sessions were held including a session titled "Grief and Awe" and another titled "Shame Resilience", with plan for 2 additional sessions. Evaluations of these sessions are planned for the end of the AY to assess effectiveness. Conclusions: The development of a curriculum to address wellness and professional development, including a fellowship retreat that focused on topics identified by a needs assessment, was found to be helpful among HO fellows. More data must be collected to evaluate the effect of these interventions; final data on the entire experience will be available to report at the annual meeting. This curriculum could serve as a model for other programs and be integrated into ASCO's array of trainee resources to address HO fellow wellness and professional development skills during training. Research Sponsor: None.

# Hematology/oncology clinical investigator training: Is current model of education adequate?

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**Background:** Clinical investigator training (CIT) is commonly performed in an apprenticeship manner rather than following a prospective education model. This may lead to disparities in educational prospects. There is greater accesibility for training opportunites prevailing in larger academic institutions – an advantage not always within reach for majority of oncology patients and professionals. Lack of predefined standard competencies during fellowship training may lead to significant heterogeneity, weaken the current pipeline, and decrease the number of principal investigators (PIs) for clinical trials. We performed a national needs assessment to understand oncology trainee and faculty perceptions of CIT. Methods: Program directors and leaders at 102 U.S. hematology/oncology (hem/onc) fellowship programs were contacted via email to invite their respective trainees and faculty to answer a 32-question cross-sectional survey. The study was IRB excempt. The survey was developed with the University of Chicago Survey Lab. Four thematic areas were interrogated: current level of experience in CI, knowledge of PI roles and responsibilities (R/R), areas of perceived weakness/lack of confidence related to CI, and interest in a course that teaches CI. Response frequencies and descriptive statistics were analyzed, with the goal of informing future targeted educational initiatives. Results: 207 respondents from 47/102 (46%) institutions completed the survey between 5/2023 - 11/ 2023. Respondents included 92 (40%) trainees and 137 (60%) attendings, 47% were men, 47% women and 57% had more than 9 years of experience as an attending post-speciality training. Among attendings, only 4.4% reported never participating in CIT, compared to 55.4% of trainees. Informal or "on the job" teaching was the most common method of learning PI R/R with response rate of 58% in attendings and 62% in trainees. Trainees reported lack of confidence and need for education in all aspects of CIT, and 85% indicated high level of interest in enrolling in a CIT course. Most attendings reported lack of confidence in areas of budget development (57%), quality of life (70%) and translational correlatives (51%). Others reported feeling weaknesses in designing primary and secondary end points (32%), letter of intent writing (33%) and creating protocols (31%). 53% of the attendings were interested in enrolling in a CIT course. Conclusions: To our knowledge, this is the first reported survey formally assessing current perceptions of preparedness in CIT within hem/onc in the U.S. Our findings strongly indicate that CIT educational gaps exist, even for attendings with prior CIT experience, and that training deficits are marked for trainees. A structured, practical, and widely-accessible CIT program is urgently needed to prepare the future hem/onc workforce. Acknowledgement: MERITS program and Section of Hem/Onc at University of Chicago. Research Sponsor: Section of Hematology/Oncology funds.

# Unveiling oncologists' geographical journey: Analyzing hematology/oncology fellowship graduates' relocation patterns and their impact on regional disparities in cancer care.

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Background: The geographical distribution of Hematology/Oncology fellowship graduates (HOFs) is essential for shaping healthcare delivery and illuminating regional health disparities in cancer care. This study explores the relocation patterns of HOFs during key transitions: from medical school to residency (T1), residency to fellowship (T2), and fellowship to the first attending position (T3). The aim is to gain insights into the geographical aspects of cancer care disparities. Methods: This study analyzes the transitions of 329 graduates from 61 ACGMEaccredited HOF programs that offered public data about their alumni from 2019-2022. Geographical relocation was measured by the straight-line distance in miles, with the U.S. divided into four regions for retention assessment. A Welch two-sample t-test was conducted to compare average travel distance between each transition. Additionally, relocation patterns were compared between graduates from top 50 NIH-funded medical schools (T50MS) and others (nonT50MS). Results: During T1, HOFs covered a significant distance (661.7 miles), which decreased during T2 (436.5 miles) and T3 (344 miles) (p<.001). Retention analysis revealed a decrease in the percentage of trainees traveling more than 200 miles from T1 (57%) to T2 (46%) to T3 (35%). No significant distance difference was observed between T50MS and nonT50MS during T1 (616 vs 693 miles) and T2 (431 vs 439 miles). However, T3 showed T50MS graduates traveling less (262 miles) compared to their nonT50MS counterparts (401 miles, p<.05). Regional retention increased from T1 (57.5%), to T2 (70%) to T3 (75.4%), with the Western region demonstrating the highest retention across all transitions (T1: 78%, T2: 92%, T3: 83%). The Southern region displayed the lowest retention rates during T1: (44%) and T2: (48%), whereas the Northern region had the lowest during T<sub>3</sub> (62%). Conclusions: The preference for relocation beyond 200 miles during T1 reflects a commitment to expanding clinical expertise and gaining varied perspectives critical in addressing complex cancer challenges. As trainees progress, a shift towards establishing roots near previous training sites suggests the allure of established professional and personal networks. T50MS graduates' inclination to stay within a smaller radius during T3 suggests expertise retention in resource-rich areas, potentially exacerbating regional disparities. Marked retention differences, particularly the Southern region's low retention during training and the Northern region's during practice establishment, reveal a concerning workforce distribution trend. These findings emphasize the necessity for targeted policy interventions aimed at improving equitable distribution of the oncology workforce, thus ensuring uniform access to quality cancer care nationwide. Research Sponsor: None.

# A longitudinal, palliative care educational pilot in hematology-oncology fellowship training.

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Background: Despite national guidelines advocating that patients (pts) with advanced cancer receive dedicated palliative care (PC) services, many pts lack access to specialty PC, due to PC workforce shortage. Training hematology-oncologists (HOs) to provide primary PC could close this gap and ensure basic PC needs of pts are met. While HO fellowships require demonstration of competence in PC skills, studies have shown major deficits in PC knowledge, educational experiences and confidence. We designed a longitudinal, integrated, PC continuity rotation for HO fellows. We report feasibility, acceptability, perceived value, and impact on knowledge and practice of this novel educational model. Methods: Over 6 months, HO fellows identified patients with PC needs from their HO continuity practice and referred them to PC clinic. Fellows then saw those pts in PC clinic with the PC attending and in HO clinic with the HO attending, as well as during hospitalizations. Pt visits and HO fellow participation were tracked for feasibility. Fellows were surveyed before and after the rotation on skill confidence and knowledge, which were compared using generalized linear models for unmatched data. After the rotation, they were surveyed on acceptability and teaching quality; they also participated in a semi-structured interview assessing educational value. Fellows electronically gave informed consent for participation; the project was approved by the institutional IRB. Results: From 2018-2023, 19 fellows from 3 HO fellowship classes participated. All 19 referred 2-4 of their continuity oncology pts to the PC team and then followed these pts in both clinics longitudinally over 6 months. A total of 51 pts (#fellows-#pts: 9-2 pts; 7-3 pts; 3-4 pts) had a total of 132 PC visits. Fellows participated in 125/132 PC visits (95%); the majority were outpatient (94/132; 71%). From pre to post intervention, there was an improvement in fellows' PC knowledge (mean 6.44/10 to 7.92, p<0.01) and overall feeling of preparedness to provide PC (mean 6.33/10 to 7.75, p<0.01). Ratings of skill confidence improved in 14 of 26 items (p<0.05), including titration of opioids, managing pain in pts with substance use disorder, recognizing when to consider methadone, and working with an interdisciplinary team. Of 17 fellows rating acceptability, 16 (94%) rated the rotation as valuable or extremely valuable, 15 (88%) agreed or strongly agreed the rotation structure was effective, and 17 (100%) agreed or strongly agreed the rotation both changed their clinical practice and helped them feel more engaged in working with their sickest pts. Conclusions: Our pilot study of a novel, longitudinal, integrated, PC continuity rotation for HO fellows was highly feasible and acceptable. The rotation changed clinical practice and improved fellows' PC knowledge and skill confidence. This could serve as a model for integrating PC education into HO fellowships nationally. Research Sponsor: None.

# Artful oncology: A comprehensive psychosocial oncology curriculum for hematology/oncology fellows.

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Background: Of patients with cancer, 46% experience significant psychosocial distress, a factor linked to higher morbidity, mortality and costs of care. Oncologists themselves face psychosocial distress, particularly during their fellowship training, with as many as 38% of hematology/oncology (H/O) fellows reporting burnout during training. The ACGME recognizes this risk and has recently included well-being skills in their professional milestones, in addition to milestones for assessing psychosocial issues and communication skills for addressing these complex patient needs, which are often a source of distress among clinicians. Very few published curricula are available to address these layered learning needs among H/O fellows. Methods: "Artful Oncology" is a multifaceted curriculum for H/O fellows focusing on four pillars: 1) monthly didactic lectures about psychosocial issues within cancer care; 2) bimonthly narrative medicine seminars reflecting on didactic themes; 3) quarterly communication skills training conducted with standardized patients; and 4) monthly cancer survivorship support group facilitation. This curriculum was instituted with the inaugural class of H/O fellows at Inova Schar Cancer Institute in 2021 (total 6 fellows to date) with iterative improvements. Outcomes were measured through self-assessed communication skills, scored feedback for each didactic, annual Physician Belief Scale (PBS) surveys, quarterly Professional Quality of Life (ProQOL)-Health and abbreviated Maslach Burnout Inventory (MBI) surveys. Results: Fellows rated didactics as being relevant to their work, prepared to implement the skills learned into clinical practice, and would recommend these sessions to others (average 4.58, 4.59, and 4.67 out of 5-point Likert scale). Among 19 evaluated didactic topics evaluated to date, the most highly rated sessions included Oncology Psychiatry, Integrative Approaches to Symptom Management, Hospice Behind the Scenes, and Moral Injury/Moral Distress (average 5.0); lowest rated included Mindfulness, Sexual Health, Recognizing Depression, Grief, and Adolescents/Young Adults (average 4.29). PBS scores numerically improved from 2022 to 2023 (78 to 68.8 out of 160, lower being associated with a more psychosocial approach to patient care). MBI and ProQOL Health scores were largely unchanged (<2 point difference on average). Self-assessed communication skills averaged across rising fellows increased from 4.38 to 7.44 out of 10 between 2022 and 2023. Conclusions: The Artful Oncology curriculum numerically improved self-assessed communication skills and attitudes regarding the physician role within psychosocial aspects of patient care. Didactic sessions were rated as highly relevant, actionable, and recommended by H/O fellows. Study of this curriculum over a longer timeframe with larger numbers of fellows is ongoing to better evaluate effects. Research Sponsor: None.

#### Evaluating speaker gender in scientific sessions at ASCO and ASCO GI (2019-2023).

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Background: Gender disparities exist in medicine, including academic and medical society leadership, journal editorial boards, and research teams. Women are also underrepresented in clinical trial leadership and authorship, with one study reporting fewer than 10% female corresponding authors for randomized clinical trials in GI Oncology, GU oncology, and Hematology. Clinical trial leadership, subsequent podium presentations and authorship have downstream effects on promotion, reputation, and funding opportunities. We examined the gender of speakers in scientific sessions at the ASCO Annual Meeting (AM) and Gastrointestinal Symposium (ASCO GI) from 2019-2023. Methods: We examined speaker gender, role (session chair, abstract presenter, abstract discussant), speaker region (Asia, Europe, N. America), and presentation topic (colorectal cancer or non-colorectal cancer) for the ASCO AM GI scientific sessions and ASCO GI from 2019-2023. For the ASCO AM, we included GI oral abstracts and plenary sessions; for ASCO GI we included oral and rapid abstracts. Self-identified gender was not available; therefore, gender was assigned by physical appearance via ASCO video or institutional websites. Statistical analyses were performed using the two-proportions z-test with a p value < 0.05 considered statistically significant. Results: 208 scientific abstracts were reviewed across both meetings over 5 years. There was a statistically significant difference in the % of men vs. women as abstract presenters (77% vs 23%, p < 0.001). This did not differ when looking at ASCO and ASCO GI separately (ASCO 76% vs 24%, ASCO GI 78% vs 22%, p < 0.001 for both) and was observed across all 5 years. Similarly, there was a predominance of men as abstract presenters regardless of speaker region (Asia 93%, Europe 74%, N. America 67%, p<0.001 for all) and presentation topic (CRC 76% vs 24%, non-CRC 78% vs. 22%; p<0.001 for both). The percent of men as repeat presenters for scientific abstracts was statistically higher than women (84% vs 16%, p < 0.001). Importantly, there was no difference in men vs. women in the invited chair/discussant roles (51% vs 49%, p = 0.89). Conclusions: Our analysis of 5 years of scientific sessions for ASCO and ASCO GI shows a stark difference in the proportion of men vs women as abstract presenters regardless of presentation topic, region of presenter, and meeting year. Our data highlight the need for all trial sponsors to be more intentional in the selection of principal investigators and lead authors as these opportunities are critical to the promotion of women in GI Oncology and to diversifying approaches to clinical trial design and access. Our data is limited by how gender was assigned (i.e., not self-reported). Lastly, we commend ASCO on their efforts to ensure gender equity among the roles that are within their control, and we advocate for them to consider opportunities for self-identification of gender in their membership directory. Research Sponsor: None.

# Are we bridging the gap? A ten-year probe into NIH grants for early-career and independent investigators in oncology.

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Background: Ongoing gender disparities persist within National Institutes of Health (NIH) funding, specifically evident in NIH R01 grants within Oncology. A crucial aspect of addressing this issue involves a comprehensive investigation of discrepancies between early-career and independent principal investigators (PI). Here we present a ten-year analysis of gender distribution of early career vs. independent grants in the NIH under the field of Oncology. Methods: We implemented an R script utilizing NIH rePORTER, tidyverse, and janitor libraries for data retrieval. This script defined fields for retrieval which looped over fiscal years 2012 to 2022. The script executed API requests with criteria that included fiscal years, activity codes, and search terms that are relevant to oncology to extract grants from NIH rePORTER. We defined the early-career grant category to encompass the top 3 most active NIH K and F grants (K01,K08,K23, F31,F32,F33). In contrast, the independent research grant category included the top 3 most active NIH R grants (R01,R21,R35). The gender library was used to predict the gender of each principal investigator (PI) based on their first name. Ggplot and gtsummary packages were employed for data visualization and statistical analysis, automatically selecting appropriate tests based on data type. Results: Over the fiscal years 2012 to 2022, a total of 44,545 active early-career grants were funded by the NIH. Females (n = 24,243: 54.4% [95% CI: 53.7%,55.0%]) surpassed their male counterparts (n = 20,302: 45.6% [95% CI:44.9%, 46.3%]) by holding more active early-career research grants. From 2012 to 2022, there was a significant upward trend that was noted in active early-career grants funded to females (1,818 to 2,969, p < 0.01). Similarly, males exhibited a noteworthy increase in these grants when comparing 2012 to 2022 (1,780 to 1,986, p < 0.001). Despite both genders experiencing an uptrend in active earlycareer NIH grants, females demonstrated a 48.3% increase, while males experienced a more modest 11.5% increase. In comparison, a total of 236,804 active independent research NIH grants were disbursed in the NIH R category from 2012 to 2022. Females (78,439: 33.1% [95% CI:32.7%,33.4%]) had fewer active independent NIH research grants compared to males (158,365: 66.9% [95% CI:66.6%,67.1%]). Males observed a 6.4% increase in independent NIH grants, rising from 14,419 to 15,343, while females exhibited a notable 48% increase, expanding from 6,193 to 9,195, from 2012 to 2022. Conclusions: In the realm of oncology, gender disparities are not evident among early career investigators as there were 53.7% of early career grants funded to females over the decade. Conversely, females accounted for only 33.3% of independent research grants. These observations emphasize the importance for targeted interventions to foster equal opportunities within the field of Oncology. Research Sponsor: None.

#### Assessing gender disparities in oncology: Less talk, more action.

Coral Olazagasti, Claudia Villa Celi, Ana I. Velazquez Manana, Arthi Sridhar, Miki Horiguchi, Arun Mahtani, Nazli Dizman, Mariana Gonzalez Nororis, Carolina Bernabe, Narjust Florez; University of Miami Sylvester Comprehensive Cancer Center, Miami, FL; Capital Health, Trenton, NJ; University of California, San Francisco, San Francisco, CA; Mayo Clinic, Rochester, MN; Dana-Farber Cancer Institute, Boston, MA; NYU, New York, NY; The University of Texas MD Anderson Cancer Center, Houston, TX; Universidad Americana, Managua, Nicaragua; Montefiore Einstein Cancer Center, Bronx, NY

Background: 'Gender disparities' is a familiar term in medicine. Only 35.2% of oncologists in the U.S. self-identified as women in 2021. Women in medicine are undercompensated and underpromoted. Little is known of the experiences of non-U.S. female physicians in the U.S. We created the first cross-sectional study to assess gender disparities in IMGs and Puerto Rican medical graduates (PRMGs) in oncology in the U.S. Methods: An anonymous online survey was created and distributed via Survey Monkey. Eligible participants were non-U.S. IMGs and PRMGs who trained and/or practiced independently in the U.S. Participants were recruited through email and social media from Sept-Dec 2023. Bivariate association analyses were performed using the two-sample Wilcoxon test for ordered categorical variables and Fisher's exact test for nominal categorical variables. Results: 97 IMGs and PRMGs in oncology completed the survey. As shown in the table, women were more likely to move to the U.S. for family (22.4% vs 6.2%, p=0.040), whereas men did more for financial gains (20.8% vs 6.1%, p=0.040). culture, particularly to the traditions (65.3% vs 43.8%;p=0.042) and dress code (44.9% vs 20.8%, p=0.017). Women experienced higher rates of gender discrimination during training (53.2% vs 4.5%, p <0.001) and independent practice (57.6% vs 3.6%, p<0.001) than men. Women were also more likely than men to face ethnic/racial discrimination during training (69.6% vs 38.1%; p=0.005). Despite lack of statistical significance, higher trends of ethnic/ racial discrimination during independent practice were reported by women (table). More women reported no plans on returning home (68.8% vs 38.3%), whereas more men planned to return home at some point (38.3% vs 16.7%). 18.8% of men vs 0% of women elected leadership opportunities as the reason for returning to their home country (p=0.001). Conclusions: Our study reveals the unfortunate reality that many IMG and PRMG women face in oncology in the U.S. Despite national efforts to reduce the gap in gender disparities, minority women continue to experience racial/ethnic and gender discrimination at higher rates than men. To overcome inequities and achieve gender equity pay transparency, diversity in selection committees is necessary. Further, efforts should be across all settings, academia, private practice, and industry. The time for gender equity in oncology is now. Research Sponsor: None.

	Women n=49 (%)	Men n=48 (%)	p-value
Reason for migration: Family	11 (22.4)	3 (6.2)	0.040
Reason for migration: Pursuing Financial gains	3 (6.1)	10 (20.8)	0.040
New culture: Traditions	32 (65.3)	21 (43.8)	0.042
New culture: Dress code	22 (44.9)	10 (20.8)	0.017
Discrimination based on race/ethnicity during training	32 (69.6)	16 (38.1)	0.005
Discrimination based on race/ethnicity during independent practice	18 (56.2)	11 (36.7)	0.137
Discrimination based on gender during independent practice	19 (57.6)	1 (3.6)	< 0.001

#### Utilizing data to drive solutions for healthcare worker wellbeing.

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Background: Oncology Healthcare Workers (HCWs) provide extraordinary treatment to patients coping with distinct challenges. While experiences of burnout, compassion fatigue, and moral distress are not new, the COVID-19 pandemic further emphasized that intentional effort is needed to mitigate these negative work-related consequences. While Roswell Park Comprehensive Cancer Center (Roswell) initiated pre-pandemic grassroots efforts to examine burnout and build organizational resilience, deliberate resources were deemed necessary to support HCW resilience and well-being. Roswell committed to building a division solely focused on employee resiliency and burnout prevention. Methods: Qualitative and quantitative data were collected to identify organizational needs and pain points. Qualitative data was collected by the Resiliency Director who held over 100 conversations in 100 days with diverse personnel across the institute. Discussions focused on two questions (e.g., What's working well? and What are the pebbles in employees' shoes?) to assess organizational strengths are growth areas. Quantitative data was obtained through the Mini-Z, a validated burnout screener. All employees were emailed an invitation to take the survey over an 8-week period starting in December 2022. Concerned employees could self-refer to the Employee Assistance Program at the screener's conclusion. Results: Qualitative data was categorized into Maslach's burnout drivers (workload, relationships, recognition, fairness, autonomy, and values conflict). Highlights included staff shortages, eroding of relationships during the pandemic, siloed communication, inconsistent recognition, micromanagement, and use of antiquated systems. Mini-Z results are displayed in the table. An interactive dashboard helped further examine demographics, role, and departmental data. Press Ganey employee engagement data also supported improvements for staff well-being, transparent communication, collaboration, recognition, and enhanced technology. **Conclusions:** Quantitative and qualitative data can drive individual, departmental, and organizational interventions to support HCW well-being. The newly established MedStaff Satisfaction and Wellness group is using the data to focus on recognizing the needs of the medical staff on an organizational level and is preparing to offer solutions to key stakeholders. HCWs are now incorporating activities aiming to build psychological safety, enhance communication, and advance well-being into their work routines through training, wellness activities, and emotional support. The Mini-Z screener has been made available in the Employee Health Portal permitting ease of personal reassessment. Research Sponsor: None.

	Joyful Workplace Reported	Highly Supportive Workplace Reported	Manageable Stress & Pace Reported
MDs (n=40)	15%	33%	15%
APPs (n=64)	9%	16%	3%
Nurses (n=210)	13%	21%	11%
All Staff (n=1058)	19%	33%	14%

### Keeping health care professionals healthy: Systematic strategies for mitigation, wellness, and burnout prevention.

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Background: Health care professionals are deeply committed to the compassionate care of their patients. However, the same level of caring and compassion is not typically extended to colleagues, much less toward themselves. Escalating issues include: burnout, demoralization, personal conflicts, early retirement, and high turnover. Literature and training offer few suggestions to proactively address these complexities. There is a lack of attention to creating truly healthy work environments, with strategic infrastructure to enhance leadership, communication, and relationship among team members that directly impact wellness, engagement, and productivity. We will present the Staff Leadership Model (SLM) that integrates courageous and compassionate communication to foster healthier work environments, including how to implement and sustain the necessary infrastructure. Methods: In 4 large academic cancer settings, evolving iterations of the SLM were developed since 1995, focusing on maximizing inherent human capacities. In 2007, the Department of Supportive Care Medicine (DSCM), an interdisciplinary department at City of Hope (COH), systematically integrated the SLM. Specific processes, such as onboarding and skills training, regularly scheduled, open and honest communication, ways of working agreements, and performance evaluations that actively support value-driven behaviors, were implemented. Tailored interpersonal strategies were implemented, such as small group democratic meeting structure that equalizes all members, and problem-solving skills to deal with conflict. Clinicians received annual Press Ganey-administered surveys that measured clinician engagementas well as clinician resilience, measuring the ability to disconnect from work and ability to find meaning in their work, providing early warning indicators of burnout. Results: Sustained success has been demonstrated: 1) 5 years top tier clinician/staff engagement scores, with increase from 4.24 in 2022 to 4.32 in 2023 (+0.14 vs. overall COH); 2) 3.96 resilience index score vs. 3.80 overall COH in 2023 (3.23 decompression score vs. COH 2.94 and 4.69 activation score vs. COH 4.65); 3) Growth of the department from 25 professionals in 2007 to 170+ in 2024; 4) A clearly-defined clinical triage created through the expertise of the professionals; and 5) Staff creativity and leadership resulting in the creation and consistent growth of innovative, marketdifferentiating programs. Conclusions: Results support the relationship between the SLM and healthier work environments that increase engagement and decrease burnout, as reflected by the consistently high scores. The resilience index is a new survey measure with one year data. Cause-effect relation will continue to be evaluated. Overall, SLM creates a culture of health, wellness, support, and optimized individuals and teams. Research Sponsor: None.

# Demographic trends and outcome measures found in randomized controlled trials of wellness interventions among medical trainees: A systematic review.

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Background: To our knowledge, there is no systematic review that identifies and characterizes the wellness interventions with high-quality evidence in the form of randomized controlled trials (RCTs) among medical education trainees (medical students, residents, and fellows). Methods: A medical librarian (YL) searched Embase, MEDLINE, Scopus, Cochrane Central Register of Controlled Trials (CENTRAL), APA PsycINFO, and Clinicaltrials.gov from the earliest timepoint to March 2022. We included full text/published studies that were prospective RCTs that included quantifiable measures related to mental health, wellness, or other measures of wellbeing. Medical students, residents, and/or fellows must be included in the intervention that is intended to improve wellbeing. We excluded studies that included only qualitative outcome measures, had no control group, or took place outside the USA. Results: Our search strategy resulted in 3,806 unique articles. 161 articles passed initial screening of titles and abstracts, and 46 studies met eligibility criteria with dates ranging from 1980 to 2022. A total of 8,016 participants were studied with the majority of studies (26) focusing on medical students, a minority of studies (20) focusing on residents, and no studies that included fellows. A minority (10) of studies were multi-institutional with the vast majority (36) being single-institutional. Outcome measures shared among two or more studies include variants of the Maslach Burnout Inventory (MBI) (5), Perceived Stress Scale (PSS) (5), PHQ-9 (5), Five-Facet Mindfulness Questionnaire (FFMQ) (5), State Trait Anxiety Inventory (STAI) (3), step count (3), Epworth Sleepiness Scale (ESS) (2), General Anxiety Disorder-7 (GAD-7) (2), Global Severity Index (GSI) (2), and Brief Symptom Index (BSI) (2). Interventions included in two or more studies center around mindfulness and/or meditation practices (15), cognitive behavioral therapy (CTB) (3), hypnosis (3), activity trackers (2), flexible work hours (2), and massage and/or manipulation (2). Conclusions: We conducted a systematic review to identify evidence-based wellness interventions and in the process potentially inform future research in regards to standardized outcome measures and highlighting the need for interventions targeting fellows, particularly in fields with a majority of physicians reporting burnout such as hematology/oncology.1 1. McKenna J. Medscape Physician Burnout & Depression Report 2024: "We Have Much Work to Do". Medscape. Published 2024. https://www.medscape.com/slideshow/2024-lifestyleburnout-6016865. Research Sponsor: None.

# Factors influencing career choices and post-fellowship perspectives in adult hematology/oncology physicians: A nationwide cross-sectional study.

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Background: We aimed to investigate the timing and influence of factors behind career choices in hematology and medical oncology, assess levels of job satisfaction, and identify factors contributing to professional retention and the prevention of attrition. Methods: An anonymous survey with 13 questions was distributed to practicing hematologists and oncologists who were members of the American Society of Clinical Oncology and/or American Society of Hematology. The respondents encompassed diverse areas of primary focus within the field, varied practice settings, and all geographical regions. Results: Out of 423 respondents, 66% were male and 32% female. The majority identified as White (69%), followed by Asian (19%), Middle Eastern (4%), Hispanic (3%), and Black (1%). Most were practicing either Medical Oncology (43%) or combined Hematology/Oncology (36%), with 46% working in an academic/university setting and 57% located in an urban region. In terms of timing, about a third had decided on their career choice in medical school, with the majority of the remaining having decided by residency. While most of those surveyed were practicing in the area they had hoped to, about one-sixth (17.5%) appeared to be working in an area they hadn't planned on. Most said they would choose their current profession again (67% definitely yes, 24% likely yes). Science and academic interest (81%) ranked the highest when combining the top two responses for factors influencing choice, followed by mentor influence (47%), with work/life balance (19%) and financial considerations (6%) being less frequently cited. Satisfaction levels were generally high across key dimensions (Table), with intellectual fulfillment receiving the highest satisfaction (63.1% very satisfied, 26% satisfied). Importantly, better work/life balance (37% respondents), fewer non-medical tasks (35%), and a higher salary (20%) were key considerations to deter professional attrition. **Conclusions:** This study offers valuable insights into the career perspectives of Hematologists and Medical Oncologists, providing a foundation for developing strategies for career development and retention initiatives within the specialty. Efforts should be undertaken to enhance participation from different minorities within Hematology/Oncology and physicians practicing Classical Hematology to identify specific support and retention needs for these areas. Research Sponsor: None.

Career and professional satisfaction.							
	Not Satisfied at All	Not Satisfied	Neutral	Satisfied	Very Satisfied	N/A	
Salary	2.1%	5%	13.2%	47.8%	30.7%	1.2%	
Opportunities for promotion	1.9%	5%	19.1%	36.4%	25.1%	12.5%	
Supervision	1.2%	3.5%	17.3%	35.2%	23.4%	19.4%	
Benefits	1.2%	3.5%	14.2%	43.5%	34.3%	3.3%	
Colleagues	1.4%	1.4%	9.5%	33.3%	53%	1.4%	
Leadership	2.6%	8.3%	18%	37.4%	30.3%	3.5%	
Intellectual fulfilment	1.2%	1.4%	6.4%	26%	63.1%	1.9%	

# Factors influencing career choices and post-fellowship perspectives in adult hematology/oncology fellows: A nationwide cross-sectional study.

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Background: The aim of our study was to explore the characteristics, aspirations, and factors influencing career choices among adult Hematology/Oncology (HO) fellows, as well as their post-fellowship perspectives. Methods: An anonymous 25-question survey was distributed online to adult HO fellowship programs in the United States. The survey collected data on demographics, educational background, career plans, and specific factors influencing career choices. Results: Of the 56 fellows completing the survey, 54% identified as male, and 46% as female. The majority were White (40%), followed by Asian (34%), Middle Eastern (12%), Hispanic (7%), and Black (3%). Most fellows (79%) were aged 30-34 years, and 68% were MD graduates of US/Caribbean schools. A significant proportion expressed certainty (80%) during residency about pursuing adult HO as a career. Thirty eight percent of the respondents planned to practice both hematology and Oncology. While 39% hoped to work in an academic/university setting, 41% planned to stay within the community. Geographically, 45% preferred suburban, and 39% urban areas. Only 3% of respondents had plans to pursue a career in classical hematology. Factors influencing career choice included clinical interest in the field (98%), previous research experience in HO (54%), career mentorship (70%), lifestyle considerations (66%), and perceived job market (60%) (Table). Almost all respondents (97%) expressed a high likelihood of pursuing adult HO fellowship if they had to choose again. Fellows were confident about finding positions aligned with their interests, including clinical (72%), providing research opportunities (43%), and those offering intellectual stimulation (73%). While the majority were confident in achieving work-life balance (84%), 16% expressed some concerns. Conclusions: This study offers valuable insights into the factors influencing career choices among adult HO fellows. The findings emphasize the necessity of adjusting strategies to align with the evolving needs and aspirations of prospective fellows. Key initiatives could include fortifying career mentorship programs, providing increased support for those interested in classical hematology, fostering research experiences during residency training, and actively promoting a diverse and inclusive environment. Understanding these aspects and results is crucial for program directors, educators, and policymakers to optimize training programs and support the diverse needs of future practitioners in the field. Research Sponsor: None.

	Not Important at All	Not Important	Neutral	Important	Very Important
Career mentorship	5.4%	3.6%	21.4%	42.9%	26.8%
Clinical interest	0%	0%	1.8%	21.4%	76.8%
Research experiences	10.7%	0%	35.7%	33.9%	19.6%
Lifestyle considerations	1.8%	3.6%	28.6%	42.9%	23.2%
Job market	1.8%	8.9%	28.6%	42.9%	17.9%

### Observing attending physician teaching behaviors during inpatient hematology/ oncology consultation.

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Background: Inpatient consultation is a primary responsibility of fellows and residents. Consults are complex tasks that impose significant cognitive load (CL) on trainees, potentially jeopardizing patient safety. We previously published strategies for attendings to optimize trainee CL during consults, and we also demonstrated that distractions are a prominent source of trainee CL during consults. Strategies to optimize CL have not been studied during inpatient consultation. Therefore, we aimed to observe and categorize attending behaviors that might affect trainee CL during consults using hematology/oncology as a model. Methods: After discussion with author SB (an oncologist who frequently performs and teaches inpatient oncology consultation), one author (MT, a neurology resident with experience performing consults outside of hematology/oncology) observed 10 new inpatient hematology and oncology consult discussions between attendings and fellows or residents at the University of California, San Francisco in 2023. The observer used our published set of strategies, divided into the three CL types (intrinsic load [IL] strategies to optimize the consult for the trainee, extraneous load [EL] strategies to reduce distractions, and germane load [GL] strategies to promote learning), as a checklist of attending behaviors and noted whether each behavior occurred during the discussions. Results: Discussions between four attendings and five trainees (three fellows and two residents) on inpatient hematology and oncology consult services were observed. Two attendings identified as female (one hematologist and one oncologist) and two male (one hematologist and one oncologist). Out of 18 attending behaviors on the checklist (six each of IL, EL, and GL), 13 (72%) were observed at least once. The median number of behaviors observed during one consult discussion was 3.5 (range 1-5, interquartile range 2-4.75). GL behaviors occurred most often (14 times across the 10 discussions), IL behaviors next most often (11 times), and EL behaviors least often (seven times). All four attendings exhibited at least one behavior from each CL type. The most commonly observed behavior was "teaching by sharing clinical reasoning" (GL). Conclusions: Hematology/oncology attendings exhibited observable behaviors related to optimizing trainee CL during inpatient consults and demonstrated behaviors intended to promote learning (GL) more frequently than behaviors intended to reduce trainee distractions (EL). Based on these data, hematology/oncology consult attendings may wish to augment their use of behaviors intended to reduce distractions, which are prominent during inpatient consults, to avoid trainee cognitive overload. Future research might correlate measured trainee CL with attending teaching behaviors to demonstrate the impact of these behaviors and optimize consult teaching interactions. Research Sponsor: None.

# Understanding fellow hematology curriculums: Characterizing perspectives and defining opportunities for improvement.

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Background: Comprehensive hematology education during fellowship is paramount for providing high-quality care, especially in busy practices. Variability in fellow educational experiences is expected. However, fellowship programs must ensure a well-rounded, equitable educational experience for all fellows to prepare them for practice and board exams in the increasingly dynamic field of hematology. Methods: We administered an e-mail survey to hematology/oncology fellows (n=30) at Mayo (Rochester) to explore inpatient hematology education experiences and the Fellow Hematology Curriculum (FHC) during 2021-2022. Based on results, we designed a fellow-led, consultant-supervised quality improvement (QI) initiative to improve FHC. Responses were in a five-point Likert scale and open-ended format. Results: Twenty fellows completed the survey (66% response rate). Respondents were well distributed (35% PGY4, 25% PGY5, 40% PGY6). Resources most used for self-education were ASH SAP (85%), UpToDate (80%), and NCCN guidelines (50%). 100% of respondents agreed/ strongly agreed that the FHC could be improved. 95% agreed/strongly agreed that there is a high degree of variability among consultants regarding engagement in fellows' education. 45% agreed that education is adequately paired with relevant clinical duties to reinforce key concepts. 25% agreed that FHC had well-defined structure and objectives. In the openended responses, a structured curriculum covering a set list of topics paired with the relevant rotation was the most common recommendation by the fellows for improving the FHC and the inpatient hematology educational experience. This prompted a QI initiative to implement a structured, evidence-based curriculum covering essential topics required for hematology practice. Each week of a four-week rotation has a relevant theme (eg, "Marrow Failure week" during the inpatient leukemia service). Fellows selected a topic of interest and created a lecture to be used by all faculty and learners during the relevant rotation (eg, "Aplastic Anemia" during the Marrow Failure). Consultants and pharmacists in respective disease groups reviewed the topics and presentations. These lectures are now provided to fellows and faculty via e-mail prior to relevant rotations. Conclusions: Our survey demonstrated that trainees' individual educational experiences on inpatient hematology services are widely variable and largely unsatisfying without some form of structured, relevant learning. We identified the need for deliberate, coordinated education as a gap to bridge toward achieving the goal of equitable, comprehensive learning. We intend to perform a post-implementation survey after one year of practicing a structured, relevantly paired FHC. This assessment will be used to make improvements in subsequent iterations of the FHC using the Plan-Do-Study-Act methodology. Research Sponsor: None.

#### Global interest in podcasts designed for medical oncology trainees.

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Background: Audio podcasts allow for medical education to be disseminated in an on-demand format and are globally accessible. There are currently a limited number of trainee-directed medical oncology podcasts and their global impact has not been shown. "Talking about Tumors with Ryann and Ryan" is an English language, evidence-based, free-to-use podcast that was initiated in April 2022 with a focus on education of trainees new to the field. Methods: Geographic statistics were collected for podcast episodes with greater than 30 days of availability. The proportion of listeners from different regions was compared between episodes. Trends in listeners from North America and global audiences were descriptively analyzed. Results: 34 episodes were included in this analysis, with content in gastrointestinal, breast, thoracic and cutaneous malignancies. Episodes had a median of 115 downloads, with consistently >30% from outside of Canada and the United States (median 37.3 +/- 6.4%). Twenty-four countries had greater than 10 downloads. The largest audience beyond North America was Australia (13%), Israel (4%), United Kingdom (3%), Pakistan (3%), Sweden (2%), India (1%), and Hong Kong (1%). A review of individual cities within countries was relatively constant, suggestive of persistent listenership. Conclusions: There is a global interest for introductory medical oncology education. Presentation in an evidence-based format and awareness of variation in regional approaches to systemic therapy can increase the impact of podcasts, which by their design can reach a global audience. The development of an index for early education oncology podcasts may improve visibility and access to those interested in this medium. Research Sponsor: None.

### Development and implementation of a geriatric oncology interprofessional casebased educational intervention for cancer care providers.

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Background: Geriatric assessment (GA) is recommended as part of the standard of care for older adults with cancer. However, the GA has not been fully adopted as part of routine practice in oncology in Mexico, mainly due to lack of qualified personnel and limited knowledge. We designed an interprofessional case-based educational intervention to address the main barriers for implementation of GA in oncology. Methods: We followed Kern's six-step approach to design a continuing professional development (CPD) activity. Our targeted learners consisted of teams comprised of one oncologist and one geriatrician who practiced at the same site in Mexico. By the end of the intervention, participants would be able to perform GA in older adults with cancer, and to integrate information obtained through a GA in a cancer treatment plan through adequate interventions. We used Project ECHO's model to create a CPD activity consisting of 12 weekly 75-minute online sessions via Zoom, with content selected from international geriatric oncology guidelines. At baseline, and at the end of the course, participants answered a 36-item multiple choice knowledge assessment (scale 0-100), a survey on self-perceived competence in GA skills (scale 0-10), and an adaptation of the Association for Community Cancer Centers Geriatric Oncology Gap Assessment Tool, which assesses subjective performance of the GA (scale 0-4). Participants also completed a satisfaction questionnaire. We compared baseline and post-intervention scores through paired t tests; results from the satisfaction questionnaire are reported descriptively. Results: We included 56 participants (28 geriatricians and 28 oncologists). Median participant attendance was 10 sessions (IQR 9-11). Thirty-eight participants completed the satisfaction questionnaire: median satisfaction was 10/10 (range 8-10). There was no difference in satisfaction scores between oncologists and geriatricians. Mean baseline knowledge score was 59.5±12.8 and mean post-intervention knowledge score was 74.4±9.7 (p<0.001, effect size 1.14). Mean baseline competence score was 6.42±2.5 and mean post-intervention competence score was 9.02±0.78 (p<0.001, effect size 1.03). Mean baseline performance score was 2.58±0.65 and mean post-intervention knowledge score was  $3.29\pm0.5$  (p<0.001, effect size 1.64). Increases in knowledge, competence, and performance scores were observed both in oncologists and in geriatricians separately. **Conclusions:** This interprofessional curriculum on GA in oncology was feasible and acceptable, and led to significant increases in knowledge, competence, and performance among participants. Project ECHO's case-based learning model is adequate to provide interprofessional education, which is crucial in multidisciplinary areas such as geriatric oncology. Research Sponsor: Conquer Cancer, the ASCO Foundation.

### Decision making in oncology: Unleashing the power of artificial intelligence— Beyond the question of feasibility.

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Background: This study examines how consulting artificial intelligence (Chat GPT, Bard) or electronic tools (Apps, Journal or Guidelines) affects the decision-making process in Oncology Fellows. Methods: In the OSCE IOHM-USAL 2023, Oncology Fellows (2022 and 2023 cohorts) individually answered stations I and II, both spontaneously and after AI consultation. Group responses for stations III and IV were also gathered. Sign tests compared pre- and postconsultation responses in stations I and II while the impact of AI in stations III and IV was individually assessed on a five-point scale (0= Null and 5= Extremely useful). Results: 15 Oncology Fellows participated in OSCE 2023-14 Females. Median age: 30 (r=28-36). A) Stations I - II Cases: Case1: 70 y. Non smoker. PS o. Stage IV NSCLC. PS o. EGFR mutated E746 \_A750. PDL1 90%. Case 2: 52 y. Postmenopausal Stage II Luminal B Her2 negative Breast cancer (pT2, pN1, M0). Case 3: 35 yo. Advanced colon cancer. Stage IV. BRAF p(V600E) c.1799 A>C. No Micorsatellite Instability. B) Station III (Ethics Committee), the following cases were addressed: 4. "BRCA1: Insured, not excluded". 5. "Smoke vs. oath? Tough choice" 6. "Follow Lynch path, or HMO exit". In all three cases, 3/15 students reported finding AI useful in the discussion. C) Station IV (Tumor board), the following cases were addressed: 7. "Postmenopausal NOS IBC (pT1c pNmic Luminal B Her2 negative)". 8. "Oncology emergency in a 22 y male patient testicular tumor pending pathology". In Case 7, 3/15 students reported finding AI useful in the discussion. In Case 8, 4/15 students reported finding AI useful. Conclusions: 1. A study of 15 oncology fellows found no appreciable influence of AI on clinical decision-making. 2. Analysis of eight cases (individual/collective) identified anchor value, optimistic denial, and confirmation bias in reasoning and processing. 3. Fellow training in critical AI analysis and outcome evaluation is imperative. Research Sponsor: None.

OSCE S	tations I-II	results.			
Case	Al	Curability	5 year Survival Rate (%) without tx	5 year Survival Rate (%) with tx	Response Rate (%) to tx
Case 1	Pre Al	No 15/15	Median 10% (r 1-30)	Median 30% (r 20 - 50)	Median 40% (r 10-60)
Case 1	Post Al	No 15/15	Median 10% (r 5-30)	Median 40% (r 20-60)	Median 71% (r 15-85)
Case 1	Sign test	p=1	p=0.812	p=0.444	p=0.025
Case 2	Pre Al	Yes =13	Median 50% (r 10-80)	Median 77% (r 30 - 95)	70% (r 30-100)
Case 2	Post Al	Yes= 14	Median 65% (r 10-85)	Median 85% (r 45-98)	83% (r 10-94)
Case 2	Sign test	p=0.9	p=0.581	p=0.875	p=0.271
Case 3	Pre Al	No=15	Median 17.5% (r 1-30)	Median 35% (r 14-60)	40% (r 15-60)
Case 3	Post Al	No = 14/15	Median 10% (r 1-40)	Median 30% (r 14-60)	40% (r 20-70)
Case 3	Sign test	p=0.9	p=0.373	p=0.893	p=0.429

### Formation and evaluation of the ASCO medical education community of practice (Med Ed CoP).

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Background: High quality education is crucial for hematology/oncology (H/O) training and lifelong learning. However, H/O has historically prioritized clinical and research careers over medical education careers. Consequently, few programs support H/O educators. A CoP is a group that shares "a concern or passion for something they do and learn how to do it better as they interact regularly." We formed the ASCO Med Ed CoP in 2021 to provide a collaborative network and professional development venue for H/O educators. Methods: Following a published framework for developing a global health professions educator community (Establish-Grow-Sustain), we (ASCO Education Scholars Program graduates) developed CoP mission and vision statements and a leadership structure (Establish), formed committees and projects (Grow), and gathered at the ASCO Annual Meeting and via virtual Town Halls (Sustain). In 2023, we collected demographics and evaluated the CoP using a logic model focused on inputs, activities, outputs, and impact. Results: As of December 2023, the CoP includes 238 members from 143 institutions (38 [27%] non-U.S.): 207 (87%) ASCO members; 127 (53%) women, 106 (45%) men, 5 (2%) no response (NR); 111 (47%) White, 88 (37%) Asian/Pacific Islander, 27 (11%) Latinx/Hispanic, 12 (5%) Black/African-American, 8 (3%) Middle Eastern, 1 (0.4%) African, 16 (7%) NR; 146 (61%) hematologist/oncologists, 68 (29%) trainees, 6 (3%) radiation oncologists, 3 (1%) surgical oncologists, and 15 (6%) other professionals. The logic model is displayed (Table). Conclusions: The CoP has had an impact on its members, ASCO, and beyond and continues to grow and sustain itself by recruiting broadly, driving projects forward, and making structural adjustments for long-term sustainability. Upcoming projects include providing more educational resources and measuring outcomes such as changes in members' knowledge, skills, and attitudes. Membership diversity continues to be a challenge and a priority. Research Sponsor: None.

Inputs	ating the ASCO Med Ed Col Activities	Outputs	Impact	
	Leadership meetings	2 ASCO Post articles 3 ASCO Educational Book articles Presentation to American College of Rheumatology about CoP model	Model for 11 additional ASCO CoPs Presence in literature	
Committee members	Committee meetings	5 committees with projects (e.g. mentorship program)		
Other members	Membership recruitment Town halls Newsletters	238 members 2 town halls 1 newsletter		
ASCO annual meeting space	Annual meeting events (speakers, Med Ed litera- ture review)	2022 and 2023 events	Recurring annual meeting presence	
ASCO MyConnec- tion website	Discussion posts Posted resources	55 posts 7 resources	Website accessible to membership	
Twitter/X account	Social media posts	307 followers 78 posts	@OncMedEdCoP	

# Educational intervention to facilitate clinician-patient discussions of lung cancer biomarker testing at safety net and non-safety net centers.

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Background: Biomarker testing is critical for optimal therapy selection in non small cell lung cancer, but it takes time and may delay treatment, causing patient anxiety and dissatisfaction. Patients want to understand the necessity and timing of biomarker testing and therapy decisions, but clinicians find these discussions challenging, especially with lower health literacy patients. As a solution, we deployed  $\triangle R$  Oncology model ( $\triangle R$  = Right Info/Care/Patient/Time) at 10 centers (4 safety net, 6 non safety net). Under 4R, clinicians discuss with patients a Care Sequence, a predeveloped care checklist with visual timing of care, emphasizing biomarker testing within the overall care plan. It includes social and supportive care to address Social Determinants of Health (SDOH). Methods: Interviews with clinicians to examine whether / how Care Sequence helped discuss the need and timing for biomarker testing with patients, including lower health literacy patients. The cohort of clinicians (N=18) included oncologists, fellows and nurses; 10 worked at safety net centers. Results: All clinicians reported that Care Sequence helped explain timing of biomarker testing and the need to wait for results (Table). The majority reported that it helped discussions with lower literacy patients and to train fellows how to discuss these issues and place related referrals. These benefits and most of the rationale were reported at a similar rate by safety net and non safety net clinicians. **Conclusions**: The 4R Care Sequence is a promising educational tool that helps clinicians, including fellows, manage patients' awareness and expectations for timing of biomarker testing and therapy decisions in lung cancer. The benefits in discussions with lower health literacy patients at both safety net and non safety net centers suggest that 4R can address disparities in patients' understanding of these complex issues and may reduce anxiety while awaiting treatment. Research Sponsor: LUNGevity.

	% Of All clinicians	% Of Safety net Clini- cians	Safety Net Clinicians	
Does Care Sequence Help / Rationale	N=18	n=10	n=8	P Value
HELPS EXPLAIN TIMING OF BIOMARKERS & DECISION,	100	100	100	1
NEED				
TO WAIT FOR RESULTS	0.4	100	00	
- Describes how biomarker testing fits into overall care plan		100	88	.4
- Visually depicts timing of testing & treatment decision	83	80	88	1
<ul> <li>Recommends patients to be active preparing for treatment while waiting</li> </ul>	78	80	75	1
- As a standard, normalizes timing of results, decisions	56	30	88	.02*
HELPS DISCUSS WITH LOWER HEALTH LITERACY PATIENTS	89	90	88	1
- Combines visual timeline & succinct checklist	61	60	63	1
- Uses plain language as possible	39	60	13	.02*
- Helps address SDOH while waiting	72	70	75	1
HELPS TRAIN FELLOWS	92	100	67	.2
- Reminds to order biomarkers, other workup	77	80	67	.2
<ul> <li>Helps develop narrative, organize discussion of biomarkers</li> </ul>	77	80	67	ı
- Prompts to discuss SDOH, refer to related care	62	80	0	.04*

<sup>\*</sup>Statistically significant, p<.05.

# Utility of a collaborative hematology oncology (HO) podcast series for post-ASCO updates and teaching critical appraisal.

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Background: Exploring strategies to share pivotal abstracts from the ASCO Annual Meeting is challenged by a paucity of resources focused on the critical appraisal of these abstracts. Podcasts are a valuable tool in medical education, though little is known on their utility to distribute post-ASCO updates compared to traditional formats (TF) including ASCO electronic updates, newsletters, Twitter, and emails. We sought to assess if a collaborative podcast series between two popular HO podcasts could enhance listeners' self-perceived comprehension of conference material and improve knowledge in critical appraisal of research methodologies and statistical analysis. Methods: Five abstracts in 5 HO subspecialties (GI, hematology, lung, breast, and GU) presented at ASCO 2023 were selected by the co-authors. Abstracts were selected for high clinical impact and important critical appraisal teaching points. One podcast episode (PE) for each abstract (PROSPECT, SWOG 1826, CONTACT 003, KEYNOTE 671, NATA-LEE) was developed collaboratively between Two Onc Docs (TOD) and The Fellow on Call (TFOC) to provide background, results, limitations, and a concept in critical appraisal. Episodes were publicly available in July 2023. Between August-September 2023, a REDCAP survey was sent via Twitter to evaluate the efficacy of the PEs in breaking down abstracts and teaching critical appraisal. The survey utilized a 5-point Likert scale (1, "not at all" to 5, "entirely"). Descriptive statistics are presented. Results: A total of 58 individuals participated, including 33 fellows (57%), 7 attending physicians (12%), 6 APPs (10%), 5 residents (9%), 5 pharmacists (9%), and 2 others (3%). Most respondents (57%) did not attend ASCO 2023 while 36% attended inperson and 7% virtually. Prior to listening, there were 15 (26%) who reviewed 0 abstracts, 25 (43%) who reviewed 1-5, and 18 (31%) who reviewed  $\geq$  5. At baseline, 31% listened to TOD, 39% listened to TFOC, and 29% listened to both. Prior to the PEs, 43 respondents (74%) reviewed  $\leq 2$ of the selected abstracts and 7 (12%) reviewed all 5 abstracts. After the PEs release, 41 (71%) listened to  $\geq$  4 PEs, with 31 individuals (54%) listening to all 5. On a scale of 1-5, the mean response for the utility of the PEs in breaking down abstracts and teaching critical appraisal were 4.76 (SD 0.47) and 4.55 (SD 0.60) respectively. The majority (88%) felt the PEs were more helpful than TFs; 12% felt PEs were equally helpful. A total of 55 (95%) reported they would listen to future collaborative series for post conference information. Conclusions: In this analysis, we highlight listeners' preference for podcasts over TF to improve comprehension and critical appraisal skills of abstracts presented at the ASCO Annual Meeting. Despite potential respondent bias, this suggests a promising avenue for leveraging established podcasts for post-conference information distribution. Research Sponsor: None.

# Roll out and influence of an educational program: Talking about risk, uncertainties of testing in genetics (TRUSTING).

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Background: Family history clinics face significant capacity issues making calls for genetic testing of all breast cancer (BC) patients problematic. Mainstreaming of services by health care professionals (HCPs) is needed but many lack confidence and familiarity with genetic counseling. Following successful development and evaluation of the TRUSTING educational program (Fallowfield et al. BJC 2022), facilitators were trained to roll out workshops for BC HCPs. Here we report the workshops' effect on participants' knowledge, skills, and self-confidence and influence on mainstreaming. Methods: 1 surgeon, 3 oncologists, 1 nurse specialist facilitated the 8-hr program in pairs. Workshop content included didactic components to enhance knowledge and various exercises to promote self-awareness about individual participants' tolerance to uncertainty and risk. Groups discussed 6 filmed scenarios showing interactions between surgeons and geneticists with the proband (triple negative BC and BRCA2 pathogenic gene alteration), her sister (BRCA2 +) and their anxious cousin (BRCA2 -). Pre-workshop, participants completed: - 1) an 18-item multiple choice knowledge questionnaire about gene testing in breast cancer 2) a 9-item questionnaire exploring self-confidence when discussing/ advising patients about different aspects of BRCA testing, results, and treatments and 3) an Intolerance to Uncertainty Scale. Knowledge and self-confidence together with general feedback questions about overall satisfaction with facilitators and the event were assessed post workshop. Follow-up questionnaires sent 3-12 mths later examined the impact TRUSTING workshops had made on participants' own practice and implementation of mainstreaming in their clinic. Results: 120 participants (61 surgeons; 41 nurses; 9 oncologists; 9 other) attended 12 UK workshops. There were improvements post workshop in knowledge (mean change = 6.57; 95% CI 5.97 to 7.16; p<0.001) and self-confidence (mean change = 2.64; 95% CI 2.33 to 2.95; p<0.001). Feedback about the facilitators' approach was uniformly high (mean range 9.65 to 9.90 /10). Most found workshops useful, enjoyable, and informative; 98% would definitively recommend them to colleagues. Follow up data revealed that attendance significantly impacted individuals' own practice with 59% reporting it had improved their discussions about genetic testing with patients. When asked about mainstreaming more generally 81% reported it as "OK" or "working very well", others (16%) that it had not yet started or (3%) that it was problematic. Conclusions: Discussing the implications of pathogenic gene alterations on patients' treatment and risk-reducing interventions is complex when patients are already coming to terms with a BC diagnosis. The TRUSTING educational program is an effective means of helping HCPs now involved in the mainstreaming of genetic testing. Research Sponsor: AstraZeneca; BCRF.

#### Training of clinical oncologists in Africa: Results of a regional survey.

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Background: Africa grapples with a significant human resource shortage in cancer care. The vast majority of practicing oncologists are clinical oncologists, performing the roles of both medical and radiation oncologists. Building a sustainable oncology workforce depends on robust training pipelines. However, the distribution and characteristics of oncology training programs across the continent have not been described. Methods: A cross-sectional study was conducted to outline the landscape of postgraduate clinical oncology training in Africa. A semistructured electronic questionnaire designed to collect data on locations and capacity of training centers, components of training curriculum, and administration of training programs was distributed via e-mail between February and May 2023 to board-certified clinical oncology consultants practicing in Africa. Participants were identified through the personal contacts of the co-authors. Results: Responses were received from 31 oncologists practicing in 24 countries. We identified 74 centers in 16 countries (67%) with ongoing clinical oncology training, and Egypt, South Africa, and Tunisia accounted for two-thirds of all training centers identified. Duration of training ranged from 4 to 8 years. Each year, about 230 residents commence training, and 198 graduate from training and join the workforce. More than half of the countries with available data require an internship and passing an entrance examination before commencing training. Almost all countries require trainees to pass an exit examination and submit a thesis before completing training. We obtained data on training components in 19 (26%) centers, and all centers provide training in chemotherapy administration and radiotherapy techniques. However, marked variations were observed in the exposure to modern radiotherapy techniques, with 10 (53%) centers including IGRT and 5 (26%) including IMRT. More than three-quarters of respondents reported that most trainees find jobs in the government service after completing training. **Conclusions:** Clinical oncology training programs in Africa are relatively limited in number. Moreover, there is a wide variation in the existing programs in terms of training duration and components of curriculum. There is tremendous potential for expansion to countries without training, which can be facilitated by partnerships with existing training programs on the continent. Furthermore, regional coordination and accreditation is vital to ensure uniformity. Research Sponsor: None.

### Two years of teaching close to home: Lessons learned from a near-peer model for an introductory lecture series for hematology-oncology fellows.

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Background: First-year hematology-oncology fellows face a large initial knowledge gap due to limited disease-specific content exposure during residency training. To facilitate their transition, we introduced a near-peer lecture series during academic year (AY) 2021-22, featuring near-peers (2nd and 3rd year ["senior"] fellows) as the primary instructors guided by content experts (disease specific faculty) [Berry, et al. JCO OP 2023]. This follow-up study's primary aim was to assess the lectures' continued impact on learning for 1st year fellows, as well as the impact on the educational skills of senior fellows. We also sought to assess the continued support of this format by faculty. Methods: For AY 2023-24, each rising senior fellow attended a one-hour preparatory workshop on active learning techniques in Spring 2023. They were then assigned 2-3 topics to teach and paired with ≥1 expert faculty. Lectures were conducted from July to September 2023. We administered anonymous surveys immediately post-lecture to attendees and at end-of-series to senior fellows and faculty. Results are summarized as proportions with binomial 95% confidence intervals (CI). Results: We received 109 immediate post-lecture responses for 26 lectures (66% of total lectures). Of 1st year fellow respondents (82.5% of all responses), 80% (95% CI [72-88%]) found the lectures very engaging, 82% (95% CI [76-90%]) found them relevant, 54% (95% [CI 46-62%]) felt very confident in disease diagnosis and staging, and 43% (95% CI [37-49%]) felt very confident in disease treatment following the lectures. All responding senior fellows (N=7) endorsed the lecture format. The majority of senior fellows (67%, 95% CI [50-84%]) found the one-hour workshop only somewhat helpful, and 71% (95% CI [50-92%]) felt only somewhat well equipped to give their lecture. Over half (57%, 95% CI [41-73%]) of senior fellows reused previous slide decks and did not meet with faculty in person to prepare for their sessions. On qualitative review of senior fellow feedback, common themes included time constraints and lack of structured format during the preparation phase. Of faculty respondents (N=9), 78% (95% CI [50-99%]) supported continuation of the format, but only 44% (95% CI [38-50%]) met inperson with their assigned senior fellow in advance of the teaching session. Conclusions: Our near-peer lecture series has broad support for its continuation and is meeting the needs of 1<sup>st</sup> year fellows. To better help senior fellows improve their education skills, future iterations will focus on optimizing the pre-session coaching and preparatory phase. This will include structured coaching with an expert educator for content planning and development, an augmented process for pre-session meetings between senior fellows and faculty, and greater focus on defining the optimal timeline for session preparation. Research Sponsor: None.

# Fortifying the workforce: A national survey of hematology/oncology fellowship program directors and training fellows for community-based careers.

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Background: Most hematology/oncology (HO) care occurs in community settings. In a recent national survey of currently practicing community oncologists, we highlighted areas of unmet need regarding preparation for community-based (CB) careers during fellowship [Agrawal et al, JCO OP 2024]. Our study aims to explore attitudes of HO fellowship program directors (PDs) relating to CB HO training. Methods: We conducted a cross-sectional email survey of 185 HO fellowship PDs in the United States. The primary outcome was assessing PDs' attitudes regarding inclusion of CB HO training during fellowship. Secondary outcomes included assessing whether programs currently have clinical and/or non-clinical training experiences specifically addressing skills relevant to community practice. Participants were also surveyed to assess PDs' attitudes regarding what motivates fellows to choose careers in community practice. Demographics pertaining to program leadership and fellows were also obtained. Results: We received a total of 53 responses (29% response rate). The majority of respondents' programs were in academic tertiary care hospitals (76%) with a plurality in the Northeast (32%), had a median of 5 trainees per class, and had roughly equal Male and Female (including transgender men and women) trainees (70%). The majority of PDs had been in clinical practice for  $\geq$ 10 years (68%) and in their program leadership position for  $\leq$ 10 years (83%). Almost all PDs (96%) reported having graduates who pursue careers in CB settings, with financial compensation cited most frequently in making this decision (98%). The majority of PDs (83%) agreed that training experiences in CB HO should be available for their trainees during fellowship. A multivariate regression analysis demonstrated that there were no significant factors associated with this outcome (p>.05). Training experiences relevant to community practice were not uniformly available amongst programs, with 74% of programs offering clinical experiences, but only 32% offering non-clinical experiences. The most cited clinical experience was the option to rotate in a CB setting (80%), and the most common non-clinical experience was exposure to training in quality improvement/patient safety (88%). Conclusions: While most HO training programs in the U.S. are embedded within academic centers, nearly all PDs indicated their programs train fellows who pursue careers in the community. PDs believe that experiences tailored to CB HO practice should be available to their fellows. Although many respondents' programs offer CB clinical rotations, relevant extraclinical skill development opportunities are lacking. Goal-concordant pathways for career development during HO fellowship can be optimized, particularly as they relate to training individuals for practice in CB settings, a growing need within the HO workforce. Research Sponsor: None.

### Educating hematology-oncology fellows about how to communicate with patients about cancer clinical trials: A needs assessment.

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Background: Cancer clinical trials (CCTs) are vital to advancing treatment yet only 5-8% of people with cancer ever participate, with even lower rates among underserved groups. Teaching oncologists in training how to communicate about CCTs may improve the frequency and quality of patient-oncologist communication about CCTs and increase participation. However, little is known about interest in or feasibility of such training during Hematology-Oncology (Hem-Onc) graduate medical education (GME) fellowships. We aimed to determine Hem-Onc fellowship programs': 1) current practices, needs, and preferences for CCT-related communication training; and 2) the acceptability and feasibility of implementing a CCT communication skills workshop. Methods: We recruited and surveyed program directors (PDs) from Hem-Onc fellowship programs across the U.S. PDs were recruited via email through the ASCO program directors' community, a publicly accessible list of ACGME Hematology-Oncology programs, and co-authors' professional networks. Participants were compensated with a \$50 gift card. Survey data were analyzed using descriptive statistics and responses were measured on a 5point Likert scale (1 = "strongly disagree" to 5 = "strongly agree"). Results: 40 PDs were surveyed, most representing programs in the Northeast (30%), Midwest (25.6%), Southeast (20.5), and Southwest (15.4%) U.S. Most were male (57%) and identified as White (55%), Asian (30%), Black/African American (2.5%) and Native American/Alaskan Native (2.5%). PDs stated their institutions prioritize CCT accrual (M=4.58, SD=.78) and clinical research training (M=4.20, SD=.85). They reported their GME CCT curriculum least often addressed: (1) How to talk to patients about CCTs when none are available (27.5%), and (2) How to help patients find CCTs at other institutions (17.5%). PDs rated their fellows' CCT knowledge as lowest in: (1) Provider-level barriers to enrolling/referring patients in CCTs (M=3.41, SD=.91) and (2) System-level barriers to patient accrual to CCTs (M=3.33, SD=.95). Fellows' lowest-rated CCT communication skills areas were: (1) Making shared decisions with patients about CCT participation (M=3.54, SD=1.14) and (2) Patient-centered communication (M=3.50, SD=1.15). PDs were interested in a CCT communication workshop ('yes'=67.5%, 'maybe'=32.5%) and said such training was feasible (M=4.28, SD=.78) and useful (M=4.47, SD=.78). Training preferences were live presentations (M=3.9, SD=1.03) and program-tailored virtual workshops (M=3.9, SD=1.08). Conclusions: Hem-Onc fellowship program leaders expressed a need for training that improves fellows' CCT knowledge and patient-centered communication skills. By highlighting current practices, challenges, and preferences, this study is an important step towards implementing and scaling communication skills training in GME programs. Research Sponsor: The Leukemia & Lymphoma Society; HSR9022-23.

# Surveying oncologists' awareness and challenges in addressing social determinants of health: A national study.

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Background: Ensuring that healthcare professionals are equipped to address disparities in healthcare access and outcomes is crucial for improving overall healthcare quality. Multiple studies have shown a clear causal link between social determinants of health (SDOH) and cancer. PeerView developed a research project to understand how well oncologists understand the impact of SDOH on the care and outcomes of patients with cancer and what they need to close gaps in knowledge and skills in order to deliver equitable care. Methods: PeerView developed and sent a series of seven surveys, each with 3-5 questions, to US medical oncologists and hematologist-oncologists from June 2023 to January 2024. Each set of surveys was sent to a different group of clinicians to ensure that responses were representative of the target group. Key Areas of Analysis: Overall awareness and understanding of SDOH; Perceived challenges in achieving health equity; Barriers to improving diversity in clinical trials; Clinician needs in addressing disparities; and Educational tactics and tool preferences for SDOH training. Results: 1,536 responses from US medical oncologists and hematologist-oncologists (37% working in an academic setting; 63% community-based) Representative findings: Approximately twothirds (67%) needed to improve their understanding of SDOH and their effects on healthcare disparities; 60% were confident in their understanding of the effects of SDOH in cancer care in 4 key areas: care delivery and quality, screening, immunotherapy efficacy, and technology literacy; Most respondents felt confident or very confident caring for patients with cancer across ethnicities (81%), cultures (83%), socioeconomic statuses (78%), genders/gender identities (82%), and age (89%); 70% expressed confidence in their ability to identify patients at higher risk because of health disparities and SDOH; While the majority (61%) felt competent in connecting patients with resources and care to overcome SDOH-related barriers, community and academic providers differed significantly in their confidence; 70% selected the lack of resources in the healthcare system as the most or second greatest significant factor contributing to healthcare disparities; and 58% believed that partnering with pharmacists, community health workers, and community groups would help increase minority participation in oncology clinical trials. Conclusions: These results outlined deficiencies in knowledge and confidence of SDOH. By integrating these insights into development of continuing education (CE) activities and sharing them with the CE community, we can help clinicians overcome care-delivery barriers related to SDOH and develop inclusive care practices that empower patients to take charge of their health. Furthermore, insights from this research can shape policy decisions, curriculum development, and resource allocation on a larger scale. Research Sponsor: None.

# A multicenter analysis of didactic curricula in a hematology oncology fellowship program.

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Background: Each hematology and oncology (H/O) fellowship program has a unique educational curriculum. Best practices about how to structure the curricula in H/O programs are limited. Here, we provide the results of a multicenter assessment to understand differences in H/O fellowship didactic curricula. Methods: H/O fellows were recruited via email to be site coordinators (SC) for a multicenter study investigating H/O educational experiences. In total, we identified SCs at 27 unique programs who enrolled in the study with leadership approval. Each SC received a REDCAP survey in which they granularly described their didactic curriculum. We present descriptive statistics from this background assessment sub-study. Results: There was even geographic distribution of the programs. Programs varied in size with median 16 fellows (range 4-33). Most (71%) reported that disease-specific didactic lectures were sporadically distributed throughout the year instead of being organized into blocks by disease type. For malignant H/O, the majority (93%) had disease-specific faculty deliver the lectures. For classical hematology, 18 SCs (64%) reported most lectures were given by topic experts, however 10 noted most lectures were given by fellows (22%) or program leadership (14%). Only 1 program had access to a curated didactic series for disease specific outpatient clinic experiences. Formal journal club (JC) was included in 24 programs (86%) while 3 programs had no JC and 1 had sporadic JC on certain rotations. Only 4 (17%) had statisticians present at any JC. Introductory statistic lectures were given at 8 programs (28%). Of these, 5 had one lecture, 2 had two lectures, and 1 had a formal 5 lecture series. Most programs (79%) integrated a boardreview series. Reading assignments were not included in didactics by most programs (61%). A total of 23 programs (82%) recommended access to online videos while 5 (18%) did not. None reported mandatory requirements for video use prior to lecture content. Amongst those with video access, 20 used ASH Review Series and 17 programs used MD Anderson Board Review Series. Only one program provided access and encouraged use of the ASCO Education Series. Conclusions: In this cross-sectional study, we found significant variation in the didactic structure at H/O fellowships across the country. Most programs have sporadic lecture topics as opposed to organized longitudinal block didactics. There were more content experts leading lectures for malignant H/O compared to classical hematology. Not all programs have formal JC in their curriculum with only 4 programs involving a statistician. Few programs provide formal lectures in statistics. Access to online review videos is variable and only one program had recommended access to ASCO video resources. Further research is needed to identify best practices and establish uniformity in didactic curricula for H/O trainees. Research Sponsor: None.

#### Alignment of patient-clinician perspectives in triple-negative breast cancer (TNBC).

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Background: Despite recent advances in therapeutic strategies, TNBC remains difficult to treat due to a poor prognosis and a reduced number of effective treatments. Among racial and ethnic groups, Black and Hispanic women have a disproportionately higher risk of TNBC. To address this, a tethered educational initiative was designed to empower patients through navigation and treatment decision-making, and facilitate patient-clinician partnerships through education and the sharing of real-world outcomes. Methods: Two, one-hour online, interactive, video-based programs were designed for patients/caregivers, and clinicians in collaboration with TOUCH, the Black Breast Cancer Alliance and the National Breast Cancer Foundation. The patient/caregiver program was hosted on CancerCoachLive and MedLive and the provider program hosted on OMedLive; both launching in June 2023. Patient stories were embedded within the program. We report on an analysis of patient outcomes and the intersection of patient and clinician perspectives, including behavioral impact, and qualitative insights. Results: To date, more than 2,000 participants have engaged across both educational programs. Of participating patients/caregivers, 42% were non-White (non-Hispanic) and 76% were people diagnosed with breast cancer. Following the program, 82% felt confident discussing treatment and outcomes with their healthcare team, and 56% reported intent-to-change related to treatment, communication, and engagement with support resources. Patient/ caregiver participants (56%) defined 'providing resources and information about diagnosis and treatment options'as the most helpful role in working with a patient navigator. Qualitative data elucidating specific intended changes and patient experiences will be shared. Of the participants in the clinician program, 89% were physicians, 91% of whom noted their specialty as oncology. In assessing patient openness to discussions with their team; 42% of clinicians believed their patients would approach them, and 71% of patients were very likely to approach their team. Only 60% of clinicians believed their patients would participate in a clinical trial while 85% of patients reported they would be likely to participate. Clinicians reported challenges enrolling patients in clinical trials as: lack of access (33%), low awareness of available trials (17%), and patient lack of interest (15%). Conclusions: Discordances in patient and clinician perspectives were revealed by the outcomes related to willingness of patients to engage in clinical trials and openness in communication between patients and their healthcare teams. These educational programs positively impacted patient and clinician motivation to address areas of care within their control. Real-world accounts of patient experiences provided context and perspectives that can help improve shared decision-making approaches. Research Sponsor: This initiative was supported by independent educational grants from Gilead Sciences, Inc

# Optimizing hematology/oncology (H/O) curricula for internal medicine (IM) residents: A two-institution Delphi survey.

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Background: Although H/O topics are essential for primary care physicians, internists and subspecialists, the H/O curriculum is not standardized across IM residency programs. We aimed to identify the most important H/O topics for IM residents to learn, according to IM generalists and H/O specialists. Methods: We used a modified Delphi approach to conduct a 2-round crosssectional survey of IM generalists and H/O specialists at the University of California, San Francisco and Stanford University. Participants rated the importance of H/O curricular topics gathered from national H/O and IM organizations on a 1-5 scale (very unimportant to very important). Participants then viewed their own ratings compared to the group mean and standard deviation (SD) for each topic from round 1 and could change their ratings in round 2 if they wished. We used a content validity index (CVI, the percentage of respondents who rated the topic  $\ge$ 4) of >75% to identify the most important topics. We compared the effect sizes of the differences between mean generalist and specialist ratings for each topic using Cohen's d. Results: The survey included 239 topics (75 classical hematology, 52 malignant hematology, 112 solid oncology). The round 1 survey was sent to 132 clinicians (68 generalists, 64 H/O specialists), with 92 round 1 responses (response rate [RR] 69.7%) and 77 round 2 responses (RR 83.7%). The average variance decreased from round 1 to round 2 (1.00 to 0.86), indicating increasing agreement. Ninety-two topics met the CVI threshold: 41 from classical hematology, 15 from malignant hematology, and 36 from solid oncology. The Table shows the highest rated topics as examples. Most effect sizes were small (58.6%), indicating agreement between generalists and specialists across most topics. Conclusions: With input from both generalists and H/O specialists, we identified the most important H/O topics for IM residents, which can guide curriculum development for IM residency programs. Research Sponsor: None.

Domain	Topics	CVI	Total Mean (SI	Specialist  ) Mean (SD)	Generalist Mean (SD)	Effect Size
Classical	1. Acute DVT/PE	100%	5.00 (0.0	0) 5.00 (0.00)	5.00 (0.00)	0.00*
Hematology	2. Disseminated intravascular	100%	4.80 (0.4	1) 4.75 (0.50)	4.82 (0.40)	0.16*
	coagulation	100%	4.47 (0.5	2) 4.75 (0.50)	4.36 (0.50)	0.75**
	<ol> <li>Antiphospholipid antibody syndrome</li> </ol>					
Malignant	<ol> <li>Neutropenic fever</li> </ol>	92%	4.69 (0.6)	2) 4.71 (0.59)	4.67 (0.71)	0.06*
Hematology	2. Acute myelogenous leukemia	88%	4.42 (0.7	0) 4.47 (0.62)	4.33 (0.87)	0.20*
	3. Acute lymphocytic leukemia	88%	4.27 (0.6)	7) 4.29 (0.69)	4.22 (0.67)	0.11*
Solid Oncology	<ol> <li>Advance care planning</li> </ol>	100%	4.80 (0.4	1) 4.76 (0.44)	4.85 (0.38)	0.20*
	2. Management of end-of-life issues	100%	4.80 (0.4	1) 4.71 (0.47)	4.92 (0.28)	0.53**
	3. Malignant pleural effusion	97%	4.70 (0.5	3) 4.65 (0.61)	4.77 (0.44)	0.23*

<sup>\*</sup>small (<0.5) \*\*moderate (0.5-0.8).

### Implementing a research methods curriculum for first year hematology oncology fellows.

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Background: The Hematology/Oncology Fellowship Program at the University of Alabama at Birmingham is an ACGME accredited, three-year academic training program. Fellows are expected to participate in at least one mentored research project during their second and third years of training. The program, however, did not provide formal training in research methods. Here, we provide the results of implementing a research methods curriculum for first year fellows to fulfill that educational need and to facilitate engagement in research projects throughout their fellowship training. Methods: We developed a structured curriculum composed of 10 didactic sessions covering the fundamental concepts of epidemiology and biostatistics. Based on the core competencies of research methods, learning objectives integrated concepts of 1) study design; 2) identifying bias and confounding; 3) exploratory data analysis, statistical inference, hypothesis testing; and results interpretation; and 4) critical appraisal of research evidence. The course was designed to promote self-directed learning and build on individual experiences and interests. One-on-one meetings between curriculum faculty and fellows facilitated identification of fellow research interests and pairing with mentors with aligned expertise. The didactic sessions were evaluated using a 21 question pre- and postknowledge assessment. Fellows also self-rated on a 10-point scale their level of confidence performing research related activities. Following the course, fellows were expected to complete at least i) one research project, present it at a scientific meeting and submit for publication in peer-reviewed journal; and/or ii) one research proposal grant application. Results: To date, 13 first-year fellows across three cohorts have participated in the course, two of which have been completed, and the third will conclude in March 2024. Complete pre- and post- assessment scores were available for 8 fellows. Mean score difference was statistically significant comparing pre- to post- knowledge scores (3.79 points (SD= 4.43), paired t-test p-value=0.02). Self- ratings improved across all components on average from 3.7 pre- to 6.5 post-course (p<0.001). The largest change in self-ratings were in understanding study design concepts, basic principles of research and critical appraisal, followed by interpreting statistical outputs. All fellows are leading at least one mentored research project and 7 out of 8 fellows have presented abstracts at national meetings including the American Society of Clinical Oncology and the American Society of Hematology. Conclusions: Implementing a dedicated research methods curriculum to clinical fellows is feasible, and improved learner knowledge, skills, and engagement in research activities. Research methods principles can be effectively incorporated into the first year of clinical fellowship training. Research Sponsor: None.

#### Improving goal concordant care clinician workshops: Do patients benefit?

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Background: From 2020-2023, the Alliance of Dedicated Cancer Centers (ADCC) undertook a national initiative to improve goal concordant care (IGCC) where all cancer patients and their families receive care that aligns with their values and priorities. One of the core components of the program was to implement a formal communications skills training program supporting the delivery of goal concordant care. As an ADCC member, City of Hope's (COH) Department of Supportive Care Medicine created the Improving Goal Concordant Care Virtual Workshop Series to address this need. Methods: The 2-part workshop series covered: Goal concordant care, having difficult conversations, advanced care planning (ACP), advance directives, Physician Orders for Life Sustaining Treatment forms, and code status. Physicians and nurse practitioners (NPs) were independently evaluated regarding their quality of care pre-/post workshop #1 by their outpatients through the "Heard and Understood (HAU)" survey, a patient-reported quality measure with 4 items: I felt heard and understood (HU), Provider understood what was important my life (UL), Provider saw me as a person (SP), Provider put my best interests first (BI). Response categories ranged from 1, not at all trueto 5, completely true. Top-box rates and percentage of patients responding completely true for a given item were calculated for each clinician. Pre-/post changes in top-box rates were examined with paired t-tests. Differences in rates over time, by clinician type, were evaluated using mixed effect modeling. Survey items were initially analyzed individually, then combined. A p-value < 0.05 was considered statistically significant. Results: A total of 37 clinicians (26 Physicians and 11 NPs) were evaluated. Patients' experience with physicians (NPs excluded) improved between pre/post training: The rates increased for the overall HAU scale (4.31, p=0.002), as well as for several individual items such as HU, UL and BI (5.24, 6.33 and 2.52 respectively, p-values<0.05). Notably, the rates for HU increased for physicians but not for NPs (5.24 vs -3.22, difference= 8.46, p=0.012), though NPs had a higher top-box rate at baseline compared to physicians (90.74 vs 78.04, p<0.001). Between group rate differences were not significant for the overall HAU scale over time. Conclusions: Patients' experience with hematology and oncology physicians improved after physicians received IGCC communication skills training. Moreover, the patients' experience with NPs was rated higher than physicians before training, but there were no significant differences after training. To further improve physician-patient communication regarding ACP and goal concordant care, the program will adapt and expand to additional departments throughout the COH clinical network. Research Sponsor: None.

## Filling the gap in competency-based training for medical oncology with supervised online patient counseling: A qualitative study.

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Background: The Higher School of Oncology (HSO) is a collaborative US-Russian postgraduate program that improves learning outcomes for young oncologists. Many HSO medical oncology (MO) residents/graduates are also engaged in online supervised patient counseling, known as 'Just Ask.' We aimed to explore the educational role of 'Just Ask' in shaping the competencybased learning outcomes of MO graduates, who have recently begun independent clinical practice. Methods: This qualitative study included 10 HSO alumni (2019-2023) who practice MO in Russia. All participants were current or prior 'Just Ask' consultants. Anonymous, online semi-structured in-depth interviews were conducted to explore interviewees reflection on competencies obtained at HSO and 'Just Ask.' The interview guide included 42 open-ended questions based on the American Accreditation Council for Graduate Medical Education (ACGME) list of competencies for MO physicians. All interviews were recorded and transcribed. Inductive-deductive coding with code categorization was followed by thematic analysis. Themes were mapped against the ACGME competencies. Results: Interviews, with a median duration of 69 (IQR: 54-80) minutes, involved participants with 0.5-3 years of practice. Six (60%) interviewees worked in hospitals, while 2 (20%) were in outpatient and another 2 (20%) were in mixed settings. We identified 85 codes and categorized them into 10 educational experience themes. Interviewees attributed learning an evidence-based approach, basic oncology knowledge, and patient communication skills through the HSO curriculum. Themes associated with learning from online counseling included integration into real-world practice, specific types of expertise (rare tumors), and advanced communication (explaining differences in management, written communication), which are less covered by HSO. This activity enhanced skills in patient navigation, advocacy, and the ability to detect care not supported by evidence. Safe-space learning provided by 'Just Ask' was a unique theme reflecting the ability of trainees to hone skills in a secure and resource-enriched environment with easy access to mentoring. The association of the selected 'Just Ask'-related themes with ACGME competencies is presented in the table. Conclusions: Supervised online counseling has emerged as a valuable educational tool aimed at supplementing competencies insufficiently covered by medical oncology postgraduate curriculum. Research Sponsor: None.

Themes	ACGME Competency	Ability
Expertise Professional communication	Medical knowledge Interpersonal and communica- tion skills	To see rare or pretreated cases To effectively communicate online
Patient navigation/ advocacy	Systems-based practice	To identify resources for cancer care across the country
Quality control	Systems-based practice	To detect and interpret quality and gaps in patient care

# A national survey of obstetrics and gynecology resident perspectives on their preparedness to provide care for racially and socioeconomically diverse gynecologic oncology populations.

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Background: Despite 83% female representation, Obstetrics and Gynecology (Ob/Gyn) lags behind other residencies in racial diversity, with 35.2% of trainees classified as Underrepresented in Medicine (URM). Fellowships are markedly less diverse, with Gynecologic Oncology representing 26.1% URM. While studies have examined Ob/Gyn residents' self-perceived preparedness for surgical skills, little is known about their confidence in treating vulnerable patients with gynecologic malignancies. This survey assessed resident confidence in providing Gynecologic Oncology care to patient populations diverse in racial/ethnic background and insurance status, while accounting for residents' own racial/ethnic backgrounds. Methods: An anonymous, novel Qualtrics survey was disseminated to current US Ob/Gyn residents, to elicit their self-reported preparedness to provide NCCN guideline-based care to diverse Gynecologic Oncology patient populations. Subjects were asked multiple-choice questions to record their own demographics followed by Likert scale questions which ranged from strongly disagree (1) to strongly agree (5) regarding their perceived readiness to care for patients diverse in insurance and racial background. Differences in responses between racial groups were analyzed using the Kruskal-Wallis Rank Sum test while differences in responses between ethnic groups were evaluated using the Wilcoxon Rank Sum test. **Results**: 207 residents complete the survey, mirroring sample sizes of national surveys of Ob/Gyn residents. There was no statistical difference in self-perceived preparedness between Hispanic and non-Hispanic Ob/Gyn residents regarding providing care for diverse racial minorities (mean Likert Non-Hispanic = 4.1 vs. Hispanic = 4.2; p = 0.222) or insurance types (mean Likert Non-Hispanic = 4.0 vs. Hispanic = 4.0; p=0.563). There was a significant difference in the number of Hispanic residents who felt that patients with Medicaid insurance experienced more difficulty obtaining non-operative gynecologic care compared to those with other insurance types (Hispanic = 3.7 vs. non-Hispanic = 3.2; p = 0.044). Further, there was a significant difference in the number of Hispanic residents who felt that patients with Medicaid insurance had to wait longer for outpatient appointments with a gynecologic oncologist (Hispanic = 3.6 vs. non-Hispanic = 3.0; p=0.016). Conclusions: All Ob/Gyn residents will encounter, screen for, and diagnose gynecologic malignancies, regardless of pursuit of Gynecologic Oncology fellowship. This study evaluated Ob/Gyn resident perceptions, finding that they feel overall prepared to provide Gynecologic Oncology care to socioeconomically diverse patient populations, though differences exist when residents are compared based on their backgrounds. Research Sponsor: None.

#### Medical students' views on oncology specialty: A cross-sectional study.

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Background: Understanding medical students' views on oncology, including in jurisdictions where societal misperceptions and social stigma about oncology exist, could help foster higher interest in oncology field among future physicians. This study is conducted to identify factors associated with interest in oncology and likelihood of pursuing a career in an oncology-related field among medical students across various medical schools in the United Arab Emirates (UAE). Methods: A cross-sectional study involving students from 7 medical schools across UAE was conducted. Students' demographics (n=5), oncology education (n=3) and prior exposure to oncology (n=6) were examined. Likert-type questions assessed students' interest in oncology and likelihood of pursuing a career in oncology, students' perspective on factors potentially affecting interest in oncology career (n=12) and the following constructed themes; i) general views about oncology (n=5), ii) confidence in skills related to challenging encounters (n=4), iii) oncology education (n=5) and iv) oncology support (n=4) in medical school. Pilot testing and validation was conducted with acceptable reliability (Cronbach's alpha  $\geq 0.70$ ). A multivariable logistic regression model was employed to identify independent variables associated with study outcomes. Results: Of all completed responses (n=145), about half were from students in UAEU vs other schools and in pre-medical vs preclinical/clinical phase (46% vs 54% and 51% vs 49%, respectively). Most (63%) had family member diagnosed with cancer and approximately a third (33%) felt pessimistic about oncology. Approximately half agreed that cancer diagnosis is often associated with social stigma (56%) and misperceptions (55%). Overall, 52% and 30% were interested in oncology and likely to pursue a career in oncology, respectively. The highest student-ranked factors affecting interest in oncology career included feeling pessimistic/ optimistic about cancer, personal/family experience in cancer, opportunities to participate in oncology research, and availability of mentorship and good local residency program. Interest in oncology and likelihood of pursuing a career in oncology were associated with family member diagnosed with cancer (OR 2.55; 1.07 - 6.28 and 4.67; 1.53 - 16.9, respectively), feeling pessimistic about cancer (0.35; 0.13 - 0.89 and 0.08; 0.01 - 0.35, respectively) and premedical vs preclinical/clinical phase (OR 0.21; 0.06 - 0.67 and 0.06; 0.01 - 0.30, respectively). Interest in oncology was also positively correlated with a composite score derived from all questions in the constructed themes (p = 0.014 Wilcoxon Test). Conclusions: Students interest in oncology, and pursuing a career in oncology, is associated with personal/family experience in cancer, pessimistic views about oncology, and availability of mentorship/research/residency, but not social stigma or societal misperceptions. Research Sponsor: None.

#### Predictive factors for academic oncology career placement.

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Background: Oncology is a discipline that has witnessed rapid expansion with new therapeutics and practices. Following this trend, training programs are increasingly valuing the cultivation of academic oncologists who will contribute to these developments through research. This study aims to explore characteristics of fellowship programs in the US promoting academic careers in oncology (initial academic position). Methods: A sampling of graduated fellow profiles available on the public websites of US hematology-oncology programs was conducted. To minimize over-representation from programs, even sampling of all available graduated fellows by year was done with a maximum of 10 per program. Characteristics including demographics, educational background, google scholar publication count during fellowship (divided into quartiles), program characteristics, and initial job (academics vs private practice) were collected. Academics was defined as working for an institution associated with a medical school. Logistic regression modeling was utilized to identify characteristics associated with higher odds of initial academic placement. Results: Between 2007 and 2023, 564 graduated fellows were identified, making up 39% of programs, with a majority favoring more recent years. Fellows graduating from NCI cancer center-associated programs and those of academic programs had significantly higher odds of obtaining an initial academic position (OR 1.60, 95% CI 1.08 – 2.38, p < 0.05; OR 2.25, 95% CI 1.22 – 4.30, p < 0.05). The strongest association was noted with scholarly productivity. Fellows of the highest quartile of productivity during their fellowship years (OR 9.70, 4.94-19.80, p < 0.001) had the highest odds of obtaining an initial academic position. Characteristics without significant association included type of medical school (US vs IMG) and gender. Conclusions: Our data shows several characteristics associated with higher odds of initial academic placement, but most prominently, fellows of the highest quartile of research productivity were more than nine times likely than those of the lowest quartile of research productivity to obtain an academic position after fellowship. Our study is limited by its observational nature, but the magnitude and significance of association is worth investigating further and can shed light on the value of fellowship academic initiatives to foster research development. Select variables of a logistic regression model examining characteristics associated with obtaining an initial academic position after fellowship. Gender and Medical School status not included. Research Sponsor: None.

		OR	95% CI	р
NCI Status	No	Reference	Reference	Reference
	Yes	1.60	1.08-2.38	< 0.05
Program Status	Community	Reference	Reference	Reference
5	Academic	2.25	1.22-4.30	< 0.05
Academic Quartile	Quartile 1	Reference	Reference	Reference
	Quartile 2	1.77	0.95-3.39	0.079
	Quartile 3	4.07	2.19-7.84	< 0.001
	Quartile 4	9.70	4.94-19.80	< 0.001

### Precision medicine preceptorship in breast and lung cancer for Latin American oncologists.

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Background: Cancer is the second leading cause of death in Latin America. Integrating genomic discoveries into patient care could improve morbidity and mortality; however economic barriers to capacity development and access to the rapeutics remain. In response to an RFP for a preceptorship for oncologists from Latin America, Emory's Winship Cancer Institute (WCI) developed a 2-week immersion involving didactics, clinical exposures, and research meetings to increase knowledge and competence of breast and lung cancer genomics. Methods: Interviews with Latin American medical oncologists, Latin America Lung Cancer Association (LALCA) leadership, and literature review were conducted to understand areas of unmet need in oncology training. A gap in knowledge and practice of genomic management of breast and lung cancer was identified and informed development of didactic and clinical exposures. The WCI website, International Association for the Study of Lung Cancer (IASLC) and LALCA publicized the program. Medical oncologists within 6 years of final oncology training applied. Participants completed a baseline needs assessment, pre-program survey to assess goals and confidence in skills, and post-program interview to evaluate the program and reassess confidence in skills. Instruments were developed with WCI's Intervention, Development, Dissemination and Implementation Shared Resource. WCI faculty were interviewed for feedback. Results: WCI hosted 12 Latin American oncologists over 3 two-week preceptorships between 2020-23, coinciding with local scientific meetings. All participants reported the program was a valuable use of time, valuable for career development and rated the program as excellent/very good. 92% reported the program met their goals and felt engaged all/most of the time. 75% rated attendance at breast and lung cancer clinics, didactics, research meetings, tumor boards as very/extremely valuable. Two-thirds intended to make changes (apply knowledge, improve communication, work with other providers like nurses, aid students in research, improve flow of activity when seeing patients, incorporate clinical research into daily practice, and add immunotherapy) in their practice at home institutions. Phase 1 and surgical oncology clinics were deemed least helpful. Themes emerged from faculty interviews: be strategic about the number of learners in clinic, characterize learner preferences and prior training/experience, articulate the preceptorship's long-term goals, and include time to team-build. Conclusions: Participants gained exposure to the latest molecular diagnostics and systemic treatments, appreciation for optimal team-based cancer care, and how clinical research drives development of novel biomarkers and therapeutics. Future goals include expanding program access to oncologists from other lowand middle-income countries and promoting post-program collaborations. Research Sponsor: Pfizer Global Medical Grants; 57516215.

## Integration of a focused podcast curriculum (PC) to improve hematology oncology fellow (HOF) knowledge: A multi-center cluster randomized controlled trial.

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Background: Several studies demonstrate widespread use of medical podcasts as learning resources. Utility of integration of educational podcasts in fellowship curricula remains unknown. Here we describe a multicenter cluster randomized trial comparing a supplemental PC with standard curriculum (SC) to SC alone for HOF. Methods: HO fellowship programs in the United States were eligible. One HOF from each program was invited via email to participate as a local PI. The trial protocol was reviewed by program directors for approval. Programs were cluster randomized to novel PC with SC (intervention) or SC alone (control). Permuted block randomization stratified by program size was performed using STATA. The PC arm was given access to a website developed by the study team with links to podcasts episodes (PE) covering 4 topics: breast oncology, myeloma, bleeding disorders, and HIT. Written show notes (SN) were provided as separate links. PE and SNs were previously developed employing an inductive approach and released by The Fellow on Call and Two Onc Docs podcasts and are freely available. Pre and post qualitative surveys (QS) and knowledge assessments (KA) were administered via REDCAP. QS utilized a 7-point Likert score. KAs were peer reviewed by expert disease-specific faculty. QS and KA links were included on the PC website. To maintain blinding, the SC arm was given a separate website with these links. HOF participation was voluntary. To improve enrollment, at minimum, QS completion was required; KA was optional. Baseline data was obtained from October to November 2023. Post data cut off will be June 2024. Power calculation was based on mean difference in comfort level and knowledge. Assuming a mean improvement by 0.5 points for QS, a total sample size of 210 HOF, 11 clusters in each arm would provide at least 80% power assuming a standard deviation (SD) of 1, intracluster correlation coefficient (ICC) of 0.05, and coefficient of variation of cluster sizes of 0.7. For improvement in KA by 10%, a total sample size of 60 HOF would provide the same power assuming SD of 15%. We therefore planned to recruit 30 HO programs to account for non-response rates. IRB review deemed the study exempt. Results: Baseline characteristics from 28 randomized programs are presented below. Conclusions: This is the first randomized education trial in graduate medical education of its kind with a priori power calculations. Our innovative use of HOF as local PIs may have led to increased participation in KAs. Recruited sites will serve as a consortium for future multicenter education research. Interim analysis will be presented at ASCO 2024. Research Sponsor: None.

SC	SC+PC
113	107
42 (37%)	40 (37%)
36 (32%)	35 (33%)
35 (31%)	32 (30%)
59 (52%)	61 (57%)
93 (̀82%)́ 44% (31% - 50%)	84 (79%) 43% (25% - 56%)
	113 42 (37%) 36 (32%) 35 (31%) 59 (52%) 93 (82%)

## Practice makes perfect: Using simulation to build and assess competency in bone marrow biopsy for heme/onc fellows.

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Background: The American Board of Internal Medicine (ABIM) requires that Hematology/ Oncology fellows demonstrate competence in bone marrow biopsies (BMB). However, offers no guidance in assessment methods. Neither the "see one, do one, teach one" nor the "complete 5 procedures" approach is sufficient to ensure competency. As this is a potentially painful procedure that requires knowledge of landmarks, simulation in a safe environment is an ideal way to introduce BMB to trainees. In 2015, we started a simulation program to teach fellows how to perform BMB using a cadaver pelvis, and assess their BMB competency. Methods: The Hematology Oncology Fellowship Program at Gundersen Health System holds a half-day simulation for our 6 fellows each July. We begin with a self-evaluation of current skills, using an 8-question pre-test. We then view a demonstration video, pausing to discuss key learning points. Fellows are given a detailed check list of the steps of the procedure. They then experiment with the tools of the procedure and practice sterile technique. We discuss the indications, contraindications, consent, and the procedure itself. For part two, fellows are divided into two groups, each consisting of a first year (F1), second year (F2), and third year (F3) fellow. A cadaver pelvis is used as the model and is positioned in a prone position. Each team is assigned a side of the pelvis. The F3 demonstrates the procedure from start to finish while the F2 and staff assesses competency and the F1 follows with the procedure check list. Once the F3 has completed the procedure and is deemed "competent" they become the leader of the session for their team. F1s can practice as many times as desired, under the guidance of the F2 and F3. F2s also have a chance to refine their skills. After the simulation is complete, fellows repeat the selfevaluation, and we debrief. Results: 44 fellows completed the simulation (F1=16, F2=14, F3=14). Questions for the pre- and post-tests were ranked on a 5-point Likert Scale of strongly agree (1) to strongly disagree (5). F1s had the worst self-assessment prior to the procedure, with a mean score of 2.4 for all questions. However, their post-test self-assessment improved to 1.6. F2s started at 1.5 and improved to 1.1 after the simulation. F3s started at 1.2 and improved to 1.0. All fellows answered that this was a useful exercise and should be continued. Comments were consistently positive, speaking to the importance of a check list, the relaxed atmosphere, and having senior fellows teach the junior fellows. Conclusions: BMB simulation allows for a lowstakes introduction to a stressful procedure, while promoting a team approach to learning. It also gives an opportunity to verify competence for graduating fellows. Fellows self-reported improvement following the session as well as from year to year. Fellows value this learning experience and look forward to it each year. Research Sponsor: None.

### Knowledge of diagnosis characteristics and treatment received among Mexican breast cancer survivors.

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Background: In Mexico, over half a million breast cancer (BC) survivors were estimated in 2020. Limited knowledge among BC survivors about their diagnosis and treatment may negatively impact their adherence to adjuvant therapy and follow-up, and thus, clinical outcomes. This study aimed to evaluate BC survivors' knowledge of their diagnosis and treatment in a Mexican BC referral center. Methods: A cross-sectional, 36-item survey evaluating knowledge of their diagnosis and treatment was conducted among BC survivors in a referral centerin Mexico City. Women diagnosed with stage I-III BC who had completed chemotherapy and radiotherapy were invited to participate between October 2023 and January 2024. Knowledge was estimated by comparing survivors' responses to medical records. Descriptive statistics were used to analyze participants' characteristics, knowledge, and information-seeking behaviors. Chi-square test was used to evaluate associations. Results: Among 129 eligible women, 95 (74%) answered the survey. At the time of the survey, mean age was 59 years, 53% had at least high school education, and 46% were unpartnered. Mean time from diagnosis to survey was 4.8 years (SD  $\pm$  2.84). Clinical stage at diagnosis was I (34%), II (41%), and III (25%). All patients underwent surgery, 76% radiotherapy, 67% chemotherapy, 88% endocrine therapy, and 14% HER-2 targeted therapy. Reporting was most frequently correct for radiotherapy (99%), tumor laterality (97%), HER2-targeted therapy (93%), and type of breast surgery (91%). Correct reporting for lymph node status was 78%, endocrine therapy 73%, clinical stage 50%, axillary surgery 44%, chemotherapy 43%, estrogen receptor 34%, histologic subtype 25%, HER2 status 24%, progesterone receptor 16%, and histologic grade 16%. BC survivors ≤60 years (p=0.005) and with at least high school education (p=0.039) were more likely to correctly report histologic subtype. Those unpartnered (p=0.013) and those  $\leq$ 5 years since diagnosis (p=0.017) were more likely to correctly report chemotherapy regimen. Forty-one (43%) survivors reported seeking additional information, mean number of sources was 1.3 (SD  $\pm$  1.96), and the most frequent source was internet (39%). Patients whose with  $\geq 1$  information source were more likely to correctly report histologic subtype (p<0.001), clinical stage (p=0.005), and receptor status (p=0.019). No associations were found between correct reporting of treatment, sociodemographic variables, and information-seeking behaviors. Conclusions: Most of the surveyed BC survivors had less knowledge of their diagnosis than their treatment. Although age, marital status, education level, and information-seeking behaviors were associated with higher diagnosis knowledge, no associations were found for treatment. Culturally appropriate strategies to improve knowledge among BC survivors are needed to empower this growing population. Research Sponsor: None.

### Analysis of hematology-oncology fellowship match outcomes (2007-2022) and cross-subspecialty comparisons: A retrospective cohort study.

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Background: The four most sought-after fellowships following Internal Medicine, by volume, are: Hematology-Oncology (HO), Cardiovascular (CV), Gastroenterology (GI), and Pulmonology-Critical Care (PC). This analysis assesses the trends in match outcomes for HO compared to other fellowships, including subset National Residency Match Program (NRMP) outcomes based on applicant types [United States (US) and non-US medical graduates (MDs)]. **Methods:** This retrospective cohort study analyzes applicants who applied to HO, CV, GI, or PC fellowships for 2007-2022. The analysis is based on publicly available NRMP data for this time. Metrics analyzed include: number of applicants per position, number and type of applicants, number and type of successfully matched applicants, and, corresponding match rates (MR) within each subspecialty. Using the chi-square test, this analysis compared match outcomes between different applicant types. Results: Out of total 55,604 applicants, the distribution across subspecialties was as follows: HO (12,006), CV (19,950), GI (11,693), and PC (11,955). Despite the apparent differences in the total number of applicants for different subspecialties, the number of applicants per position was not statistically significantly different, and decreased from 2007 to 2022 for all subspecialties except PC (+6.7%). As the number of applicants increased, the number of available positions also increased to a substantially higher degree. In 2008, MR ranged from 50-64% across subspecialties, gradually increasing over the years, with HO achieving the highest MR at 73.5% in 2022, compared to PC at 60.7%. USMD graduates consistently had higher MRs compared to non-USMDs (p<0.001) across all subspecialties. Despite this persistent gap over the study's duration, this difference progressively narrowed across all subspecialties, with HO representing the lowest difference (22.1%) and GI the highest (37.2%) in match rates for 2022. **Conclusions:** The HO fellowship exhibited the highest match rates, closely followed by CV. The proportional increase in HO, CV and GI positions in response to the growing applicants has led to a reduction in the applicants per position, unlike in PC. HO fellowship consistently stands out with the lowest MR disparity among USMDs and non-USMDs. This may represent successful efforts towards equity, diversity and inclusion among programs. Research Sponsor: None.

	HO 2008	HO 2022	CV 2008	CV 2022	GI 2008	GI 2022	PC 2008	PC 2022
Positions	424	663	699	1120	325	616	374	721
Applicants	724	894	1264	1620	622	974	569	1182
USMD	312	412	550	653	319	446	206	452
<b>Applicants per Position</b>	1.7	1.4	1.8	1.5	1.9	1.6	1.5	1.6
Matched	416	657	693	1118	313	614	359	718
Matched USMD	241	352	438	568	230	371	182	351
Match Rate (MR) %	57.5	73.5	54.8	69	50.3	63	63.1	60.7
MR USMD %	77.2	85.4	79.6	87	72.1	83.2	88.3	77.7
MR Non-USMD %	42.5	63.3	35.7	56.9	27.4	46	48.8	50.3
MR Disparity %	34.7	22.1	43.9	30.1	44.7	37.2	39.5	27.4

## Development of a professional oncology navigation training and credentialing program: ACS Leadership in Oncology Navigation (ACS LION).

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Background: Navigation by trained professionals is a key component to improving cancer outcomes in the US, helping to ensure every cancer patient has access to timely, quality, and culturally competent care. Due to limited standardized training and lack of sustainable funding for navigation, patients are not receiving the comprehensive care they deserve. The new Center for Medicare (CMS) 2024 physician fee schedule pathway for reimbursement of non-clinical patient navigation (PN) offers a pathway to create sustainable oncology navigation. Methods: The American Cancer Society developed the Leadership in Oncology Navigation (ACS LION) training and credentialing program with the goal of increasing access to high quality, standardized navigation training in compliance with Medicare requirements and in alignment with the Oncology Navigation Standards of Professional Practice. The program includes 10 learning modules and associated guizzes and a final summative assessment that is remotely liveproctored to demonstrate learning comprehension. This mixed methods analysis includes program descriptive data and paired t-tests of pre- and post-course comprehension and qualitative thematic analysis of open-ended survey responses. Results: The ACS LION program was piloted among 11 organizations nationally, including both academic health systems and community-based organizations. Of the 79 participants, 23% were Black and 14% were Hispanic. 18% of participants had less than one year of experience and 29% had more than 5 years of experience in navigation. 28% held clinical job titles. 51% had organization-specific in-service training and only 11% had taken an external standardized training program. Compared with pre-course scores, the program was significantly associated with higher postcourse self-reported comprehension of 9 CMS required PN competencies (p<0.001; p=0.08 for professionalism and ethical conduct). Qualitative analysis revealed 4 themes: learner experience, practicality, comprehensiveness, and role delineation. Post-program ratings averaged 4.5 out of 5.0, including overall learning experience, meeting a need, would recommend to others, and enhanced their professional experience. Conclusions: Pilot participants from diverse racial, ethnic, and work experience backgrounds found ACS LION to be comprehensive, engaging, and provided either critical foundational knowledge for less experienced navigators or enhanced their existing knowledge for experienced navigators, providing practical tools and resources. Pilot results informed the course that was launched nationally on Jan 1, 2024. Webinars, learning collaboratives, refresher courses, and re-credentialing will continue to be developed and offered as part of ACS LION and ACS commitment to advancing high quality professional navigation. Research Sponsor: None.

#### Bioethics of over- and undertreatment in older adults with cancer.

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Background: Over-/undertreatment are pervasive in older adults with cancer, despite oncologists prescribing with best intentions. What "ought" to be prescribed with limited evidence creates challenges in adhering to the principles of bioethics: beneficence, nonmaleficence, justice, and respect for autonomy. Our objective for this study was to elucidate whether and how tensions among these ethical principles can contribute to over-/undertreatment in older patients. Methods: We designed a modified Delphi study, convening a panel of 13 experts in biomedical ethics (5 male, 8 female; 4 MD, 4 PhD, 2 MD/MA, 1 MD/PhD, 1 JD/MDiv, 1 DNP) from U.S. and Canadian institutions for three iterative rounds of data collection. In the first round an electronic questionnaire—we presented definitions of overtreatment and undertreatment in older adults with cancer (DuMontier, J Clin Oncol, 2020) and asked questions delineating which ethical principles related to each definition, followed by questions regarding how over-/ undertreatment might occur from conflicts among different ethical principles. Consensus for each question was defined as ≥75% of experts answering "agree" or "strongly agree". The second round consisted of a virtual synchronous focus group of 9 of the panel experts led by a qualitative researcher to review round one results and discuss questions that did not reach consensus, followed by a second questionnaire including these questions. Results: After the first round, experts reached consensus that bioethical principles applied to over-/ undertreatment in older adults with cancer. Specifically, 92% felt that overtreatment can occur when oncologists overemphasize beneficence that values the potential benefit of cancer treatments, while underemphasizing non-maleficence with respect to treatment adverse effects. Moreover, 77% felt that overtreatment can also occur when oncologists prioritize patient autonomy (preference to be treated) over non-maleficence (oncologists' concerns that treatment harms outweigh benefits). 84% felt that undertreatment can occur due to a lack of justice in equitable consideration of cancer treatments that could provide similar benefits in older adults as they would in younger adults. Moreover, 77% felt that undertreatment can occur when oncologists underemphasize patient autonomy, failing to consider patient preferences regarding which benefits to pursue and risks to take. Data collection for the second questionnaire and qualitative analysis of the focus group are underway. Conclusions: Our findings suggest that tension in ethical principles can lead to over- and undertreatment in older adults with cancer. The "right" treatment in older patients in the context of limited evidence is not simply one that aims to aggressively target their cancer, but that balances both benefits and harms in light of the whole patient and their preferences, while not restricting therapies based on age alone. Research Sponsor: Murphy Family Fund; Edward P. Evans Center for MDS at Dana-Farber Cancer Institute; Dana-Farber/Harvard Cancer Center Specialized Program of Research Excellence in Multiple Myeloma through National Cancer Institute; P50 CA100707.

#### Hematology/oncology fellowship programs' instagram presence.

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Background: Since the SARS-CoV-2 pandemic, applicants and programs have transitioned to virtual platforms as a surrogate for in-person visits. Social media provides insight into trainees' experiences, wellness, medical education, and life outside the hospital. Instagram has been reported as the preferred platform and a majority of applicants note that social media content could change their perception of a program. Due to the emergence of social media in fellowship recruitment, no studies have analyzed the relationship between Instagram content and hematology/oncology fellowship programs' perception. Methods: The American Medical Association Fellowship and Residency Electronic Interactive Database was used to identify and categorize programs as either community-based (CB), community-based academic affiliated (CBAA), university-based (UB), military, and other. For programs with Instagram pages created prior to 2023, the posts from 2022 were subjectively classified into one of two categorizes, either "Medical Education" or "Fellow Life" based on the emphasis of the caption and image. "Medical Education" encompassed posts that promote education as well as academic accomplishments of trainees and faculty. "Fellow Life" included posts emphasizing culture, wellbeing, camaraderie, and social activities. Post from 2023 were analyzed for Instagram accounts created after 2022. The first image was used for posts containing multiple images. This was exempt from IRB review by Pennsylvania State University. Results: There are 183 accredited hematology/oncology fellowships programs; 60% (n=110) UB, 28% (n=52) CBAA, 9% (n=16) CB, 2% (n=4) others, and 0.5% (n=1) military. Of the 183 programs, 33 Instagram pages representing 18% of programs were identified (binomial test, p<0.0001), consisting of 70% (n=23) UB, 24% (n=8) CBAA, and 6% (n=2) CB. UB programs were significantly more likely to have an Instagram (Fisher's exact test p<0.0001). Posts highlighting "Fellow Life" were significantly more frequent than those emphasizing "Medical Education" (Wilcoxon signed rank test, p = 0.001) (interquartile range: 65% (50-84%) vs. 36% (17-50%)). Conclusions: Despite the implementation of virtual interviews, an overwhelming majority of hematology/ oncology fellowship programs do not have an Instagram page. Those with Instagram emphasize extracurricular wellbeing and culture, which is likely valuable to applicants. In this digital age, Instagram is not just a platform; it is a catalyst for connection, engagement, and decisionmaking in the hematology/oncology recruitment landscape. We advocate for a strategic embrace of Instagram, a balanced content mix highlighting academic and cultural facets, as a key recruitment strategy, reflecting the unique ethos of each program. Reference: 1. Oliver MG, Kelly K: Student Perceptions and Use of Social Media as Residency Program Information. Fam Med 54:380–383, 2022. Research Sponsor: None.

### Exploring the digital footprint: Social media use among hematology oncology fellowship programs in the U.S.

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Background: Social media platforms have emerged as pivotal tools for communication, outreach, and engagement. This study aims to assess the adoption and utilization of social media among Accreditation Council for Graduate Medical Education (ACGME) accredited Hematology Oncology (HO) fellowship programs, examining the correlation between program characteristics and social media presence. Methods: A comprehensive review was conducted of all ACGME-accredited HO fellowship programs to identify their presence on popular social media platforms, Twitter/X and Instagram. Collected metrics included the presence of official accounts, the date of creation, and follower counts as of February 2023. Additional details such as university affiliation, program size, and geographic location were also gathered to understand their influence on social media usage. Results: Out of 183 programs, 54 programs (29.5%) were found to be using Twitter, while 21 programs (11.5%) had an Instagram presence. Of these, 9 programs (4.9%) had a dual presence. Regional analysis revealed that the East North Central region had the highest Twitter/X presence, with 14 programs (25.9%), while on Instagram, the Pacific region led with 5 programs (23.8%). A significant association was observed between program type (university vs. community) and Twitter/X use. Programs with a higher number of fellowship positions (four or more) were more likely to use social media. In the period post-2021, approximately 20 programs adopted Twitter, and 15 began using Instagram. Descriptive statistics, including median values and interquartile ranges for posts, followers, and accounts followed, along with verification percentages, are detailed in the accompanying table. Conclusions: The use of social media within HO fellowship programs is a strategic tool for increasing program visibility and engaging with the next generation of medical professionals. The findings highlight a predominant use of social media in larger, possibly more resourceendowed programs, and suggest that these platforms may be an effective medium for recruitment in a digital age. This study emphasizes the significance of social media in the contemporary recruitment landscape and lays the groundwork for future research on its impact on program attractiveness and applicant selection processes in the medical field. Research Sponsor: None.

Utilization of social media accounts in HO programs.			
	Twitter/X	Instagram	
Program, N (%)	54 (30)	21 (11)	
University Programs, N(%)	47 (̀87)́	15 (71)	
Total Posts, Median (IQR)	106 (59-293)	37 (1 <sup>9</sup> -95)	
Followers, Median (IQR)	311 (181-525)	305 (146-468)	
Following, Median (IQR)	125 (66-224)	102 (81- 243)	
Verified (%)	33 (61)	19 (90%) ´	

IQR: Interquartile Range, Verified : Using offical HO program website Link on Social Media.

## The role of social media and email in hematology oncology fellowship program recruitment: Insights from national survey of program directors.

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Background: In the dynamically evolving medical landscape, the role of digital communication, encompassing both social media and email, in Hematology Oncology fellowship recruitment is increasingly prominent. This comprehensive study investigates how U.S. program directors (PDs) leverage these platforms, particularly in an era where virtual interviews are becoming the norm. By examining the utilization of social media alongside traditional email communications, this research aims to illuminate the dual strategies employed in engaging prospective fellows. Methods: From November to December 2023, a nationwide anonymous survey was conducted among all American Council for Graduate Medical Education (ACGME) accredited Hematology Oncology fellowship PDs. This survey sent via SurveyMonkey sought to collect demographic information of PDs, details about their programs, and insights into their use of social media platforms such as Twitter/X and Instagram, in addition to email, for both promoting their programs and reviewing fellowship applications. Results: In a survey of 183 Hematology Oncology fellowship programs, 32 program directors (PDs) responded, yielding an 18% response rate. The majority of PD were women (59%) with a predominant affiliation with university hospitals (69%). The responses indicated a broad geographical spread, especially in the South Atlantic and Pacific regions. Around 31% (10) of the program directors reported using Twitter/X, and 16% (5) utilized Instagram for promoting their fellowship programs. However, it was rarely used for applicant review (10% for Twitter/X, 0% for Instagram). Notably, there was no statistical difference in social media usage between university and community hospital PDs for program promotion or applicant engagement In contrast, email remains central in the recruitment process. On average, each PD receives about 57 emails expressing interest in their program. A considerable 71% (22) of PDs indicated that they would review an applicant who contacted them via email, with an average review rate of 80%. However, a relatively small percentage—18%—of the applicants reviewed were subsequently invited for an interview. Significantly, PDs from university hospitals were more inclined to review applicants via email compared to their counterparts in community hospitals (P-value<0.01). Conclusions: This survey sheds light on the evolving dynamics of Hematology Oncology fellowship recruitment, marking a significant transition in the way program directors connect with potential candidates. Our research reveals that social media is gradually becoming part of the promotional toolkit for fellowship programs, yet email remains the primary method for communicating with and reviewing applicants. Research Sponsor: None.

## YouTube as a reliable source of information on antibody drug conjugates: A qualitative analysis.

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Background: YouTube is an open-access source of information which can serve a platform for health information and misinformation. Antibody Drug Conjugates (ADC) are a novel therapy that utilizes monoclonal antibodies to target antigens expressed on cancer cells, thus delivering cytotoxic agents specifically to malignant cells and minimizing toxic effects on healthy cells. Our study sought to assess the quality and engagement parameters of the 100 most viewed videos on YouTube regarding ADCs. Methods: A YouTube search was conducted with the keywords "Antibody Drug Conjugate" and "cancer". The videos were sorted by the highest number of views. Duplicates and videos not in the English language were excluded. A total of 100 videos were included in the final analysis. They were organized into three categories: academic, commercial, and media. Next, they were assessed for quality using two validated quality instruments, the DISCERN and PEMAT scoring systems. The number of views, comments, and likes were also evaluated. A Pearson correlation and descriptive statistics using R Studio v2002.12.0-353 was then used to generate data. Results: The total number of views on the videos on YouTube regarding ADC was 95,969 with a (median number of views of 723.5). The videos were categorized into 71% from academic sources, 28% from commercial, and 1% from media sources. The mean DISCERN sum was 41.13. The number of YouTube videos that were rated as poor or very poor were 44%, followed by 33% that was rated as fair, and only 23% were rated as good or excellent. 21% videos discussed risks and benefits, while only 6 % of the videos provided support in shared decision making. 63% of the videos stated the aims clearly. Based on the PEMAT score, 87% of videos made their purpose evident, 34% summarized the videos, and 31% explained how to use the medication. There was a significant positive correlation in number of likes on videos and DISCERN score (r 0.253, 95% CI 0.06-0.428, p 0.011), PEMAT understandability score (r 0.197, 95% CI 0.00063-0.379, p 0.0494), and PEMAT accountability (r 0.2, 95% CI 0.00368-0.381, p 0.0461). There was also a positive correlation between length of video and DISCERN score (r 0.32, 95% CI 0.13-0.49, p<0.001), PEMAT understandability score (r 0.23, 95% CI 0.04-0.41, p 0.01), and PEMAT actionability score (r 0.4, 95% CI 0.31-0.62, p <0.001). **Conclusions:** Our analysis revealed that the overall quality of videos was suboptimal, with the majority categorized as poor or fair. Important aspects such as risks, benefits and shared decision-making were inadequately addressed, indicating a potential gap in patient education and informed decision-making. Although longer videos have positive correlation, it would be impactful to keep the duration of the video shorter. Efforts to promote high-quality, patient-centered educational content on ADCs are needed to ensure access to reliable information to support treatment decisions. Research Sponsor: None.

# Cracking the code: Can bibliometric attributes predict NIH R01 grant funding outcomes in gastrointestinal oncology? Exploring patterns from a five-year analysis.

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Background: The allocation of National Institutes of Health (NIH) Ro1 grants holds paramount importance for principal investigators in the field of scientific research. In this study, we explore the relationship between bibliometric attributes of principal investigators - specifically H-index, citations, publications, and seniority with the amount of NIH grant funding for R01 grants under gastrointestinal oncology from the fiscal years of 2018 to 2022. Understanding these interrelationships is crucial for researchers aiming to enhance their profiles to secure higher funding amounts from the NIH. Methods: The data was retrieved from the NIH Re-PORTER (Research Portfolio Online Reporting Tools Expenditure) using gastrointestinal oncology-related search terms from 2018-2022. The number of citations, publications, Hindex, and seniority were obtained from Scopus. The bibliometric attributes of principal investigators were correlated with NIH grant funding amounts. Multiple regression analysis was employed to quantify the predictive power. Additionally, t-tests were performed to examine the significant differences in grant funding between high and low h-index groups. Results: A total of 1652 principal investigators who were awarded a gastrointestinal oncology related R01 grant were included in this study. The H-index consistently showcases a positive correlation with the amount of grant funding, reaching statistical significance in 2020 (H-index coefficient=1510.49, p value=0.07). Concurrently, t-tests emphasize the importance of H-index, illustrating that PI's with high H-indexes (H-index >42) secure significantly higher funding (average grant=\$423,806, p=0.006 compared to those in the lower H-index group (average grant=\$420,306, p=0.004). Conversely, citations showcased mixed results, with 2020 revealing a significant negative correlation (coefficient: -1.63, p= 0.04). Publications displayed a strong positive effect in 2021 (coefficient: 231.68, p value=0.10). Seniority exhibited varying impacts across years, notably a significant negative relationship in 2018 (coefficient: -3013.9, p=0.025). Conclusions: This study illuminates the complex interplay between PI's bibliometric attributes and NIH grant funding outcomes. Notably, high h-index values consistently correlate with a higher funding amount for NIH grants. Although these insights contribute to a deeper understanding of the factors influencing NIH grants, further analysis should investigate additional variables that may significantly impact NIH grant funding. Research Sponsor: None.

#### Health insurance plans offered at NCI-designated cancer centers.

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Background: The health insurance landscape in the US represents an expensive and complex challenge to patients and physicians alike. Little is known about health insurance plans (HIPs) offered to physicians, particularly at NCI-designated cancer centers, which represent centers seeking to meet the highest standards. Methods: We collected data on the HIPs offered to physicians at NCI-designated cancer centers by reviewing institution websites from 11/2023 -01/2024. We abstracted data on the insurance premium, deductible, out-of-pocket (OOP) maximum, and coinsurance for hospitalizations, limited to three HIPs per institution. We derived estimates using the lowest charge. We calculated inpatient stay costs based on standard hospital stay costs (\$2,883 per day over an average of 4.5 days). We compared HIPs between public and private cancer centers. We used US Census Bureau population density data and regression models to explore associations among population density and OOP costs. Results: Among 65 NCI-designated cancer centers reviewed, 61 (93.8%) had readily available information about HIPs provided. Most institutions provided HIPs for all hospital employees, while 2 institutions only covered physicians. On average, each cancer center offered 3.67 HIPs, involving 1.67 insurers (54.1% offered a single insurer). Among 153 HIPs overall, 51.6% were preferred provider organization (PPOs) and one-third (33.3%) were health maintenance organization (HMOs). Only 22.9% of HIPs were high-deductible health plans (HDHP). The majority of cancer centers offered PPO plans (75.4%), HMO plans (57.4%), HDHP plans (55.7%), and some (24.6%) offered other plans, such as point of service and exclusive provider organization. Average costs for different kinds of HIPs are presented in the Table. A higher percentage of public cancer centers provided HMOs (60.5% vs. 50.0%, p=0.76) and PPOs (84.3% vs. 60.5%, p=0.09) than private centers, yet differences did not reach significance. Centers located in regions with higher state population density were more likely to have higher HMO OOP costs (beta=2.72; p=.006) and lower PPO OOP costs (beta=-2.98; p=.012). Conclusions: We found that most NCI-designated cancer centers had readily available information about HIPs provided to physicians. For these centers, physicians had limited HIP options offered, particularly in private institutions, which offered fewer HMO and PPO plans. We also demonstrated associations among state population density and OOP max in HMO and PPO plans. Our study provides a current synopsis of HIPs and identifies disparities among them, contributing to a foundation for future research. Research Sponsor: None.

Average HIP costs reported for HMOs, PPOs, and others.			
Average Costs (\$)	HMOs	PPOs	Others
Premium	133.6	176.8	144.2
Deductible	387.8	906.2	583.7
Copay of PCP visit	20.0	19.7	15.9
Copay of specialist visit	29.5	30.4	25.1
Coinsurance for inpatient stay	955.2	1712.0	1242.5
OOP Maximum	3300.2	3823.8	2732.6

## Development of equity, diversity, and inclusion competencies in residents and faculty in oncology through formal and informal learning.

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Background: In recent years, a growing body of literature has suggested that patients need their clinicians to provide culturally competent care. A focus on integrated and longitudinal training within the domains of equity, diversity and inclusion (EDI) is needed to equip physicians to meet patients' needs. Oncology is one such specialty that needs strong skillsets in EDI given its vulnerable and complex patient populations. This study explores how physicians within oncology learn about the domains of EDI through formal and informal learning. Methods: Using constructivist grounded theory (CGT), this study explores EDI competency formation at one academic center - the Juravinski Cancer Center in Hamilton ON, Canada. A purposive sample of 16 staff and resident physicians was taken to incorporate variation sampling including a variety of ages, genders, and work/training experience. Participants were from both medical and radiation oncology. Semi-structured one-on-one interviews were conducted. Transcripts were generated, anonymized, and analyzed iteratively. Data analysis followed stages of open, axial, and selective coding through which themes were constructed. Interviews were continued until data saturation was reached. Results: Of the 16 participants, there was an even distribution between men (8) and women (8). Mean age was 43 (range 30-65). There were 5 residents and 11 faculty members. 9 were from medical oncology and 7 from radiation oncology. The major themes generated from the study were: the relationship between EDI competencies and professional identify formation, the role of culture and context in influencing exposure and learning about EDI, and the relationship between formal and informal learning opportunities. Conclusions: This study is the first to explore of how oncologists presently develop EDI competencies through formal and informal learning. The study has discovered the role of professional identify formation as a factor influencing learning, the impact of the culture and context of medicine, and the significant interplay between formal and informal learning in developing EDI skillsets. While much learning takes place informally, informed by clinical encounters and personal experiences, there is a need to marry the informal learning opportunities to more structured formal teaching in the training and clinical environment. Research Sponsor: None.

Themes and codes.			
Themes	Codes		
EDI competencies and professional identity formation	- Personal identify formation - Motivation - Authentic outreach - Learning opportunities - Emotions		
The role of culture and context	Personal experiences     Mentorship and role-modeling     Landscape of medical training     Medical culture     Barriers (time, authentic outreach, changing entrenched systems)		
Relationship between formal and informal learning	- Lack of formal training - Role of informal learning - Amalgamation of both		

#### Al in oncology: Resident perspectives by gender and tech literacy.

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Background: The integration of AI and ML in oncology demands that physicians adapt and grasp the basics for responsible use. We evaluated AI knowledge and perspectives among Canadian oncology residents, noting differences by program, gender, and tech literacy, and pinpointing education gaps. Methods: An ethics-approved survey collected anonymous responses from Canadian oncology residents, analyzing gender, program, and tech skills. Descriptive statistics, cross-tabs, and chi-square tests assessed associations; t-tests and Mann-Whitney tests compared groups. Results: A total of 57 (31%) residents and fellows, out of an estimated 182, participated, with representation from each oncology training program in Canada. Most of participants were male (63.2%) and most participants self-identified as white (42.1%) or Asian (22.8%). RO programs were better represented than MO programs (68.5% vs 31.6%) with balanced representation across all years of training. In our survey, women equally favored Medical Oncology (MO) and Radiation Oncology (RO) at 50%, but were more in MO (55.6%) than RO (26.3%). Men preferred RO (77.8%) over MO (22.2%). Tech literacy showed a gender gap, with more men (91.7%) feeling tech-savvy than women (8.3%). Tech-savvy respondents leaned towards RO (84%) and were younger (30 vs 33 years). They also showed more willingness to use AI, with a significant difference in willingness scores (1.52 vs 2.06). Despite gender not influencing AI attitudes significantly, tech literacy correlated with better AI understanding. High awareness of AI in medicine was reported (91.2%), with a strong belief in AI's future prevalence (96%). The majority were willing to use AI (86%) and recognized the need to understand it (74%). RO participants were more inclined towards AI education and usage than MO counterparts. The study highlighted a significant interest in AI learning (73%), with a preference for workshops (79%). Only 29% could describe AI, indicating a gap in AI education, despite 63% acknowledging its importance in training. Formal AI training was rare (12.3%), with a desire for more education, especially among RO residents. All findings had p<0.05. Conclusions: Canadian oncology residents anticipate AI's growing influence in medicine but face educational deficiencies. Gender, program preference, and tech literacy impact attitudes toward AI, highlighting the need for inclusive education to bridge gaps and foster diversity in AI's medical application. Research Sponsor: None.