**68** **Oral Abstract Session**

## Enrollment patterns and site-level predictors of Black participant recruitment to a multisite randomized clinical trial (RCT) of endocrine therapy adherence support.

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**Background:** Accrual of racial and ethnic minority patients (pts) to clinical trials has been an ongoing challenge in research. Barriers exist at many levels of engagement including trial availability, screening biases, strict enrollment criteria, and structural racism. Lack of trial diversity has led to less generalizable medical evidence, suboptimal data for toxicity and efficacy of cancer treatments, poorer outcomes and continued mistrust by communities of color in research processes that exclude or marginalize them. Site factors and study design strategies associated with successful recruitment of diverse study populations are understudied. **Methods:** Alliance A191901 is an RCT testing combinations of text and telephone support to promote endocrine therapy adherence among breast cancer survivors. It oversamples Black participants and those < 50 years at thresholds of 30% each. Administrative enrollment data was used to track and describe monthly accrual trajectory by race among the initial 50% of participants (n = 590) and to examine associations between % Black participants accrued and accruing site characteristics, including site type, geographic region, % Black population in the site's zip code and volume of pts by race accrued to recent (2018-2019) Alliance trials, using $\chi^2$ tests. We also examined patterns of Black participant accrual before and after closure of the A191901 study to non-Black participants. **Results:** At 50% accrual, 124 sites had enrolled at least 1 participant. Among 590 participants, 9.7% were Black and 22.5% were < 50 years. Neither site type nor volume was associated with % Black participants recruited. Sites in the South recruited higher proportions of Blacks (19.0% vs 5.6% for Midwest, the lowest region, $p < 0.001$). Neighborhood racial composition was positively associated with accrual of Black participants (17.2% at sites from highest Black composition vs. 2.3% in lowest, $p < 0.001$). Recruitment trajectories of Black participants consistently lagged those of non-Black participants in the first half of the study; however, Black participants recruited per month numerically increased after the study reached target accrual of non-Blacks and closed to non-Black participants. **Conclusions:** Sites in neighborhoods and geographic regions with larger Black populations recruited higher proportions of Black participants, but site type and volume were not associated with recruitment of Black participants. Closure of non-Black study strata based on predetermined accrual targets may positively impact recruitment trajectories of Black participants, but further study is needed. Site selection based on neighborhood composition and geography may be an appropriate tool for increasing trial diversity. Support: UG1CA189823. Clinical trial information: NCT04379570. Research Sponsor: Alliance.

**69** **Oral Abstract Session**

## Association of historical housing discrimination and colon cancer treatment and outcomes in the United States.

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**Background:** In the 1930s, the federally-sponsored Home Owners' Loan Corporation (HOLC) created maps that directed mortgage financing based largely on a neighborhood's racial composition. American neighborhoods were subdivided into four risk-based rankings (A – best neighborhood, B – still desirable, C – in decline, and D – hazardous and mapped in red) for mortgage approvals and denials. "Redlining" resulted in racial segregation and systemic disinvestment in communities targeted for marginalization. We investigated the association between historical housing discrimination and contemporary diagnosis, treatment, and survival outcomes in colon cancer – a leading cause of cancer deaths amenable to early detection and treatment. **Methods:** Individuals diagnosed with colon cancer from 2007-2017 were identified from the National Cancer Database. Individuals residing within known zip code tabulation areas (ZCTA) in 196 cities with ≥10% HOLC coverage were included. Residences were assigned a HOLC grade (A, B, C, or D) based on the majority HOLC area represented. Multivariable logistic regression models (adjusted for age and sex) were used to investigate the association of housing discrimination and late stage (stages III/IV) diagnosis, time to chemotherapy initiation, and non-guideline-concordant care (no chemotherapy, surgery, or < 12 lymph node dissection). Multivariable Cox proportional hazard models with age as time scale were used to investigate the association of housing discrimination and overall survival. **Results:** There were 98,335 patients with new diagnoses of colon cancer with median age 68 years. Individuals residing in HOLC D were more likely to be non-Hispanic White (59%), have public insurance (46%), and income < $40,000/year. Compared to people living in majority HOLC A ZCTAs, living in majority HOLC D had higher odds of a late-stage diagnosis, and living in majority HOLC B, C, or D had higher odds of non-guideline concordant colon cancer care with longer time to chemotherapy initiation. For people living in majority HOLC C and D, overall survival for all stages and late stage was worse when compared to HOLC A ZCTAs. Findings were consistent in sensitivity analysis. **Conclusions:** Historical housing discrimination is adversely associated with contemporary colon cancer care and outcomes. Findings underscore the importance of state-and federal-level practices on mortgage lending regulation and fair housing practices in determining equitable cancer risk, access to care, and outcomes. Research Sponsor: None.

**Housing and cancer outcomes.**

| HOLC Rank | Late Stage Diagnosis (OR, 95% CI) | Time to Chemotherapy Initiation (HR, 95% CI) | Non-Guideline Concordant Care (OR, 95% CI) | Overall Survival (HR, 95% CI) |
|---|---|---|---|---|
| A | Ref | Ref | Ref | Ref |
| B | 0.96 (0.9, 1.0) | 1.2 (1.1, 1.2) | 1.1 (1.0, 1.2) | 1.1 (1.0, 1.1) |
| C | 0.99 (0.9, 1.1) | 1.2 (1.1, 1.3) | 1.2 (1.1, 1.3) | 1.1 (1.1, 1.1) |
| D | 1.1 (1.0, 1.1) | 1.3 (1.2, 1.4) | 1.4 (1.3, 1.5) | 1.1 (1.0, 1.1) |

*OR, Odds Ratio; HR, Hazard Ratio.

## Associations of delays in care due to transportation barriers and care utilization, and cause-specific mortality risk among the U.S. adults with a cancer history.

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**Background:** Cancer survivors have greater comorbidity burden, health care use, and mortality risk than individuals without a cancer history. Cancer survivors are also more likely to experience transportation barriers to care in the US. This study examines associations between transportation barriers and cancer survivors' care utilization and outcomes in a nationally representative sample. **Methods:** We identified cohorts of cancer survivors (n = 28,606) and adults without a cancer history (n = 469,860) from the 2000-2018 National Health Interview Survey (NHIS) linked to the recently released NHIS Mortality Files. Transportation barriers were measured as medical care delays during the past 12 months due to lack of transportation. Outcomes included lack of routine place for care, emergency room (ER) use during the past 12 months, all-cause, and cancer-specific mortality. Their association with transportation barriers was estimated using weighted multivariable logistic, and Cox's proportional hazards regressions, respectively. Models were adjusted for age, sex, race, educational attainment, comorbidities, region, year of survey, and functional limitations, as well as time since cancer diagnosis, and cancer types (breast, colorectal, prostate, and others). Health insurance coverage was added sequentially to models. **Results:** 2.8% of cancer survivors and 1.7% of adults without cancer history reported delays in care due to transportation barriers. Cancer survivors with transportation barriers had the strongest associations with lack of routine place for care and ER use; followed by survivors without transportation barriers; and adults without a cancer history with and without transportation barriers (Table). Similarly, transportation barriers were associated with the highest risk of all-cause and cancer-specific mortality risk among cancer survivors. Further adjustment for health insurance reduced the magnitude of association between transportation barriers and mortality. **Conclusions:** Cancer survivors who delayed care due to lack of transportation were more likely to use the ER. They also had the highest risks of all-cause and cancer-specific mortality. Efforts are needed to mitigate transportation barriers in the rapidly growing but vulnerable cancer survivor community. Research Sponsor: None.

| | | | | All-cause Mortality** | | Cancer-specific Mortality** | |
|---|---|---|---|---|---|---|---|
| Cancer History | Transportation Barriers | No Routine Place for Care* | ER Use* | Adjusted Model | Adjusted Model w/ Insurance | Adjusted Model | Adjusted Model w/ Insurance |
| Yes | Yes | 1.69 (0.77, 3.69) | 5.07 (3.20, 8.04) | 2.60 (1.71, 3.95) | 2.31 (1.52, 3.51) | 1.38 (1.10, 1.75) | 1.29 (1.02, 1.63) |
| | No | 1.20 (0.57, 2.55) | 2.69 (1.77, 4.08) | 1.86 (1.26, 2.76) | 1.83 (1.23, 2.72) | Ref | |
| No | Yes | 1.25 (1.16, 1.35) | 2.00 (1.89, 2.12) | 1.58 (1.47, 1.70) | 1.39 (1.29, 1.50) | | |
| | No | Ref | | Ref | | | |

*Odds Ratio (95%CI). **Hazard Ratio (95% CI).

**71** **Rapid Abstract Session**

## Physician knowledge and attitudes toward breast cancer screening strategies in transgender population.

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**Background:** Transgender people experience intersecting forms of marginalization and suffer significant healthcare disparities. There is evidence that healthcare providers are insufficiently equipped to provide adequate healthcare to this population. Hormone-replacement therapy for trans-women requires blockade of androgen production and estrogen supplementation, which increases the risk of breast cancer (BC) compared to cis-males. Also, trans-women without gender-affirming mastectomy should undergo BC screening (BCS). We seek to explore the knowledge and attitudes among physicians regarding current strategies for breast cancer screening in trans-women and men. **Methods:** We adapted an online 15-item survey exploring knowledge and attitudes among physicians on strategies for BCS in trans people. The first 6-items evaluated attitudes, and the last 9-items knowledge. We conducted a pilot phase to assess physicians' understanding before the final data collection and adjusted it after corrections. Participants were invited through social media and directly peer-to-peer in June 2022. Descriptive statistics and Chi-square test were used for statistical analysis using SPSS ver. 26. **Results:** A total of 165 participants completed the survey, 96 (58.2%) self-identified as male, 66 (40%) female, and 2 (1.2%) non-binary gender with a mean age of 30 years (23 – 60 years). Most participants were residents and fellows (70.3%), and 29.7% were attendings. Overall, only 7.3% of participants felt confident in their knowledge of BCS in trans-people, 55.2% felt that had an inadequate preparation regarding transgender health during medical school and 86.1 and 83% agreed that it should be thoroughly addressed during medical school and residency, respectively. Regarding knowledge, 10.9% recognized that BC risk is different between trans- and cis-women, 9.7% identified that trans-women had a lower BC risk, and 77% answered that transgender people have insufficient access to health services. Finally, as for specific BC screening strategies, only 49.1% correctly identified BCS strategies for trans-women, 61.2% correctly answered the recommended age to start BCS in trans-women, 40.6% the periodicity for BCS, and 63% identified the correct recommendation for BCS trans-men without a gender-affirming mastectomy. **Conclusions:** Current physician knowledge regarding BCS strategies in the transgender population is limited. Nonetheless, respondents identified transgender health as an area of opportunity that might be addressed with widespread information. These findings reinforce that education of healthcare providers is required to end health inequalities faced by this diverse group of patients. Research Sponsor: None.

**72** **Rapid Abstract Session**

## Impact of biopsychosocial screening program on hospital admissions: Observational study from a Brazilian cancer center.

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**Background:** The integration of biopsychosocial screening programs (BSP) has been promoted as a way by which to identify unmet needs and to provide tailored treatments to patients. Studies have reported mixed outcomes regarding the impact of such services on hospital admissions during cancer treatment. This study sought to evaluate the effect of a BSP on hospital admissions and length of stay among a large, heterogenous sample of patients diagnosed with cancer (March 2020 to December 2021). **Methods:** We enrolled consecutive patients diagnosed with cancer receiving treatment at a single institution located in the capital of Brazil. We assessed patients' characteristics via chart review (e.g., age, sex, histology, hospital admission, length of hospitalization). In addition, as per the BSP protocol, patients were assessed via standardized self-report questionnaires (Distress Thermometer, FACT-G, Patient-Generated Subjective Global Assessment), and appropriate interventions are provided. This program was offered at no cost to all patients and engagement was voluntary. We compared the number of hospital admissions and length of stay between groups (patients who participated in the BSP vs. those who did not). Mixed linear models adjusted for selected characteristics (age, type of cancer and disease stage) were assessed. **Results:** A total of 1014 patients were included in this analysis. From the total sample, 84% participated in the BSP and 20% were hospitalized for an average of 9 days (ranging from 1-80 days). Mostly patients were female (63%), median age was 63 years old. Breast cancer (26%), hematological (18%), and gastrointestinal cancer (14%) were the most common types of cancer, and the majority had advanced disease (stage III-IV; 67%). Compared to those who engaged in the BSP, patient's characteristics were well balanced, however, the proportion of patients hospitalized during their cancer treatment was higher among patients who did not participate in the BSP (27% vs 8%: P = 0.001), as was the length of hospitalization spent more days in the hospital than patients who has participated in the BSP (M = 9.5 days vs M = 4.2 days; P = 0.001). **Conclusions:** Our findings suggest the benefit of a BSP in reducing hospitalizations and length of stay among patients with cancer. An integrated model of care may assist in targeting patient's unmet needs and may positively impact clinical and hospital-based outcomes. This is the first study to evaluate the effects of a BSP among a Brazilian population using real world data. Research Sponsor: None.

**73** **Rapid Abstract Session**

## Association of the Affordable Care Act Medicaid expansion and receipt of palliative care among individuals newly diagnosed with advanced stage cancers.

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**Background:** Receipt of palliative care is a guideline-based practice but is low among patients with advanced cancer is low in the U.S. Lack of insurance is a major barrier to accessing palliative care. It is unknown, however, whether Medicaid expansion under the Affordable Care Act (ACA) and the associated increase in insurance coverage among individuals diagnosed with cancer has led to increased palliative care. We use a nationwide dataset to examine the association between Medicaid expansion and receipt of palliative care among individuals newly diagnosed with advanced stage cancers. **Methods:** Individuals aged 18-64 years with newly diagnosed stage-IV solid cancers pre- (2010-2013) and post- (2014-2019) ACA Medicaid expansion were identified from the National Cancer Database. We used difference-in-differences (DD) analyses to estimate the association between Medicaid expansion and changes in receipt of palliative care as part of first-line therapy, adjusting for age group, sex, race/ethnicity, area-level poverty, metropolitan status, comorbidity, facility type, palliative care specialist availability, diagnosis year and state of residence. Stratified analyses were conducted by cancer type and sociodemographic factors. **Results:** A total of 685,781 individuals diagnosed with stage IV cancers were included from Medicaid expansion (N = 439,142) and non-expansion (N = 246,639) states. The percentage of eligible patients who received palliative care as part of first-line therapy increased from 17.0% pre-ACA to 18.9% post-ACA in Medicaid expansion states and from 15.7% to 16.7% in non-expansion states, resulting in a net increase (DD) of 1.4 (95%CI = 1.0-1.8) percentage points in expansion states after adjusting for sociodemographic and clinical factors. The increase in receipt of palliative care in expansion states compared to non-expansion states was greater for patients with advanced pancreatic (DD = 2.5; 95%CI = 0.8-4.3), colorectal (DD = 2.2; 95%CI = 1.1-3.3), female breast (DD = 1.9; 95%CI = 0.1-3.7), lung (DD = 1.6; 95%CI = 0.7-2.5), oral cavity and pharynx (DD = 1.1;95%CI = 0.5-1.6) cancers, and non-Hodgkin lymphoma (DD = 0.9; 95%CI = 0.2-1.5). The improvement in receipt of palliative care was larger among individuals aged 55-64 years, non-Hispanic White patients, and patients residing in middle-income areas and nonmetropolitan areas. **Conclusions:** Among individuals newly diagnosed with stage-IV cancer, Medicaid expansion was associated with increases in receipt of palliative care, although overall use was low. Furthermore, the increase varied by cancer type and sociodemographic factors. Improving access to insurance can facilitate access to guideline-based palliative care. Research Sponsor: None.

**74** **Rapid Abstract Session**

## Changes in cancer mortality rates after Medicaid expansion under the Affordable Care Act and the role of changes in stage at diagnosis.

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**Background:** Medicaid expansion is associated with earlier cancer diagnoses and improved cancer survival. However, it is unclear if the expansion-associated survival benefits are driven primarily by early detection leading to improved prognosis and/or increased access to appropriate cancer care. A nationwide analysis was performed to determine the degree to which expansion-associated changes in cancer mortality rates can be explained by changes in stage at diagnosis. **Methods:** State-level cancer incidence and mortality data from 2001-2019 for individuals ages 20-64 years were obtained from the combined Surveillance, Epidemiology, and End Results and National Program of Cancer Registries databases (incidence) and the National Center for Health Statistics (mortality), which cover the 50 US States and Washington DC. Difference-in-differences analyses were conducted to compare changes in localized and distant stage cancer incidence rates and cancer mortality rates from pre- vs. post-2014 in expansion vs. non-expansion states. We utilized generalized estimating equations to account for autocorrelation within states and adjusted for age, race, sex, year, state, early Medicaid expansion effects, and state-level covariates (unemployment, education, poverty, race/ethnicity, and insurance). Analyses were conducted overall and by cancer site subtype. Mediation analyses were utilized to assess whether local and/or distant stage diagnosis rates were mediators of the changes in cancer mortality rates. **Results:** The data consisted of 16,470 state-year observations stratified by age, sex and race. In our adjusted analyses with all cancer sites combined, there were decreases in the distant stage cancer incidence rate (OR: 0.966, 95% CI = 0.942 - 0.991, $P$=.009) and cancer mortality rate (OR: 0.974, 95% CI = 0.950 - 0.999, $P$=.041) after Medicaid expansion in expansion relative to non-expansion states. There were no expansion-associated changes in localized cancer incidence rates (OR: 0.989, $P$=.45). Changes in distant stage cancer incidence mediated 26% of the expansion-associated change in cancer mortality ($P$=.013). By cancer site, there were Medicaid expansion-associated decreases in cancer mortality rates for breast (OR: 0.954, $P$<.001), cervical (OR: 0.934, $P$=.020), and colorectal (OR: 0.945, $P$=.045) cancers, though local or distant stage incidence rates were not found to be statistically significant mediators. **Conclusions:** Medicaid expansion was associated with decreased metastatic stage cancer incidence and decreased overall cancer mortality. Approximately 25% of the improvements in cancer mortality can be attributed to decreases in metastatic diagnoses suggesting increased rates of curative-intent treatment, amongst other factors. Remaining survival benefits may reflect access to timely, quality cancer care not captured in this analysis. Research Sponsor: None.

**75** **Poster Session**

## Palliative care utilization and trends among patients with metastatic breast cancer: A SEER-Medicare analysis.

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**Background:** Receiving palliative care (PC) is associated with improving quality of life in patients with cancer. Despite its clinical benefits, limited data is available regarding PC utilization among the metastatic breast cancer population. Examining the trends and current patterns of PC provide an opportunity for improved effective implementation of PC in management of patients with breast cancer. **Methods:** SEER-Medicare linked data was queried to identify patients with metastatic breast cancer aged > 65 years between 2006 and 2017. PC utilization since diagnosis was identified using ICD-9 code V66.7 or ICD-10 Z51.5. Descriptive statistics were used to summarize patient characteristics by the receipt of PC. Multivariable logistic regression was estimated to identify predictors of PC use. Trends in PC utilization were then compared by patient race/ethnicity, residential region, and census poverty rate. **Results:** Of 11,245 patients with metastatic breast cancer diagnosed between 2006 and 2017 (median survival, 17.9 months), 1,756 (15.6%) received PC (median time from diagnosis to PC, 18.5 months). During the study period, PC use increased significantly from 2.5% in 2006-2007 to 28.1% in 2016-2017 (P trend <.001). Patients with metastatic breast cancer who received PC were more likely to be younger (20.6% among 65-69 years old vs. 11.9% among 80+), living in the West census region (17.2% vs. 14.1% in South), urban areas (16.8% vs. 8.2% in rural), and low poverty rate (16.1% with < 5% poverty level vs. 12.9% with > 20%) (P all <.05). There was no significant difference observed by race or ethnicity (P >.05). **Conclusions:** There was a significant increase in PC utilization among patients with metastatic breast cancer aged > 65 years between 2006 and 2017. However, its utilization rate remains suboptimal, with geographic, age and income disparities in PC use. Research Sponsor: Conquer Cancer Foundation of the American Society of Clinical Oncology.

## Characterizing "no treatment" decisions in patients with advanced-stage cancers.

*Ogheneyoma Akpoviroro, Oghenetejiro Princess Akpoviroro, Kristena Yossef, Myriam Castagne, Elga Rodrigues, Queeneth Uwandu, Brian Bolden, Wasique Mirza; Geisinger Northeast, Wilkes Barre, PA; Mater Dei Hospital, Department of Medicine, Msida, Malta; Boston University, Boston, MA; Geisinger Health Systems, Wilkes-Barre, PA*

**Background:** Cancer (CA) is one of the leading causes of death worldwide. In 2020 CA was the second leading cause of mortality in the US. Novel treatments for various malignancies are discovered each passing year. Despite these advancements, some patients refuse to receive treatment. Our study focused on characterizing the group of patients with advanced malignancies who refused therapy. **Methods:** We performed a retrospective chart review of patients diagnosed with advanced malignancies, aged 18-75 years, between 01/01/ 2010 and 12/31/2015, who refused any therapy. We used Geisinger Health System's data. **Results:** Our search provided 644 patients who met our inclusion criteria. The mean age of patients was 63.2 years (standard deviation ($\sigma$) 8.3). Female patients made up 40.4% (260/644), while 59.6% (384/644) were male. Most patients were Caucasian (96.9%, 624/644), 1.9% (12/644) were Black; 0.6% (4/644) were Asian, and 0.6% (4/644) were of unknown racial background. Marital status was evenly distributed with 50.0% (322/644) being married and 50.0% (322/644) being non-married. Most of the study population (52.3%, 337/644) had government-funded insurance at the time of CA diagnosis; 46.6% (300/644) had private insurance, and 1.1% (7/644) had no insurance. Stage 3 disease, according to American Joint Committee on Cancer staging was noted in 21.1% (136/644), while 78.9% (508/644) had stage 4 disease. The mean BMI was 28.2 ($\sigma$ 8.3). Most patients were either overweight or obese (60.6%, 350/577; 67 patients did not have data on BMI available). A history of cigarette smoking was present in 73.0% (438/600). Adenocarcinomas (323/639, 50.5%) were the most prominent histological subtype. The most common site of malignancy was the respiratory system (220/644, 34.2%). Only 9.6% (62/644) of patients had a history of previous CA, while a family history of CA was present in 29.5% (190/644). Most patients (62.1%, 400/644) had a Charleston Comorbidity Index (CCI) > 5; the mean CCI was 6.4 ($\sigma$ 3.7). In 17.1% (110/644) a palliative medicine referral was made. Substance use disorders were present in 23.8% (153/644); 14.4% (93/644) had a history of depression, and anxiety 10.1% (65/644). **Conclusions:** Male patients made up a larger proportion of the group of advanced-stage patients who declined therapy. The racial distribution in this group of patients appeared to reflect the local population. Most patients who refused therapy had stage 4 disease, and they appeared to have severe underlying comorbidities, with an average CCI >5. Despite treatment refusal, a surprisingly low percentage of patients were referred to palliative medicine. Research Sponsor: Geisinger.

**Cohort (N = 644).**

| | n (%) |
|---|---|
| **Sex** | |
| **Female** | 260 (40.4%) |
| **Male** | 384 (59.6%) |
| **Race** | |
| **Asian** | 4 (0.6%) |
| **Black Or African American** | 12 (1.9%) |
| **White** | 624 (96.9%) |
| **Unknown** | 4 (0.6%) |
| **Charleston Comorbidity Index (CCI)** | |
| **Mild, CCI 1-2** | 84 (13.0%) |
| **Moderate, CCI 3-4** | 160 (24.8%) |
| **Severe, CCI > = 5** | 400 (62.1%) |
| **Referred to Palliative Care** | |
| **No** | 534 (82.9%) |
| **Yes** | 110 (17.1%) |

**77** **Poster Session**

## Factors influencing "no treatment" decisions in advanced stage cancers.

*Ogheneyoma Akpoviroro, Oghenetejiro Princess Akpoviroro, Queeneth Uwandu, Kristena Yossef, Steven Suastegui, Myriam Castagne, Elga Rodrigues, Brian Bolden, Wasique Mirza; Geisinger Northeast, Wilkes Barre, PA; Mater Dei Hospital, Department of Medicine, Msida, Malta; Boston University, Boston, MA; Geisinger Health Systems, Wilkes-Barre, PA*

**Background:** Several studies have attempted to explore treatment refusal in patients with cancer (CA). We performed a study that focused on patients with advanced CAs, characterizing those in this group that refused therapy. Based on this study, we sought to determine if some variables significantly correlated with 'no treatment' decisions, compared with a group of similar patients who accepted therapy. **Methods:** Our inclusion criteria were patients aged 18-75 years, diagnosed with stage IV CAs (per the American Joint Committee on Cancer staging) between 1/1/2010 and 12/31/2015 and refused therapy (Cohort 1). A randomly selected group of patients with stage IV CAs who accepted treatment in the same timeframe were used for comparison (Cohort 2). We used Proc SurveySelect and a simple random sampling method to create Cohort 2. Geisinger Health System's data was used. **Results:** We found 508 patients for cohort 1, and 100 patients for cohort 2. The significance level was < 0.05. Female sex was associated with treatment acceptance (51/100, 51.0%) compared with refusal (201/508, 39.6%); p = 0.03. There was no association between treatment decision and race, marital status, BMI, tobacco use, previous CA history, or family CA history. Government-funded insurance was associated with therapy refusal (337/508, 66.3%) than acceptance (35/100, 35.0%); p < 0.0001. Cohort 1 had an older population compared with cohort 2 (p < 0.0001). The mean age of cohort 1 was 63.1 years (standard deviation ($\sigma$) 8.1), and 59.2 ($\sigma$ 9.9) in cohort 2. The most common malignancy site in both cohorts was the respiratory system but this was not related to treatment decisions. Patients with pancreatic CA tended to refuse treatment (p = 0.0009). Only 19.1% (97/508) in cohort 1 were referred to palliative medicine, with 18% (18/100) in cohort 2; p = 0.8. There was an insignificant trend for patients who accepted treatment to have more comorbidities per the Charleston Comorbidity Index (CCI) (p = 0.08). The mean CCI in cohort 1 was 6.5 ($\sigma$ 3.7), and 8.0 ($\sigma$ 3.9) in cohort 2. Treatment of psychiatric disorders after CA diagnosis was inversely associated with treatment refusal (p < 0.0001). **Conclusions:** Male sex, older age, government-funded health insurance, and pancreatic CAs were associated with treatment refusal in advanced CA patients. Those who refused treatment were not increasingly referred to palliative medicine. Treatment of psychiatric disorders after CA diagnosis was associated with treatment acceptance. Research Sponsor: Geisinger.

| Variables | Cohort 1 n = 508 n (%) | Cohort 2 n = 100 n (%) | Total n = 608 n (%) | p-value |
|---|---|---|---|---|
| **Sex** | | | | 0.0339[1] |
| **Female** | 201 (39.6) | 51 (51.0) | 252 (41.4) | |
| **Male** | 307 (60.4) | 49 (49.0) | 356 (58.6) | |
| **Insurance** | | | | <.0001[1] |
| **Government-funded** | 337 (66.3) | 35 (35.0) | 372 (61.2) | |
| **Private** | 164 (32.3) | 65 (65.0) | 229 (37.7) | |
| **None** | 7 (1.4) | 0 (0.0) | 7 (1.2) | |
| **ICDO Site** | | | | 0.0009[1] |
| **Pancreatic** | 86 (16.9) | 4 (4.0) | 90 (14.8) | |
| **Palliative Referral** | | | | 0.7984[1] |
| **No** | 411 (80.9) | 82 (82.0) | 493 (81.1) | |
| **Yes** | 97 (19.1) | 18 (18.0) | 115 (18.9) | |

[1]Chi-Square p-value.

**78** **Poster Session**

## Use of non-curative oncological care in osteosarcoma.

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**Background:** Osteosarcoma is the most common form of bone cancer, but the utilization of palliative care (PC) in patients with this cancer has not previously been investigated in the NCDB. **Methods:** This study retrospectively evaluated the use of palliative care in osteosarcoma patients diagnosed and recorded in the National Cancer Database (NCDB) between 2004 and 2017. Patients were identified by the International Classification of Diseases for Oncology, Third Edition (ICD-O-3) coding, and patients with other malignancies or missing follow-up data were excluded. Cross tabulations with Chi-square analysis were performed to evaluate frequencies of different patient and tumor characteristics. Multivariable logistic binary regression was performed to evaluate relationships between patient and tumor characteristics and the use of palliative care. **Results:** A total of 7498 patients were analyzed with 2.8% of all patients diagnosed having any form of palliative care utilization. Of this group, 53.37% received PC within the first 12 months after diagnosis. Those receiving PC were most likely to be treated with non-curative surgery, radiation, chemotherapy, or any combination of these modalities (56.7%). No significant increase in PC utilization was noted over the 13-year duration of this study. Palliative care usage was increased in patients with greater tumor diameter, tumors in the bones of the trunk & skull, or stage IV tumors. Palliative care usage was decreased in patients living 25-49 miles of their treatment facility, those living in pacific states, those with chondroblastic osteosarcoma, or those with private insurance. **Conclusions:** Palliative care use in patients with osteosarcoma increases with tumor stage, tumor size, or more proximal tumors, but overall utilization remains markedly low. Future studies should further define these patterns of care and help expand the utilization of PC. Research Sponsor: None.

**79** **Poster Session**

## Drivers of palliative care and hospice use among patients with advanced lung cancer.

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**Background:** Despite rigorous evidence of improved quality of life and longer survival, disparities in the utilization and quality of palliative and hospice care persist for racial and ethnic minority (Black and Latinx) patients with advanced lung cancer. To better understand drivers of palliative care and hospice inequities, this study evaluated the impact of psychosocial factors (e.g., lung cancer beliefs) on palliative and hospice care utilization among minority patients with cancer. **Methods:** This was a prospective cohort study of 99 patients with advanced lung cancer recruited at the Mount Sinai Hospital. At enrollment, minority and non-minority patients were asked questions about their sociodemographic, clinical, and the following psychosocial factors: medical mistrust, lung cancer beliefs, palliative care and hospice beliefs. Palliative care and hospice care utilization was abstracted from patients' medical records. Bivariate analysis examined the association between independent factors (e.g., sociodemographic, lung cancer beliefs) and outcomes of palliative care consult and hospice care use (yes vs. no). **Results:** Of the 99 enrolled participants, 55 (55%) were minorities with a mean age of 65 years. 42% completed a palliative care consult and 26% utilized hospice care (26%). Palliative care utilization was associated with more favorable beliefs toward palliative care ($p = 0.022$) and hospice ($p = 0.005$) and lower levels of medical mistrust ($p = 0.007$). Majority of the sample was not refered to palliative (50%) or hospice care (61%); however patients refered were more likely to utilize care ($p < 0.001$). Minority patients were more likely to receive a referral and schedule a palliative care consultation compared to non-minorities ($p < 0.001$). Self-reported minority status did not predict differences in hospice care use. **Conclusions:** Minority patients with lung cancer were more likely to receive a palliative care referral and specialty level consultation when compared to non-minority patients. Higher levels of mistrust were a driver of not receiving palliative care. Patient referrals appear to be an important leverage point to help mitigate disparities in palliative and hospice care use. Future work to understand factors associated with palliative care use and the impact on minority patients is needed. Research Sponsor: American Cancer Society.

**80** **Poster Session**

## Socioeconomic disparities in the receipt of palliative care in biliary tract cancers.

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**Background:** Biliary tract cancers are tumors arising from epithelial cells lining the biliary tract including the intrahepatic bile duct, extrahepatic bile duct, gall bladder, and ampulla of Vater. The incidence of biliary tract cancers has over the years. While there have been several advances in the diagnosis and treatment of biliary tract cancers, palliative treatment remains important in the management of these cancers. This study aims to analyze the patterns associated with the receipt of palliative care in patients with biliary tract cancers. **Methods:** We conducted a retrospective review of 150,007 patients in the National Cancer Database diagnosed with biliary tract cancer between 2004-2018 using ICD-03 codes. Chi-square tests were used to assess the differences between palliative care recipients and non-recipients. Logistic regression was used to assess which variables influence the likelihood of receiving palliative care. Statistical analyses were performed using SPSS. **Results:** The overall palliative care utilization amongst patients with biliary tract cancers was 13%. The use of palliative care in biliary tract cancers gradually increased over the years. Patients with gall bladder cancers were less likely to receive palliative care than those with intra-hepatic biliary duct cancers (OR 0.60 $p < 0.001$). Our study also found significant differences in the utilization of palliative care based on race. Blacks were less likely to use palliative care than whites (OR 0.89 $p = 0.001$). Hispanic patients were less likely to utilize palliative care than whites (OR 0.70 95% CI 0.64-0.76). There was no statistically significant difference between the use of PC between Whites and Asians (OR 1.04 95% CI 0.95-1.13 $p < 0.441$). Privately insured patients were less likely to receive palliative care than uninsured patients (OR 0.88 $p = 0.029$). There were no statistically significant differences between the receipt of palliative care in uninsured patients and Medicare or Medicaid patients (OR 0.98 $p = 0.69$; OR 1.00 $p = 0.93$). Patients belonging to households with a median income (> $63,333) were less likely to receive palliative care than those in low-income (< $40,000) household (OR 0.67 $p < 0.001$). There was an increased likelihood of receiving palliative care in patients from communities with higher educational status. Patients who received treatment at academic/research programs were more likely to receive palliative care than those at community cancer programs (OR 1.18 95% CI 1.08-1.29). **Conclusions:** Our study identified disparities in the receipt of palliative care in biliary tract cancers based on socioeconomic status. Blacks and Hispanics were less likely to receive palliative care than whites. Interestingly, uninsured patients were more likely to receive palliative care than privately insured patients. As part of quality improvement, future research should address the drivers behind these reported disparities. Research Sponsor: None.

**81** **Poster Session**

## System-level barriers and facilitators to cancer rehabilitation delivery for children with cancer.

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**Background:** Up to 20% of childhood cancer survivors suffer from a significant physical function impairment due to cancer or cancer treatment. Early intervention with Occupational Therapy (OT) and Physical Therapy (PT) increases engagement in personal care, leisure interests, school-based tasks, return to work, and prevents cognitive decline. Despite this, less than 30% of childhood cancer survivors receive PT services. To date, facilitators and barriers to implementing cancer rehabilitation (CR) for pediatric cancer survivors have not been adequately explored. Thus, the aim of this research was to identify system-level barriers and facilitators to CR delivery based on surveys completed by hospital administrators, oncology physicians, advanced practice providers, and OT/PT therapists. **Methods:** A cross-sectional method was employed. Three previously published cardiac rehabilitation delivery instruments specific for administrators, OT/PT therapists and clinical providers respectively were adapted to evaluate CR delivery. All surveys used a 5-point Likert-type response format (e.g., 1 = strongly disagree to 5 = strongly agree). Surveys ranged from 12 items (therapist survey) to 23 items (administrator survey). Questions pertained to knowledge, attitudes, and perceptions regarding CR. **Results:** A total of 20 administrators (mean age, 49.95 years old, 65% non-Hispanic White, 65% female), 20 providers (mean age, 43.4 years old, 71.4% non-Hispanic White, 67% female), and 20 therapists (mean age, 38.3 years old, 70% non-Hispanic white, 84% female) completed surveys. Administrators' results indicated mid-range CR knowledge (median: 3.5; IQR 2,5), and all perceived CR as important or extremely important to outpatient care (median: 5; IQR 4,5). Limited insurance coverage and lack of space were the top barriers identified by administrators. Eighty percent of providers endorsed that clinical practice guidelines promote CR referral (median 4; IQR 4,5) and none reported being skeptical of CR benefits. Provider-identified barriers included an inconvenient referral process, lack of CR patient-education materials, and inadequate information on external CR resources. Therapists identified rate of absenteeism and referral rates as barriers to CR. Ninety percent of therapists reported hybrid CR delivery (supervised and unsupervised exercise) could facilitate CR participation (median 4; IQR 4,4). **Conclusions:** System-wide, there was adequate knowledge and positive perceptions and attitudes regarding CR. However, we identified multiple barriers presenting opportunities for multilevel interventions. These included: insurance coverage advocacy, streamlining referral processes to CR services, providing information on external CR programs, providing patient education materials, and leveraging hybrid CR delivery to optimize participation. Research Sponsor: 5P30CA016672-44.

# Differences in the utilization of palliative care support services among patients with metastatic solid tumor cancer in a community oncology setting: A retrospective review.

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**Background:** Palliative care has been underutilized in the setting of advanced cancer despite its established benefit in improving the quality of life in cancer patients. Few studies have evaluated socioeconomic disparities in receiving palliative care in the outpatient oncology setting. We aimed to evaluate for disparities in utilization of palliative care among patients with metastatic solid tumor malignancies at Tennessee Oncology, a large outpatient community oncology practice with an established palliative care program. **Methods:** We completed a retrospective review of medical records of 1513 patients that were seen in Tennessee Oncology clinics from 12/2020 to 12/2021. We compared the baseline characteristics of patients with metastatic solid tumor malignancies who did and did not receive palliative care. Chi-square and two-sample t-tests were used for data analysis with the 5% significance level using R statistical software. **Results:** Male patients utilized palliative care less often than female patients (17% versus 24% for females, p =.0002; 95% CI,.05-1.0). Of payer types, Medicare had the least palliative care utilization (14%) compared to commercial (25%) and other payers (23%). Utilization also varied by cancer type, with melanoma (9%), lung cancer (15%) and renal cancer (21%) being least likely to receive palliative care (p <.00005; 95% CI,.19-1.0). We did examine racial differences in palliative care utilization, but those did not reach statistical significance. **Conclusions:** There are multiple disparities in the utilization of on-site palliative care support services among patients with metastatic solid tumor cancer in this outpatient community oncology setting. Further research is needed to gain insight into why this is, including an in-depth analysis of both patient and provider utilization/referral practices. Research Sponsor: None.

**Utilization of palliative care by sex, insurance payer type, race, and cancer type.**

| | Palliative care | No palliative care | P value |
|---|---|---|---|
| **Sex** | | | |
| **Female** | 24% (n = 208) | 76% (n = 659) | p =.0002 |
| **Male** | 17% (n = 108) | 83% (n = 527) | |
| **Payer type** | | | |
| **Commercial** | 25% (n = 219) | 75% (n = 658) | |
| **Medicare** | 14% (n = 70) | 86% (n = 428) | p =.00005 |
| **Other** | 23% (n = 18) | 77% (n = 59) | |
| **Race** | | | |
| **Black** | 18% (n = 24) | 82% (n = 111) | p = 0.30 |
| **White** | 22% (n = 283) | 78% (n = 1004) | |
| **Cancer type** | | | p < 0.00005 |
| **Breast** | 28% (n = 101) | 72% (n = 261) | p < 0.00005 |
| **Hepatobiliary** | 37% (n = 16) | 63% (n = 27) | p = 0.09 |
| **Lung** | 15% (n = 18) | 85% (n = 99) | p < 0.00005 |
| **Melanoma** | 9% (n = 9) | 91% (n = 89) | p < 0.00005 |
| **Ovarian** | 28% (n = 11) | 72% (n = 29) | p < 0.00005 |
| **Pancreatic** | 48% (n = 78) | 52% (n = 85) | p = 0.70 |
| **Renal** | 21% (n = 31) | 79% (n = 118) | p < 0.00005 |

**83** **Poster Session**

## Interest and enrollment in clinical trials by race and ethnicity, rurality, and insurance status in patients with ovarian cancer.

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**Background:** Enrollment in Phase III clinical trials in gynecologic cancer patients has decreased by approximately 90% since 2011. Efforts to increase enrollment are needed. Previous research showed that not all eligible patients are approached, and those who are do not consistently enroll. Data regarding enrollment by patient characteristics, such as race/ethnicity, rurality, and insurance status is limited. We aimed to identify how these characteristics affect enrollment in ovarian cancer patients. **Methods:** We conducted retrospective chart review for patients with incident ovarian cancer presenting to the University of Alabama at Birmingham from 1/2017-3/2020. We abstracted patient race, ethnicity, Rural-Urban Commuting Area (RUCA; rural vs urban) and Area Deprivation Index (ADI; most vs least disadvantaged) based on Census tract codes, insurance status, eligibility for available trials, and trial participation from medical records. Patient interest in participation was abstracted from a patient-reported outcomes database. We calculated descriptive statistics and estimated enrollment as a multivariate function of age, race, ethnicity, insurance, RUCA and ADI using binomial logistic regression. We reported associations as odds ratios with 95% confidence intervals. **Results:** Of 156 patients, 25% were Black, Indigenous, or Persons of Color (BIPOC). 19% lived in a rural area. Mean age was 62 (SD 11.7). Most (95%) patients were insured; 49% Medicare, 40% private insurance, and 6% Medicaid. 126 (81%) were eligible for a trial during their treatment course. Of 102 patients who completed the question on clinical trial interest, 58% were interested; 42% were not. Ultimately, 36% of the 102 enrolled in a trial including 47% of those initially interested and 21% of those not. 39% of white patients (n = 117) initially expressed interest in a trial compared to 33% of BIPOC (n = 39); 48% of white patients ultimately enrolled vs 23% BIPOC. Of patients living in urban vs rural areas with known interest, patients in urban areas had higher interest (44% vs 10%) and higher enrollment (44% vs 31%). Among insurance types, interest and enrollment differed (Medicare (n = 76) 33% and 1%, Private (n = 63) 46% and 46%, Medicaid (n = 9) 33% and 22%, no insurance (n = 8) 25% and 36%). In our adjusted analysis, BIPOC patients had lower odds of enrolling onto clinical trials compared to white patients (OR 0.32, 95% CI 0.13-0.76). Additionally, as age increased by 1 year, odds of enrollment decreased (OR 0.96, 95% CI 0.92-0.99). **Conclusions:** BIPOC identity and older age were associated with lower rates of clinical trial enrollment. Comprehensive eligibility screening and early introduction could improve enrollment, particularly among BIPOC and older patients. These efforts have potential to improve enrollment as a greater percentage of patients ultimately enrolled on trial than initially expressed interest. Research Sponsor: None.

**84** **Poster Session**

## Why aren't more patients with breast cancer enrolled in clinical trials?

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**Background:** Only 2-8% of adult patients with cancer participate in clinical trials, likely due to strict exclusion criteria as well as financial and access issues. The primary objective of this study is to understand the population of patients with breast cancer who are and are not offered a clinical trial and the impact of exclusion criteria on enrollment. **Methods:** Inclusion and exclusion criteria from study protocols housed in OnCore and ClinicalTrials.gov were obtained for breast cancer-specific, therapeutic clinical trials open at the University of Alabama at Birmingham (UAB) from 2016 to 2020. Patients with breast cancer receiving oncology services at UAB from 2016 to 2020 were identified from electronic health records. Race and ethnicity and address were abstracted. Address was utilized to characterize patients as living in areas of higher vs. lower deprivation (Area Deprivation Index) and rural communities (Rural-Urban Commuting Area). Chart abstraction was conducted to assess if patients were offered a trial, eligible for a trial, reason for ineligibility, and enrollment in trial vs standard of care treatment. **Results:** 518 patients were included; 387 were offered a trial and 131 were not. The median age of patients offered a trial was 57 years old, whereas the median age of patients who were not offered a trial was 61. The majority of patients offered a trial were more often White (72% vs. 24% African American), resided in areas of lower disadvantage (70% vs 17% most disadvantaged), and urban residents (75% vs 13% rural). Of the 387 patients offered a trial, 319 (82%) enrolled, 34 (9%) declined enrollment and chose standard of care, and the remaining 34 (9%) were interested in enrollment but later found to be ineligible. Reasons for ineligibility of the 34 patients who were offered a trial included comorbidities (n = 9), tumor size (n = 7), metastases (n = 5), and previous cancer history (n = 4). Additionally, 9 patients were ineligible for miscellaneous reasons (abnormal labs, age, prescription, trial closed to accrual, tumor characteristics). Of the 131 patients that were not offered a clinical trial, 77 (59%) were ineligible for enrollment. Reasons for ineligibility included: stage 1 disease (n = 35), tumor size and characteristics (n = 24), and comorbidities and abnormal labs (n = 18). The remaining 54 patients would have been eligible, but their provider did not offer a clinical trial. **Conclusions:** Most patients who are offered a clinical trial are willing to participate; physicians not offering a trial to patients appears to be a driver for low enrollment. Strict exclusion criteria related to comorbidities limit trial participation. Further work is needed to understand the relative importance of these eligibility criteria in relation to validity. Efforts should be made to include patients in clinical trials that reflect the diverse patient population that will receive the drug in the future. Research Sponsor: Genentech.

**85** **Poster Session**

## Associations between insurance status and the cancer clinical trial enrollment process.

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**Background:** Most patients with cancer experience multi-leveled barriers to clinical trial participation, potentially including financial concerns due to the complexity surrounding trial-related insurance coverage. Our study sought to understand the association between insurance status and cancer clinical trial eligibility, offer, and enrollment. **Methods:** This retrospective cohort study included patients with breast or ovarian cancer receiving a therapeutic cancer drug at the University of Alabama at Birmingham between January 2017 and February 2020. Available clinical trials and eligibility criteria were abstracted from OnCore and ClinicalTrials.gov. Patient trial eligibility, offer from provider, demographics, and clinical characteristics were abstracted from electronic medical records. Patient trial enrollment was determined via OnCore. Odds of clinical trial eligibility, offer, and enrollment by insurance status (private, public [Medicaid, Medicare]) were estimated using logistic regression models. Models estimating odds of trial offer and enrollment contained only eligible patients. Models were adjusted for patient age at diagnosis, race and ethnicity, rural-urban residence, Area Deprivation Index, cancer type, and cancer stage (early, late). **Results:** A total of 513 patients with breast (71%) or ovarian (29%) cancer were included in our analyses. Median age at diagnosis was 60 (interquartile range: 49-67) years; the majority were White (69%) and had early stage cancer (65%). Half of patients had private insurance (54%), and 46% of patients had public insurance (38% Medicare, 8% Medicaid). Patients with private insurance more often had early stage cancer compared to patients with public insurance (73% vs 57%). Almost two-thirds of patients (65%) were eligible for clinical trial enrollment. Of eligible patients (n = 333), 68% were offered a trial and 47% enrolled onto a trial. In adjusted analyses, patients with public vs private insurance had similar odds of clinical trial eligibility (odds ratio [OR] 0.95, 95% confidence intervals [CI] 0.61-1.48), being offered to participate (OR 1.23, 95% CI 0.71-2.14), and clinical trial enrollment (OR 1.13, 95% CI 0.68-1.89). **Conclusions:** Our results suggest oncologists do not assess trial eligibility or offering a trial based on insurance status, and patients do not differentially participate based on their insurance coverage. Further research is needed to understand implications of trial participation (e.g., out-of-pocket and time costs) for patients covered by differing insurance. Research Sponsor: Genentech.

**86** **Poster Session**

## Clinical trial participation in a majority-minority, NCI-designated cancer center.

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**Background:** Substantial racial and ethnic disparities exist in clinical trial enrollment. Because oncology has rapidly evolved into a field rife with therapies aimed at specific biologic differences in patients, disparities in the standard of care and treatment outcomes have arisen, mainly in minorities such as Hispanics, African Americans, and Native Americans/Alaskan Natives. These disparities are due mainly to the limited understanding of tumor biology in underrepresented groups. The lack of representation in clinical trial enrollment represents both a grave oversight in oncology and an opportunity to increase treatment options for underserved groups significantly. **Methods:** Retrospective single-institution analysis including patients enrolled in clinical trials between 2014 and 2018. We use a Negative Binomial generalized linear model to measure the racial and ethnic disparities in Mays Cancer Center's clinical trials accruals from 2014 to 2018. **Results:** 4724 patients with various tumor types were enrolled in clinical trials at the mays cancer center: Using a Negative Binomial generalized linear model, we discover that clinical trial enrollment is distinct in Blacks ($e^{coefficient}$ = 0.22, p = 1.38e-09) and Asians ($e^{coefficient}$ = 0.08, p = 3.03e-20) when compared to Whites. Hispanics and Non-Hispanics do not differ in clinical trial enrollments ($e^{coefficient}$ = 0.77, p = 1.34e-01). Both Hispanic and Non-Hispanic Asians are greatly underrepresented; Non-Hispanic whites are overrepresented. Hispanics of all races are overrepresented in breast cancer trials as compared with Non-Hispanics (p = 6.89e-18). The inverse is true for genitourinary trials, with Non-Hispanics being overrepresented as compared to Hispanics (p = 9.78e-46). **Conclusions:** Hispanics were disproportionately enrolled in breast cancer trials, and Non-Hispanics were disproportionately enrolled in GU trials. Mays Cancer Center outperforms similar institutions in the enrollment of Hispanics, yet despite this, Hispanics are still somewhat underrepresented in our trials. Asians broadly are underrepresented in MCC enrollments. Research Sponsor: None.

**87** **Poster Session**

## Best practices in achieving patient diversity in oncology clinical trials.

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**Background:** The underrepresentation of Black patients in cancer clinical trials in the United States has been well documented. While a multitude of recommendations exist from government organizations, academic institutions, industry sponsors, and commercial groups on approaches designed to increase enrollment, there is a lack of evidence as to the effectiveness of these recommendations in real-world settings. The West Cancer Center & Research Institute (WCCRI), a community oncology center in the greater Memphis, TN area, has consistently conducted trials in which Black patients are well-represented. Of all oncology clinical trials conducted at WCCRI in 2021, Black patients represented 29.9% of the total enrolled population. To further extend the literature on successful methods to achieve greater trial diversity, enrollment tactics used by WCCRI were explored to understand best practices and assess scalability to other oncology centers. **Methods:** A total of 35 qualitative in-depth interviews were conducted with multiple constituencies associated with WCCRI to obtain a holistic view of clinical trial practices. Interviews were held between March and April 2022. Included were Black patients who participated in a clinical trial, Black patients that declined participation in a clinical trial, caregivers of these patients, WCCRI staff, and community leaders in the Memphis, TN area. All patients interviewed had a history of solid malignancies and were treated at WCCRI between January 2018 and December 2021. The study was considered minimal risk research and all participants provided informed consent before study participation. **Results:** This research underscored the fact that barriers to enroll Black patients are complex and involve challenges at various structural levels including the system, individual, and interpersonal levels. WCCRI practices were found to incorporate tactics at each of these levels, leading to the ability of this community oncology center to enroll representative proportions of Black patients into its oncology trials. Examples of tactics that reach into the community include coordinating with local leaders to provide residents with health education; outreach by Black WCCRI staff, diverse PIs, and ambassadors to dispel myths about a cancer diagnosis and treatment; and faith-based leaders guiding patients to helpful resources and supportive services provided by WCCRI. **Conclusions:** Results of this research build upon previous literature that suggest although some success has been identified through interventions at any one level, the greatest opportunity for achieving diversity in oncology trials comes from multilevel interventions. Emphasis should be placed on crafting tactics that simultaneously address factors in each of these levels to consistently achieve enrollment diversity. Research Sponsor: Bristol Myers Squibb.

**88** **Poster Session**

## How granularity of data matters in understanding and accelerating racial diversity in U.S. clinical trials.

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**Background:** Historically, US clinical trials have been shown to recruit disproportionately large percentages of White patients, raising concerns about the generalizability of clinical trial results to underrepresented racial minority patient populations. Because of this, the FDA has recently reiterated its guidance stating that clinical trials need to reflect the demographic distribution of the US. In this research, we sought to understand how participation of Black patients varies by therapeutic area and geography within the US. **Methods:** Studying patient-level clinical trial data from an industry-leading historical clinical trial data repository of over 8 million patients from 27,000 clinical trials, we assessed the racial composition of US interventional trials across indications from 2010 to 2021 which encompassed 433,822 clinical trial participants across 2,997 trials. We also analyzed participants' racial composition within the subset of trials from three distinct therapeutic areas (i.e., oncology n = 118,194, cardiovascular n = 12,281, central nervous system n = 35,533) and distinct sites over the same period. **Results:** The racial distribution of clinical trial participants in the US across all therapeutic areas was 78% White, 15% Black, and 3% Asian. Within the three distinct therapeutic areas, the proportion of Black clinical trial participants varied, with oncology trials reporting 8.5% Black participants, cardiovascular trials reporting 15.3% Black participants, and central nervous system trials reporting 19.9% Black participants. Black participation also varied within a therapeutic area, depending on the indication, as well as by site, with individual sites contributing differently to the racial diversity of trials. **Conclusions:** Our analysis shows that US interventional trials enroll 15% Black participants, appearing consistent with the 2020 US Census, which estimates that 14.6% of Americans are Black. However, more granular analyses at the level of therapeutic area, indication and site suggest substantial variation in Black participation in clinical trials including a gap in Black representation in oncology trials vs. US Census estimates. This research suggests that aggregate estimates of racial enrollment may mask dramatic variation by other factors like granularity of disease area and geographic location. The study of historic clinical trial data may yield useful insights for accelerating diverse representation in clinical trials. Research Sponsor: Medidata.

**89** **Poster Session**

## Racial disparities among patients with multiple myeloma enrolled in clinical trials.

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**Background:** Tremendous therapeutic progress has been made over the past decade in the field of multiple myeloma (MM). Although the incidence of MM is twice as high for black compared to white individuals, mortality rates remain higher for black patients (Marinac, et al. Blood Ca J 2020). In addition, black Americans are significantly less likely to participate in clinical trials in general (Hong, et al. Am J Prev Med 2021), leading to disproportionate enrollment in studies of novel agents. Various factors may account for these disparities, including access to clinical trials, clinician bias, and hesitancy to enroll in clinical trials among different patient populations. Furthermore, underrepresentation of racial groups within clinical trials impacts the generalizability of important findings from these studies. Here we characterized the racial representation of MM clinical trials. **Methods:** Randomized clinical trials focused on MM interventions published between 2012-2022 were included. We screened 431 publications during this period and characterized racial demographics as available in the literature. A two-sided Cochran-Armitage Trend Test was used to assess if there was a linear trend in the percentage of black participants in clinical trials over time. **Results:** Among 431 studies published over the past 10 years, 76 collected over past 5 years that included racial demographic details were included. Among the 38,830 participants, 87.5% were white, 4.8% were black, and 7.7% were other (reported as either "Asian", "mixed", or "other"). There was a significant trend toward increased enrollment comparing over time between 2018 to 2021 (2.1 to 7.0%, $p < 0.001$ for trend), however black individual remained largely underrepresented in all these studies. **Conclusions:** While the number of black participating in randomized controlled trials involving MM patients over the past five years is significantly increasing, these studies included a disproportionate number of white participants, despite the incidence of MM being higher for black patients. Efforts are underway in the field to enhance enrollment of underrepresented populations, including a recent randomized study that included 19% black MM patients (Richardson, et al. New Eng J Med 2022). Our study was limited due to many trials not reporting details about racial demographics until relatively recently. Further investigations required to examine the reasons underlying racial disparities in MM trial recruitment and enrollment. Research Sponsor: None.

**90** **Poster Session**

## Improving participation of under-represented minorities in breast cancer therapeutic trials in a safety-net system.

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**Background:** Racial and ethnic minorities remain under-represented in cancer clinical trials. Strategies to improve access and participation of diverse populations in clinical trials is therefore a key step to improve outcomes and eliminate disparities. **Methods:** Parkland Health (PH) is the safety-net system for Dallas County, Texas, and is affiliated with the UT Southwestern/Harold C. Simmons Comprehensive Cancer Center (SCCC). Trial operations at PH is mainly supported by a dedicated team of SCCC research coordinators. Interventions employed to increase minority access and accruals were focused on optimizing the portfolio, increasing provider awareness, and enhanced screening. A bilingual research patient navigator was also added to the research team to improve patient education and engagement. Transportation and childcare assistance are routinely provided for patients at PH. Accrual data for 2021, compared to 2017-2020, is presented here. **Results:** The majority (73%) of breast cancer patients at PH are uninsured and 88% belong to racial/ethnic minorities (57% Hispanics, 31% Blacks). Of the 15 therapeutic breast cancer trials open at SCCC in 2021, 12 (80%) were open at PH. The PH breast cancer trial portfolio included 4 cooperative group, 5 industry-sponsored (ISTs), and 3 investigator-initiated studies (IITs). Four trials were in metastatic setting and 8 were in curative intent setting. Four trials required a genomic biomarker. Forty-three patients were enrolled in therapeutic trials at PH in 2021. This represents 10.3% (43/418) of new cases during the same time period. Thirty-two were enrolled in cooperative group studies, 10 in IITs, and 1 in ISTs. The majority (93%) of the trial participants belonged to under-represented minorities. Number of trial participants in 2021 increased by 48% compared to the best year in the past 5 years (29 patients enrolled in 2018). **Conclusions:** Collaboration between academic institutions and safety-net systems presents a unique opportunity to provide clinical trial options to under-represented minorities. In this setting, interventions to improve trial portfolio, provider awareness, screening process, and patient education, as well as addition of a patient research navigator resulted in a significant increase in the number of minority participants in breast cancer trials at our safety-net hospital. Research Sponsor: None.

**91** **Poster Session**

## Understanding feasibility and patient experiences with a ride share program to facilitate uninsured, Hispanic participation in clinical trials: A pilot survey study.

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**Background:** Most screening clinical trials are not representative of the populations susceptible to disparities in breast cancer outcomes. Strategies are needed to address known structural barriers to clinical trial participation. We partnered with a federally qualified health center to provide no-cost ride-share services as a strategy to facilitate enrollment of uninsured, Hispanic women in Maricopa County, Arizona into a national trial offering no-cost mammography screening. Objective: This pilot survey study explored the feasibility and experiences of uninsured, Hispanic women with a no-cost ride share program as part of the National Cancer Institute funded ECOG-ACRIN clinical trial, TMIST, studying mammography screening at the Mayo Clinic Arizona in Phoenix. **Methods:** Participants completed a validated survey by phone and interview-style. Survey items assessed women's use of and experiences with the ride share service including barriers, benefits, and if the ride share service facilitated their participation in the screening trial. Descriptive statistics were calculated using SAS. **Results:** A total of 30 women completed the survey (response rate = 30/33). All women first-time Mayo Clinic trial participants and 90% lived at least 30 minutes away from trial facility. The mean age of women was X years, 90% had a high school degree or less, and 97% were Spanish speaking. Most women (73.7%) said that travel distance was a barrier to participation in prior clinical trials. A large proportion of women (73%) reported using ride share services for this trial and all agreed that the ride service made it easier for them to attend their trial visit. Nearly 1/3 (64%) said that they were uncertain or would not have been able to participate without the ride-share as an option. Among women using the ride share service, the main benefits of the program included at-home pick up and the service being of no-cost. Other benefits included flexible timing (86%) and one-on-one service (86%). The primary barrier of the program was the driver not speaking the dominant native language (27.3%). **Conclusions:** Despite lengthy travel distances, women reported overwhelming positive experiences with the no-cost ride share program and agreed that the service helped facilitate their participation in the clinical trial. Thus, no-cost ride share programs are a promising and feasible strategy to reduce barriers to clinical trial participation among historically underserved populations. Future studies should continue to explore the benefits and sustainability of ride-share programs, including benefits to clinical trial retention. Research Sponsor: Mayo Clinic Cancer Center, Other Government Agency.

**93** **Poster Session**

## Underrepresented minority clinical trial participation: Perspectives of the research care team and patients.

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**Background**: Clinical trials (CT) are important treatment options for patients with cancer, yet enrollment rates among underrepresented minority (URM) patients remain suboptimal. Oncology care teams need to assess barriers and facilitators of CT participation and identify practices and resources to better support patients. As part of a larger mixed-methods project, we elicited perspectives on improving URM CT enrollment from oncology research care teams and patients. **Methods**: We conducted four 60-minute focus groups with 12 oncology physicians, 12 research nurses, and nine clinical research coordinators, and semi-structured interviews with nine URM CT patients at a large academic medical center between January and December 2021. **Results**: Thematic analysis of the focus groups and interviews identified multiple barriers and potential resources and supports at the patient, healthcare team, institutional, and trial design levels. Barriers included difficulty ensuring patient understanding and informed consent, especially among patients with low health literacy and limited-English proficiency, complex logistical and financial demands of CT participation for patients, and the lack of multidisciplinary oncology care team collaboration. Collectively, these barriers undermined communication, trust, and the quality of patients' relationships with the care team, all affecting CT participation. Suggested resources and practices included proactive needs assessments for all patients with early engagement of social workers, providing a liaison or navigator for each patient, services and support to reduce patient out of pocket costs, expansion of non-English materials availability and increased used of interpreters, increased training and diversity for all care team roles, and simplifying CT requirements by streamlining informed consent documents, eliminating unnecessary CT-related appointments, and broadening eligibility criteria. **Conclusions**: Findings suggest that changes in clinical trial design, care team coordination, and early assessment and monitoring of patients' needs and experiences may help reduce access barriers and increase enrollment of URM patients into cancer CTs. Research Sponsor: Dana-Farber/Harvard Cancer Center.

**94** **Poster Session**

## Reasons for declining a pharmacist-led telehealth study among oncology patients initiating oral anti-cancer drugs.

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**Background:** During the COVID-19 pandemic, remote cancer care, and video communication in particular, has become increasingly common in the context of routine visits and clinical trials. Though this medium has the potential to augment patient-provider communication, telehealth also raises concerns about the digital divide promoting disparities in access to cancer care. In this study, we surveyed oncology patients who declined to participate in a pilot study looking at a one-time pharmacist-led video visit for patients initiating oral anti-cancer medications to evaluate their primary reason for declining the intervention. **Methods:** Between June 2021 and June 2022, we conducted a prospective survey among adult oncology patients at Columbia University Medical Center (CUMC) who declined a pilot study looking at a video visit intervention for patients initiating oral anti-cancer medications to assess the primary barriers to participation. The survey categorized specific reasons for decline into telehealth-related barriers (no access to electronic device, inability to navigate video visits specifically, patient preference for in person care) and trial-related barriers (patient too tired/unwell, no time to participate, not interested in this study specifically, not interested in clinical trial participation in general), and patients were asked to select the primary reason for declining among the list of options. **Results:** Twenty-three patients completed the survey (82% completion rate). Among 23 respondents, 9 patients (39%) described a technology-related barrier to participation, including 7 (30%) who owned a mobile device with video capacity, but did not know how to use video technology well enough for the visit, 1 (4%) who did not own a device with video capacity, and 1 (4%) who preferred in person visits. Fourteen respondents cited a reason unrelated to telehealth for declining participation, including 7 (30%) who did not feel the study would benefit them, 3 (13%) who did not have time, 2 (9%) who were too tired to participate in a study, and 2 (9%) who were not interested in participating in any kind of clinical trial. **Conclusions:** Video-based telehealth visits have become increasingly common in routine cancer care and clinical trials. Among oncology patients who declined participation in a pilot study looking at a pharmacist-led video consultation, over a third cited telehealth-related barriers to participation, the majority of whom had a mobile device, but did not know how to use video technology well enough to participate. Focusing efforts on training patients to use technology, particularly video communication, may help address the digital divide in cancer care. Research Sponsor: None.

**95** **Poster Session**

## Reasons for declining participation in breast cancer trials among minorities at a safety-net health system.

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**Background:** Despite increasing awareness, racial and ethnic minorities remain under-represented in clinical trials. Understanding patients' reasons to decline participation can help tailor solutions to improve minority enrollment in cancer trials. **Methods:** Parkland Health (Dallas County, TX) is a safety-net health system, and affiliated with the UT Southwestern/Harold C. Simmons Comprehensive Cancer Center (SCCC). Over 80% of the breast cancer patients treated at Parkland belong to racial and ethnic minorities. Potential study candidates are referred to the clinical trial support team, which includes a Hispanic bilingual patient navigator. Patients who decline to participate are asked to describe their reasons. Data for screening and accrual to therapeutic breast cancer trials at Parkland between January 2021 and May 2022 is presented here. **Results:** A total of 193 potential study candidates were referred to the trial support team in the pre-screening phase. Ninety-five patients (49%) were excluded after screening (screen-fails). Of the 98 patients who met all study specific eligibility criteria, 93% belonged to minorities: 69% (68/98) Hispanics and 23% (23/98) Blacks. Thirty-one patients (32%) declined participation in clinical trials. Compared to Hispanics, Black patients were more likely to decline participation: Blacks 65% (15/23) vs Hispanics 19% (13/68); $p < 0.0001$. Patients' reasons for declining to participate in trials included: lack of interest (14/31), excessive trial requirements such as extra biopsies (8/31), and potential delay in treatment due to additional tests (5/31). Four patients declined participation in a de-escalation trial due to the fear of inferior outcomes with less treatment. Among patients who declined participation, 53% of Blacks and 23% of Hispanics cited lack of interest as the reason (p = NS). **Conclusions:** We observed a higher participation rate among Hispanics, which may in part reflect the impact of having a bilingual research navigator from the same ethnic background. Lack of interest was a major reason to decline, particularly among Blacks. Strategies focused on patient education and trust are being implemented to further improve minority participation in trials at our institution. Research Sponsor: None.

**96** **Poster Session**

## Implementation of a virtual, on-demand, molecular tumor board at a large, multi-clinic, community oncology practice.

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**Background:** Despite the availability of molecularly-targeted agents for the treatment of many cancer types, gaps remain in integrating comprehensive precision oncology decision support tools and services into routine clinical practice. Molecular Tumor Boards (MTBs) have been shown to improve accurate incorporation of precision oncology and oncologic clinical trial enrolment into clinical practice. However, the traditional MTB model is a didactic meeting occurring at regular pre-scheduled cadences which may not align with treatment decisions or schedules of community-based general medical oncologists and advanced practice providers (APPs) without protected time away from clinic. Herein, we report on the utilization of an on-demand virtual MTB (vMTB) implemented at Tennessee Oncology (TO) powered by the Personalized Medicine (PM) team at the Sarah Cannon Research Institute (SCRI). **Methods:** "MolecularHelp" (MH) decision support services were implemented in September 2021 for oncology providers at TO – a network of over 100 oncologists and 86 APPs practicing across 34 clinics in Tennessee. The MH services request was a structured order that could be placed directly within the electronic health record (EHR) or through patient-protected email within the practice. MH orders initiated a virtual, on-demand interpretation of comprehensive genomic profiling (CGP) reports by a centralized vMTB run by SCRI's PM team and supported by Genospace, SCRI's precision medicine software platform. The PM team – comprised of pharmacologists, cell biologists, human geneticists, and molecular biologists – analyze CGP results and provide expert advice on both standard-of-care (SOC) and clinical research therapeutic options. Both SOC and clinical research targeted therapy options were relayed back to the treating physician and embedded within the EHR. Herein, we report key metrics including MH order frequency, average turnaround time, and subsequent clinical trial enrolment between September 2021 and March 2022. **Results:** CGP reports from 120 unique patients were reviewed by the vMTB during the collection period. MH orders were initiated by 30 TO providers from 14 different clinic locations across Middle and East Tennessee. The average turnaround time from referral to vMTB interpretation was less than 10 hours. Of the 120 patients reviewed, actionable mutations were identified by the MTB in 103 patients, of whom 27 subsequently enrolled onto clinical trials (15 phase 1 and 12 phase 2/3). **Conclusions:** An on-demand vMTB is feasible within an engaged community oncology practice with investments in bioinformatics, decision support software tools, and a team of precision oncology experts supported by a robust clinical trial menu. On-demand vMTBs can be widely adopted to enhance clinical trial enrolment. Future directions include studying the impact of vMTBs on patient outcomes over time. Research Sponsor: None.

**97** **Poster Session**

## The effect of modifications to clinical trial activities implemented during the COVID-19 pandemic on willingness to participate in clinical trials: The TBCRC 057 survey.

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**Background:** In order to maintain safety, clinical trial activities have been modified during the COVID-19 pandemic. As part of the TBCRC 057 survey, we assessed how pandemic-related modifications to trial activities affect breast cancer patients' willingness to participate in clinical trials. **Methods:** US residents with breast cancer were eligible to complete the online survey 8/6/21 – 9/30/21. Respondents rated whether each of 11 modifications to clinical trial activities would affect their decision to participate in a trial during or after the pandemic. Items evaluated modifications that involved changing the location of trial activities to closer to home, switching trial activities to telemedicine and making the trial schedule more flexible and convenient. Response options were "much less likely to participate", "somewhat less likely to participate", "would not affect my decision whether or not to participate", "somewhat more likely to participate" and "much more likely to participate". Current trial participants were asked to consider how modifications would affect their decision to participate in another trial. Results are reported descriptively. **Results:** Among 385 respondents, median age was 52 (range 25-85), 88.6% were non-Hispanic White, 52.5% had metastatic disease, 93% were receiving active treatment, 48.6% received care at an academic center and 9.6% were current trial participants. Changing location of trial activities was viewed favorably, with 70.2%, 64.6% and 54.1% of respondents indicating they would be much or somewhat more likely to participate if they could complete trial blood tests, x-ray tests or doctor visits closer to home, respectively. Similarly, the option to complete trial activities electronically was viewed favorably, with 59.6%, 58.6% and 60.9% of respondents indicating they would be much or somewhat more likely to participate if they could complete trial doctor visits, consent and questionnaires via telemedicine, respectively. With regard to modifications to make the trial schedule more flexible and convenient, respondent feedback was also favorable. 71.4%, 67.7% and 82.4% of respondents indicated that requiring study site visits no more than once per 3 weeks, widening windows for trial activities and offering home delivery of oral study medications, respectively, would make them much or somewhat more likely to participate. Finally, 30.4% and 51.7% indicated that the flexibility to opt-out of research-only blood tests and biopsies, respectively, would make them much or somewhat more likely to participate. **Conclusions:** Patients view modifications to trial activities implemented during the pandemic favorably. Trials should be flexible and the option to conduct study activities close to home or electronically when possible should be maintained during the pandemic and beyond. Research Sponsor: Metastatic Breast Cancer Network.

**98** **Poster Session**

## Diversity, equity, and inclusion in cancer clinical trial enrollment: Laying the groundwork for a cancer center collaborative intervention through key informant interviews.

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**Background:** Clinical trial (CT) participation rates in the US are about 8% overall. Although, Black, Indigenous and People of Color (BIPOC) are as willing to join CTs as Whites, they remain underrepresented. We will implement a multi-level intervention across 3 cancer centers in New York City by creating a collaborative pool of CTs for breast, prostate, and liver cancer, thereby increasing availability of trials for all, especially BIPOC populations. To lay the groundwork, we conducted a formative evaluation to identify constructs that can influence implementation of this intervention. **Methods:** We designed a semi-structured interview guide for key informants to ascertain barriers and facilitators of enrollment at 1 cancer center and its 2 community affiliates. 23 key informants including oncologists, research staff, informatics, nurses, and cancer center leadership were identified using a targeted approach, followed by snowball sampling. Interviews were recorded, transcribed, and analyzed using thematic analysis approach. **Results:** Facilitators of accrual include patient referrals from physician-investigators and their teams, and oncologists' knowledge of open trials through tumor boards, disease focus groups, and research meetings. Major barriers to CT enrollment are gaps in trial portfolio, inadequate infrastructure (e.g., staffing, space, and time), and incentives (e.g., RVU-based reimbursements). Informants felt that for patients, financial toxicity, medical mistrust, inadequate health literacy, comorbidities, poor performance status, and language are reasons for low accrual. Physicians emphasized their willingness to refer patients out-of-institution for CTs but lacked knowledge of outside trials. Care coordination across sites and loss of revenue for home institution are system-level barriers to referral. Additionally, informants believed that patients' willingness to seek trials at other institutions is influenced by their commute, unfamiliarity with a new system, insurance coverage, rapport with oncologist, and motivation. **Conclusions:** Involving key stakeholders, increasing physician awareness of open CTs, educating patients and addressing their concerns about CTs, improving access to bilingual materials and interpreters, standardizing care coordination and ensuring similar rates of referrals across institutions are key facilitators to implement a multi-level intervention to increase CT enrollment across a cancer center collaboration. Research Sponsor: Stand Up To Cancer.

**99** **Poster Session**

## Peeling back the curtain: The impact of patient and provider race on clinical trial enrollment.

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**Background:** Optimization clinical trials testing less intense treatments are becoming more prominent in oncology due to the availability of better prognostic tools and targeted therapies. In addition to previously documented barriers, these trials are likely to face new barriers from engaging racially diverse populations due to the potential of an increased recurrence risk with reducing treatment. However, little is known about the role of race in decision-making for optimization clinical trials amongst physicians and patients. **Methods:** This qualitative study included a subset analysis on the influence of race in decision-making for participation in trials testing less chemotherapy. This analysis is part of a larger study, which included semi-structured interviews with patients, patient advocates, and physicians assessing barriers and facilitators to trial participation. Interviews were transcribed, and four coders evaluated transcripts for key themes and exemplary quotes using NVivo. **Results:** 79 participants (24 patients with breast cancer, 16 patient advocates, and 39 physicians) participated; 30% of patients and patient advocates and 26% of physicians were BIPOC (Black, Indigenous, and People of Color). Several key barriers traditionally associated with Black race were noted amongst both patients and physicians, including aggressive biology (e.g. triple negative breast cancer), younger age, socioeconomic challenges, and lack of trust in physicians and clinical trials. One physician noted, "Taking someone who already has a mistrust of medical care and talking to them about a trial of cutting medical care back, it's challenging." While some physicians explicitly acknowledged the role of race in decision-making, often linking race to these barriers, the majority of physicians independently highlighted these barriers while denying the explicit impact of race. Black patients noted similar barriers including emphasizing the role of having triple negative breast cancer, being young, the influence of financial strain, and medical mistrust. One Black patient commented, "I was a triple negative, and that kind was more prone to African American women, usually we don't really survive from it as well as other races do." Another Black woman commented, "I had a lot of family and friends that were worried that I was going to be a "guinea pig". In contrast, White patients heavily emphasized the role of trust in their physicians when making decisions. A White woman stated the following, "I would have done whatever they (doctors) told me was the best thing to do.". **Conclusions:** Factors associated with Black race can play both an overt and subconscious role in patient and provider decision-making about participation in optimization clinical trials. Multi-level interventions are needed to address these specific barriers to ensure representative participation in clinical trials for all patient populations. Research Sponsor: Komen Foundation.

**100** **Poster Session**

## Evaluating factors contributing to low rates of breast cancer clinical trial accrual in a diverse patient population.

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**Background:** In an ideal world, the populations studied in cancer clinical trials (CCT) would be representative of the patients seen in clinic. Unfortunately, significant disparities exist in trial enrollment. Patients who are white, male, insured, or of high socioeconomic status (SES) are overrepresented in NCI-sponsored CCT. Despite data indicating equal willingness for participation in CCT across all racial groups, lack of access, cultural barriers, and social determinants of health contribute to poor accrual rates among racial and ethnic minority patients. The Dan L. Duncan Comprehensive Cancer Center (DLDCCC) provides equal access to breast CCT at Smith Clinic (SC) within the safety-net Harris Health system and Baylor St. Luke's Medical Center (BSLMC). The patient populations differ greatly at these two sites, with BSLMC serving > 95% insured, largely Caucasian patients, and SC serving 60% uninsured, mostly low SES patients, with > 80% racial and ethnic minorities. Despite equal access, patients at SC have a significantly higher CCT refusal rate. **Methods:** We performed a retrospective review of a prospectively maintained database of new patients seen at DLDCCC dating from 5/2015 to 9/2021, which included 3043 patients screened for breast CCT. 366 patients were found to be eligible for CCT. Some patients were eligible for multiple CCT, so there were 431 total offers of CCT. We performed logistic regression to evaluate whether differences in age, clinic, race, trial type, and primary language may be underlying the observed differences in CCT enrollment rates. **Results:** In the BSLMC cohort, 61% (116/204) of eligible patients enrolled in a CCT, while in the SC cohort only 39% (74/227) of eligible patients elected to enroll in CCT. This difference was significant on univariate but not multivariate analysis. There were significant differences when comparing race and trial type in the overall patient set. On univariate analysis, SC patients, African American (AA) patients, Hispanic/Latino patients, and Spanish speaking patients were significantly more likely to decline CCT participation. However, on multivariate analysis, only the AA patient category was associated with enrollment refusal (odds ratio 0.261, 95% CI 0.116-0.563, $p < 0.001$). On both univariate and multivariate analyses, patients were significantly more likely to accept biobanking trials (multivariate: odds ratio 12.799, 95% CI 3.777-61.403, $p < 0.001$). **Conclusions:** Based on these findings, it is likely an oversimplification to assume that equal access will lead to a complete elimination of CCT disparities. Our AA patients were significantly less likely to agree to participate in clinical trials, challenging the commonly held view that lack of access is a major barrier. We are exploring interventions designed to improve our AA patient population's views of trial enrollment. Research Sponsor: None.

**101** **Poster Session**

## PACCT: An intervention to improve communication quality and clinical trial invitations for Black and White men with prostate cancer.

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**Background:** Cancer clinical trial enrollment rates are low, with Black individuals especially underrepresented. We tested Partnering Around Cancer Clinical Trials (PACCT), a multi-level intervention designed to improve patient-physician communication and increase trial invitations among Black and White men with prostate cancer. This study reports only on PACCT Phase 1, the patient-focused intervention, because data collection for PACCT Phase 2, the physician-focused intervention, was halted by the COVID-19 pandemic. **Methods:** Black and White men with prostate cancer and their physicians were invited to participate. Patients were tracked <two years for trial eligibility, with eligible patients randomized to usual care or intervention. Intervention patients received a brochure that included text promoting patient-physician partnerships and a trials-focused Question Prompt List to encourage them to participate actively in clinic visits, such as by asking questions or stating concerns. Patient-physician visits with eligible patients were video-recorded. After the visits, communication (i.e., patient active participation and physician patient-centered communication) was assessed via patient self-report and observer ratings of video-recordings. Medical chart abstractions determined trial invitations. Univariable logistic mixed-effects models nesting patients within physicians tested intervention effects by race on communication and trial invitation. **Results:** Among 199 participants (91 Black; 108 White), 22% (n = 44; 20 Black, 24 White) became eligible for a trial and received the intervention (n = 19) or usual care (n = 25). Regarding communication, Black intervention patients reported participating more actively than those in usual care (difference = 0.41, 95% CI -0.27-1.08), while White intervention patients reported participating less actively than those in usual care (difference = -0.34, 95% CI -0.72-0.05). No differences in observer ratings of active participation or self-report or observer ratings of physician communication were found. Regarding trial invitations, findings were nonsignificant, but showed more intervention patients (74%) than usual care patients (60%) received invitations (logOR = 1.97, 95% CI -0.30 to 4.24), with Black intervention patients having higher odds of receiving invitations (80%) than White intervention patients (67%) (logOR = 3.84, 95% CI -0.92 to 8.59 vs. logOR = -0.14, 95% CI -4.61 to 4.50). **Conclusions:** Few patients (22%, n = 44) were eligible for a trial during PACCT Phase 1. Despite this small sample, the PACCT intervention showed promise in increasing the level of active participation among Black patients and in increasing clinical trial invitations for Black and White patients. Future research should test this intervention in a larger sample and in combination with the physician-focused intervention. Clinical trial information: NCT02906241. Research Sponsor: National Cancer Institute.

**102** **Poster Session**

## Decentralized and hybrid trials in oncology: Results of a global survey of clinical research executives.

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**Background:** Decentralized (DCT) and hybrid (Agile) clinical trials have the potential to deliver significant enhancements to trial operations by improving access to patients and providers. We conducted a survey of research executives at sponsor sites and contract research organizations (CRO) to understand trends in oncology clinical trials. **Methods:** The survey took place in March and April 2022 via online questionnaires. Only complete responses from senior executives who are either involved in sponsoring or managing clinical research within oncology, or who are planning to execute oncology clinical trials in future, were included. Response data were analyzed by an independent market research service and tested for significance at the 95% confidence level. **Results:** The questionnaires generated a "qualified" respondent sample of 85 responses. Most (60%) respondents were from biopharmaceutical sponsors, with around one-third from organizations with more than US$20 billion in revenue. The most frequent perceived challenges for oncology clinical trials execution were patient recruitment (72% of execs ranked this in their top 3); study start-up (55%); and study delays (54%). Three in four executives (73%) are planning to run either a DCT or hybrid trial for oncology in the next 12 months, up significantly from 49% in the prior 12 months. Most common cancer indications for DCT in the next 12 months are lung cancer (40%), leukemia/blood cancers (37%), and breast cancer (30%). More than half of respondents reported that they plan to include ePRO/eCOA tools (57%) and telemedicine (54%) in their oncology clinical trial designs over the next 12 months. A further 48% expect to deploy Mobile Nurses, with the same number planning to incorporate eConsent. The top three perceived benefits of using DCT tools identified in oncology trials are increased patient retention (67%); greater patient diversity (54%); and faster patient recruitment (50%). **Conclusions:** The survey of oncology research executives highlights the most common perceived challenges in executing clinical trials. Many of these challenges can be addressed using decentralized tools. Researchers are planning to significantly increase the adoption of DCT in the coming year. DCT adoption in oncology clinical trials Prev 12 mos Next 12 mos Traditional, Site-Based Trial 88% 65% Agile Trial (Hybrid) 43% 58% Fully Decentralized Trial 19% 40% Agile Trial OR Fully Decentralized Trial 49% 73%. Research Sponsor: None.

**103** **Poster Session**

## Race in a molecular tumor board compared to cancer registry population.

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**Background:** Disparities in cancer care due to race and ethnicity are prevalent in both the care patients receive and patient outcomes. The evaluation of next generation sequencing (NGS) results from patients with advanced cancer by a molecular tumor board (MTB) has become standard practice in many institutions for the identification of additional treatment options and targeted therapies. We sought to compare the racial distribution of patients evaluated by our MTB with our institutional cancer registry (CR). **Methods:** We tabulated the racial distribution of 560 MTB patients chosen for presentation in a bimonthly case conference based on physician request or clinical interest from more than 2,500 NGS reports of patients with advanced cancer from 2016 through 2020. Self-identified race from patients with stage 4 cancer within our institutional CR from the same time interval was compared to the MTB population from each year using the Chi-Squared test. The Cochran-Mantel-Haenszel test was used to analyze the relationship between race and MTB/CR after controlling for year. Race categories were defined as Asian, Black/African-American (AA), White/Caucasian, and other. **Results:** We identified 4,151 CR patients with stage 4 cancer from 2016 through 2020, 573 of whom identified as Black/AA (13.8%). Of the 560 MTB patients, 55 were Black/AA (9.8%). When controlling for year, Black/AA patients were less frequently included in the MTB compared to the CR (p = 0.0128). **Conclusions:** Black/AA patients with advanced cancer are under-represented in our MTB. Larger studies are warranted to examine underlying causes of this discrepancy including implicit bias, generalizability of this finding to other minorities and institutions, and potential remedies to ensure equitable access to state-of-the-art cancer care. Research Sponsor: None.

| | 2016 | | 2017 | | 2018 | | 2019 | | 2020 | |
|---|---|---|---|---|---|---|---|---|---|---|
| | MTB (n = 91) | CR (n = 827) | MTB (n = 139) | CR (n = 793) | MTB (n = 135) | CR (n = 776) | MTB (n = 123) | CR (n = 854) | MTB (n = 72) | CR (n = 901) |
| Asian | 7 (7.69%) | 96 (11.61%) | 24 (17.27%) | 92 (11.60%) | 24 (17.78%) | 87 (11.21%) | 18 (14.63%) | 120 (14.05) | 5 (6.94%) | 130 (14.43%) |
| Black or African American | 11 (12.09%) | 107 (12.94%) | 15 (10.79%) | 90 (11.35%) | 13 (9.63%) | 115 (14.82%) | 10 (8.13%) | 121 (14.17%) | 6 (8.33%) | 140 (15.547%) |
| White Caucasian | 70 (76.92%) | 562 (67.96%) | 93 (66.91%) | 531 (66.96%) | 90 (66.67%) | 522 (67.27%) | 76 (61.79%) | 558 (65.34%) | 53 (73.61%) | 557 (61.82%) |
| Other | 3 (3.30%) | 62 (7.50%) | 7 (5.04%) | 80 (10.09%) | 8 (5.93%) | 52 (6.70%) | 19 (15.45%) | 55 (6.44%) | 8 (11.11%) | 74 (8.21%) |

**104** **Poster Session**

## Patient education intervention to improve diversity in breast cancer clinical trials.

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**Background:** Patient education has been shown to improve clinical trial participation. Medically underserved, racial, and ethnic minorities have a lower participation rate in cancer clinical trials (CCT) than patients of high socioeconomic status (SES). Our comprehensive cancer center is notable for providing equal access to breast CCT (BCCT) through a private system (McNair) and a public safety net hospital system, Smith Clinic (SC). Our prior research has shown that SC cancer patients, who are 60% uninsured, predominantly low SES, and >80% racial minorities, are 40% less likely to enroll into BCCT compared to McNair patients who are > 95% insured and largely White. **Methods:** We developed a 7-minute video with testimonies of our current patients (who are of diverse racial and linguistic backgrounds) about their BCCT experience and testimonies of our research team discussing misconceptions surrounding BCCT and biospecimen collection. The video was designed to be culturally sensitive and used simplified terms in English, Spanish, and Vietnamese. We modified a validated questionnaire by UT Health San Antonio, Institute for Health Promotion Research to assess participants' attitudes towards CCT participation before and after watching the video. We used a Wilcoxon Signed Rank test to measure the effect of the video on a 5-point Likert scale with 5 indicating "Extremely likely", 3 "Moderately Likely" and 1 "Not Likely at all". The primary outcome was a shift in likelihood of participation in a CCT by 1. Other outcomes included assessing the effects of English proficiency, residing in United States (US) for at least 10 years, race, stage of breast cancer diagnosis (high risk vs. early stage vs. metastatic disease) using Chi-squared tests. With 200 survey respondents, the study had 97% power to detect the desired primary outcome. The project was supported by a Pfizer education grant. **Results:** A total of 200 patients (73 at McNair and 127 at SC) watched the video and completed the surveys. 93 identified as Hispanic, 50 as African American, 14 as Asian, 47 as White, and 7 as other races. The mean pre-intervention score for likelihood of willingness to participate in a CCT was 3.34 (SD 1.45) at McNair and 2.81 (SD 1.28) at SC. The mean post-intervention score was 3.89 (SD 1.28) at McNair and 3.44 (SD 1.22) at SC. While the pre- and post-intervention scores were significantly different across the two sites ($p = 0.01$ and $p = 0.015$ respectively), the study did not meet its primary objective. English proficiency, residing in US for at least 10 years, race, and stage of breast cancer diagnosis were not significantly associated with the outcome. **Conclusions:** Our patient education video did not improve our patients' willingness to participate in BCCT as much as we had hoped. This suggests that a comprehensive approach is required to improve our community's engagement and close the disparity gap in BCCT enrollment. Research Sponsor: Pfizer Education Grant.

**105** **Poster Session**

## Saturday pap smear clinic: Addressing barriers to women's health.

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**Background:** Screening for cervical cancer with pap smears and HPV testing can improve patient outcomes by allowing for early identification of cervical cancer. The Minnesota Community Measure and Mayo Clinic's goal is to have a cervical cancer screening rate of 82% (Detailed Report-Cervical Cancer Screening, 2020). Healthy People 2030 aims to have a cervical cancer screening rate of 83.4% (Increase the proportion of females who get screened for cervical cancer -C-09, 2021). Community Internal Medicine cervical cancer screening rates are below this level at 63.09% compliance, with 5,239 patients non-compliant, who are eligible for cervical cancer screenings. Olmsted County only offers acute services on the weekends with no primary care services, which leaves women who work during the week or have childcare/caregiver issues with no options on the weekend or evenings when they have availability to attend appointments. **Methods:** Based on guidelines for pap smear screening (women ages 21-65), 14,195 women were identified within CIM to be eligible for screening. Of those, 5,239 were due for screening. The Saturday Pap Smear Clinic had 88 available spots. We aimed to improve cervical cancer screening rates among non-compliant women within Community Internal Medicine by 1% (52 women, total noncompliant women = 5,239) by January 2021 without adversely impacting coverage of existing clinic hours. **Results:** The electronic medical record (EMR), EPIC, was utilized to identify all patients who were eligible for a pap smear based on current guidelines (Total eligible = 14,195; Sample size/non-compliant: 5,239 patients) within Community Internal Medicine (CIM) of the Baldwin Building in Rochester, MN. Interventions included: surveys that were sent to patients via the Patient Portal. Advertising for the Saturday Clinic included Primary Care News, E-boards, Posters, Social Media, SCOPE, Mayo News, and Providers. The Saturday clinic allowed time outside the traditional hours. One unique feature of the clinic is that all females staffed it during clinic hours in an attempt to alleviate some of the fear/anxiety. After completion of the pilot Saturday Pap Clinic, pap smear compliance from the Saturday Pap Clinic alone arose 1.2% (62 patients) within CIM. **Conclusions:** Post-intervention, cervical screening rates among non-compliant women within Baldwin CIM improved by 1.2% (62 women total). Research Sponsor: None.

**106** **Poster Session**

## Access to Medicaid dental services and distant-stage oral cancer diagnoses in Utah: A quasi-experimental approach.

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**Background**: Late detection may contribute to disparities in oral cancer outcomes, as most low-income oral cancer patients are diagnosed at distant stages. Because dentists are the most likely provider to screen for oral cancer, access to Medicaid dental services could improve outcomes. However, states are not mandated to cover adult Medicaid dental benefits. In 2010, Utah's Medicaid program added dental benefits. My study leverages this policy change to test if dental coverage is associated with distant stage diagnoses and if this association changes with the number of dentists per capita. **Methods**: I analyzed SEER data for all oral cancers diagnosed between 2007-2013. The outcome is a binary variable, indicating if the oral cancer patient was diagnosed at a distant stage. All analyses control for age, race, and gender as well as state and year fixed-effects. Under a Difference-in-Differences design, where DD = Post2010*Utah, I estimate the effect of adding dental coverage for Medicaid enrollees in Utah compared to Medicaid enrollees in states that did not change their Medicaid program. Then, to account for differential trends, I implement a Triple Differences design, where DDD = Post2010*Utah*Medicaid, and estimate the effect of adding dental coverage for Medicaid enrollees in Utah compared to adults in Utah who are not on Medicaid. Finally, I interact the DDD variable with a variable measuring Utah's dentists per 100,000 population (county-level data from AHRQ). **Results**: Compared to Medicaid enrollees in other states, adding Medicaid dental coverage in Utah was associated with a decline in the probability of a distant-stage oral cancer diagnosis (DD = -0.046; ci = -0.078, -0.014). The Triple Difference result was similar (DDD = -0.074; ci = -0.107, -0.041). The heterogeneity analysis reveals that the association between adding Medicaid dental coverage and distant stage diagnoses are small and insignificant in Utah counties without dentists. However, the interaction term between adding dental coverage and dentists per capita yields a significant decline for every additional dentist in the county (DDD*Dentists/100,000Capita. = -.001 ci = [-0.002, -0.0009]. Putting these results into context, the marginal effect of adding dental coverage in counties with 80 dentists/100,000 is associated with a 0.104-percentage point decline in distant diagnoses: a 20% decline relative to pre-2010 rates. **Conclusions**: Access to dental services could improve outcomes for low-income oral cancer patients, but the persistent barriers to dental care may perpetuate disparities. Research Sponsor: U.S. National Institutes of Health.

**107** **Poster Session**

## Multi-level determinants of endometrial cancer diagnosis as experienced by Black women.

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**Background:** Black women experience inequity in access to timely endometrial cancer (EC) diagnosis compared to non-Hispanic white women. Delays in obtaining a timely diagnosis and referral for treatment can amplify poorer outcomes in Black women. Communication between Black patients and providers are likely influenced by determinants at multiple levels (e.g., individual, community, systems). Examining determinants at multiple levels can provide insight on how they influence guideline-concordant EC diagnosis in Black women through patient-provider communication. This study reports on Black women's EC diagnosis experience, from the time of symptom onset to obtaining a diagnosis. **Methods:** We conducted a qualitative study using semi-structured interviews guided by the socio-cultural framework for the study of health service disparities (SCF-HSD). We used deductive thematic analysis using codes from the SCF-HSD framework, and inductive thematic analysis for new themes arising in the data. Participants were recruited using a study posting on an online patient research platform associated with an academic hospital in North Carolina. Eligible patients had to identify as Black, English-speaking, aged 40 years or older, and have a diagnosis of EC within the last 3 years. **Results:** Thirteen Black women with EC participated in online & phone interviews ranging from 22-50 minutes. Participants were primarily between 40-49 years of age (mean age = 45), stage II (100%), and either had private (47%), Medicare (23%) or Medicaid (30%) health insurance. Participants identified determinants at 3 levels: individual (symptom misinformation; delay in seeking support for symptoms - competing needs with work and family; fear and anxiety while waiting for tests and results), community (convenience of primary care clinics; existing relationships with providers; delay in referral by primary care providers; lack of information on testing rationale and expectations), and environment (distance to cancer centers; difficulty in obtaining appointments). Many participants reported that the onus was on them to find a cancer center and oncologist to conduct further diagnostic testing after seeing a primary care provider for their symptoms. When asked whether participants felt they were treated differently (positively/negatively) because of their race, many participants mentioned being Black negatively affected their ability to obtain timely appointments for diagnostic testing (e.g. biopsy, vaginal ultrasound). A few participants specifically mentioned reaching out to Black providers for management of their cancer. **Conclusions:** Black women with EC report several determinants to timely diagnosis at multiple levels. These findings will be mapped onto implementation strategies in a system-strengthening intervention to improve guideline-concordant diagnosis. Research Sponsor: U.S. National Institutes of Health.

**108** **Poster Session**

## Quality initiative to improve lung cancer screening in a Veterans Affairs medical center.

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**Background:** In 2013 the US Preventative Services Task Force recommended lung cancer screening (LCS) with low-dose CT (LDCT) scans in high-risk populations. Eight VA Medical Centers (VAMC) successfully piloted LCS in a demonstration project and several additional VA sites have since launched LCS programs, including the Salt Lake City VAMC. These systems utilize the "Clinical Reminder System" (CRS) in the electronic medical record to enroll patients into the LCS program which allows LDCTs to be tracked by a nurse coordinator. As these programs are relatively new, improvements and shared knowledge is imperative to optimizing the success of LCS programs. **Methods:** Our intervention was to change the radiology ordering menu to encourage providers to order LDCTs through the CRS, thus enrolling patients in the LCS program. We examined the percentage of LDCTs performed within the LCS screening program as our process measure. We then chose three outcome measures based on recommendations proposed by a national cancer roundtable: 1) Percentage of Lung-RADS 1 or 2 diagnoses with follow-up within 15 months, 2) Percentage of Lung-RADS 3 diagnoses with follow-up within 8 months and 3) Percentage of Lung-RADS 4 diagnoses with follow-up within 18 weeks. We compared outcome measures between LDCTs performed within the LCS program and those performed outside of the program. **Results:** We compared a total of 492 LDCTs during a pre-intervention six-month period to the 544 LDCTs performed in the first 6 months after our intervention. Pre-intervention, 54% of LDCTs were performed through the LCS program, compared to 79% post-intervention ($p < 0.001$). The percentage of Lung-RADS 1 or 2 scans with appropriate follow-up time was significantly better within the LCS program (70%), compared to scans performed outside the program (49%, $p < 0.001$). There was no statistical difference in follow-up of Lung-RADS 3 or 4 scans. **Conclusions:** Through this work we learned the CRS is non-intuitive and used with variable comfort within the VAMC. As such, a simple intervention guiding ordering providers from the radiology ordering menu to the CRS was effective in increasing enrollment and adherence to follow up in a VA system LCS program. LCS is complex compared to other cancer screening programs. Many primary care providers and radiologists alike are uncomfortable managing these patients. As such, enrollment in a standardized LCS program and early involvement of a multi-disciplinary team is imperative. Not only did we demonstrate this with our outcome measures, but while examining the system we uncovered many inappropriate follow-up scans, biopsies, and oncology consults that contribute to waste. As lung cancer screening programs continue to evolve, quality improvement projects such as this will help improve lung cancer care and outcomes. Research Sponsor: VHA National Center for Patient Safety.

**109** **Poster Session**

## Racial and ethnic disparities in the cervical cancer screening cascade in three U.S. health care settings.

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**Background:** There are wide disparities in cervical cancer incidence and mortality in the US by race and ethnicity. Our objective was to characterize racial and ethnic differences in routine cervical cancer screening and follow-up of abnormal findings across three US healthcare settings. **Methods:** We used 2016 to 2019 data from three sites participating in the METRICS research center, part of the PROSPR II consortium. We evaluated screening among average risk, screen-eligible patients receiving care at participating sites, by race and ethnicity as captured in the EHR. Among patients with a high-risk abnormal finding, we evaluated the proportion receiving colposcopy or biopsy within six months. We conducted multivariate regression to assess the extent to which clinical, socioeconomic, and structural characteristics mediate observed differences in screening. **Results:** We identified 188,415 eligible patients; 74.6% received cervical cancer screening during the 3-year study window. Screening use was lower among non-Hispanic Black (66.8%) patients and higher among Hispanic (82.5%), Asian/Pacific Islander (75.8%) patients, and those who identified as multi-racial or "other" race (75.8%) compared to non-Hispanic White (71.4%) patients. In multivariate regression, most differences were explained by the distribution of patients across sites, with the lowest screening rate observed at the site caring for the majority of both Black and Hispanic patients. However, Hispanic patients remained more likely to be screened even after controlling for a variety of clinical and sociodemographic factors (Risk Ratio: 1.14 [1.12, 1.16]). Among those receiving a screening test, Black and Hispanic patients were more likely to receive Pap-only testing (vs. HPV DNA co-testing) compared to non-Hispanic White patients and were more likely to have abnormal findings. Follow-up from abnormal results within six months was low for all groups (68.7%) but highest among Hispanic participants (77.7%). **Conclusions:** In a large cohort of patients receiving care in three community settings, cervical cancer screening and follow-up were lower than national targets. Lower screening for Black women is strongly driven by insurance and site of care, underscoring the value of addressing systemic inequity. More research is needed to characterize the relatively higher screening for Hispanic women, which is not explained by observed individual or systemic factors. Additionally, it is crucial to focus on follow-up after abnormalities are identified, which is low for all populations. Research Sponsor: U.S. National Institutes of Health.

# What's missing? Diagnostic workup for breast cancer in Sudan.

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**Background:** In Sudan, healthcare access may limit diagnostic workup for breast cancer. This study evaluates the relationship between geography and ethnicity and completeness of documentation of diagnostic workup (staging and receptor testing) in Sudan. **Methods:** This retrospective study used data abstracted from patients with breast cancer receiving cancer care at Sudan's largest cancer center (Radiation and Isotopes Center Khartoum [RICK]) in 2017. The patient's age at diagnosis, sex, breast cancer stage, ethnic subgroup (further categorized as Arab and non-Arab), regions of origin and residence (Central, Northeastern, Western, and Khartoum [where RICK is located]), and receptor status from pathology reports were abstracted from paper medical records. Complete diagnostic workup was defined as having both receptor testing and staging. Descriptive statistics were calculated using frequencies and percentages for categorical variables and median and interquartile range (IQR) for continuous variables. Odds ratios (OR) and 95% confidence intervals (CI) were estimated to evaluate complete diagnostic workup on ethnic group, origin, and residence using binomial logistic regression models (excluding non-Sudanese patients and those with missing demographics). **Results:** Of 240 patients included, 237 were female, median age was 53 (IQR 43-62). Most often patients were Arab (68%), originated from Northeastern and Khartoum regions (both 28%) and lived in the Khartoum region (53%). Overall, 49% patients were missing receptor testing and/or staging, with modest differences by geographic region and ethnicity (Table). In adjusted analyses, non-Arab patients had similar odds of having complete diagnostic workup when compared to Arab patients (OR 1.22; 95% CI 0.70-2.10). Patients originating from and residing in regions outside the Khartoum region had similar odds of complete diagnostic workup when compared to patients originating from and residing in the Khartoum region. **Conclusions:** Almost half of breast cancer patients had incomplete diagnostic workup, regardless of region of origin, region of residence, and ethnic group. This highlights a substantial systems-based quality gap in care delivery, warranting efforts to improve completeness in diagnostic workup for all patients with breast cancer in Sudan. Research Sponsor: None.

Demographic characteristics (N = 240).

| | | Both Available % n = 123 | Missing Receptor Testing % n = 48 | Missing Staging % n = 51 | Both Missing % n = 18 | Total |
|---|---|---|---|---|---|---|
| **Ethnic Group** | | | | | | |
| **Arab** | **Arab** | 50 | 20 | 22 | 9 | 68 |
| **Non-Arab** | **Beja** | 57 | 43 | 0 | 0 | 3 |
| | **Darfurian** | 56 | 11 | 22 | 11 | 8 |
| | **Hausa/Fulani** | 38 | 50 | 13 | 0 | 3 |
| | **Nuba** | 50 | 25 | 25 | 0 | 2 |
| | **Nubian** | 58 | 15 | 23 | 5 | 17 |
| **Geographic Origin** | | | | | | |
| | **Central** | 44 | 23 | 26 | 8 | 28 |
| | **Khartoum** | 56 | 21 | 21 | 3 | 28 |
| | **Northeastern** | 54 | 18 | 21 | 7 | 28 |
| | **Western** | 51 | 18 | 15 | 15 | 16 |
| **Geographic Residence** | | | | | | |
| | **Central** | 44 | 22 | 26 | 9 | 19 |
| | **Khartoum** | 29 | 20 | 21 | 2 | 53 |
| | Northeastern | 51 | 20 | 20 | 9 | 19 |
| | **Western** | 44 | 17 | 17 | 22 | 10 |

*Non-Sudanese patients and patients with missing data for demographics were excluded.

**111** **Poster Session**

## Barriers to cancer prevention among women experiencing homelessness who receive onsite mammography, patient navigation, and education (HOPE).

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**Background:** While incidence rates of cancer are lower among women experiencing homelessness (WEH), cancer mortality remains higher. Barriers to screening include economic, transportation, housing, childcare and other barriers. This study evaluates barriers to mammographic screening as part of a prospective program that provides onsite mammography services to WEH. **Methods:** Cleveland Clinic partnered with shelters to provide breast health education, patient navigation, and mobile mammograms onsite at shelters. Also, participants received a meal, a bra, and hygiene items. 75 women and persons of other genders completed a mammogram. 55 WEH participated in the study by completing a survey for a response rate of 73.3%. The survey included questions about barriers and demographics. We conducted a preliminary analysis to improve study quality and plan for a follow up study. **Results:** Participants were 40-75 years old and identified as American Indian/Alaska Native (5.5%), Black/African American (60%), and White (40%). 16% of participants received their first ever mammogram. 34% noted a family history of breast cancer and 22% had previously been advised to return for additional imaging. One participant was a breast cancer survivor. On average, participants' last mammogram was four years prior with the greatest screening lapse being 18 years prior. A majority (n = 39, 70.9%) disagreed or strongly disagreed with the statement, "I'm afraid the mammogram will be painful." Likewise, a majority (n = 46, 83.7%) disagreed or strongly disagreed with the statement, "I'm embarrassed about having a mammogram." A majority (n = 44, 80.0%) also disagreed or strongly disagreed with the statement, "I'm busy and do not have time." Almost all participants (n = 51, 96.2%) responded "yes" to the statement, "I believe in preventative care screenings." However, participants' responses to the statement, "I'm afraid of finding breast cancer" varied widely from strongly disagree (n = 7, 13.0%) and disagree (n = 10, 18.5%), to neutral (n = 15, 27.8%), to agree (n = 12, 22.2%) and strongly agree (n = 10, 18.5%). **Conclusions:** Our preliminary data shows that most participants believe in preventative screening, showing that novel services such as onsite mammography may address the lack of screening in this population. 40.7% of participants stated they are afraid of finding breast cancer, indicating this is a barrier to screening in the WEH population. Future research should explore reasons for fear (financial burden, mortality, lack of access to care, etc.) and why this may result in a lack of screening. Research Sponsor: Cleveland Clinic Caregiver Catalyst Award.

**112** **Poster Session**

## Promoting prostate cancer screening equity: Findings from a quality improvement education initiative implemented in 3 sites.

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**Background**: Prostate cancer (PC) screening guidelines differ in recommended age at screening and varying emphasis on risk factors (e.g., race, family history), leading to lack of clarity among healthcare providers (HCPs). Research has highlighted a higher risk for Black patients, and the importance for at-risk patients to undergo screening at an earlier age and receive appropriate follow-up. A system-based Quality Improvement Education (QIE) intervention was developed to increase screening and referrals for PC especially among higher risk subgroups. The QIE aimed to increase awareness of the burden and consequences of racial disparities while mobilizing a team-focused approach. **Methods**: QIE intervention was deployed at 3 practice sites that provide community-based primary care services to Black populations (72% Black patients). The sites differed in patient capacity, staff, challenges faced, and pre-intervention screening practices. Practice assessments were completed pre-intervention by site representatives (n = 3) and individual baseline surveys were filled out by HCPs (n = 24). The 12-week intervention included educational materials from Prostate Health Education Network (PHEN) and deployment of an updated screening protocol within each clinic to raise PC awareness to staff and patients. Post-intervention evaluation was based on qualitative interviews (n = 5) and feedback from the QIE coaches. Patient data from electronic health records (EHR) on PC screening and referrals was collected post-initiative and divided a posteriori into 3 sub-groups, pre, during and post-intervention (n = 6662). **Results:** QIE led to increased awareness of barriers to access faced by patients from diverse communities. The QIE also led to increased awareness among team members regarding the need for screening at-risk groups at an earlier age and the importance of follow-up with patients. Online education materials made available to HCPs raised patient awareness. Table highlights an increase in PC screening during the intervention, but limited sustainability post-intervention. Interviewees reported increases in patient education, referrals and follow-up action. **Conclusions**: Increase in percentage of patients screened during the intervention phase was potentially due to added attention during the initiative, while limited sustainability post-intervention might be due to the brief intervention period, reliance on retrospective data and inability to fully leverage EHR data. Based on this project s learnings, similar initiatives should seek organizational support for data analytics and process documentation to ensure consistent data standards and overall success. Research Sponsor: Genentech.

EHR data regarding PC screening across the 3 practice sites pre-, during and post-intervention.

| % of patients screened | Pre- | During | Post- |
|---|---|---|---|
| Total | 53% | 69% | 53% |
| Age 40-45 | 40% | 54% | 49% |
| Black | 51% | 68% | 52% |
| White | 59% | 72% | 53% |

**113** **Poster Session**

## ReUnidos: Farmworker Skin Cancer Health Navigation Program.

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**Background:** Farmworkers are at increased risk for skin cancer because of occupational exposure to sun and pesticides. In 2017/2018, Farmworker Justice conducted the Unidos community mobilization project to raise skin-cancer awareness and promote skin-cancer care access in farmworker communities. Unmet needs were identified in follow-up care coordination for patients who screened positive for a suspicious skin lesion. We undertook this ReUnidos study to document the incidence of skin cancer in the farmworker community and to evaluate the benefits of a health-navigator program to facilitate follow-up care. **Methods:** Participants (primarily Latinx) are screened in the community setting by volunteer dermatologists. Those who screen positive for suspected skin cancer are invited to participate in the study. They are assigned a trained navigator who addresses the importance of evaluating the lesion, the details of the diagnostic process, and any questions the subjects have. The navigators also help arrange travel, scheduling of appointments, interpretation services, and any other supports needed during the care journey. Data are collected on the number of biopsies performed, diagnoses, time from screening to diagnosis, skin cancer staging, time to treatment, as well as satisfaction with and perceived effectiveness of the navigator program. Outcome measures are extracted from chart review and final semi-structured interviews of both subjects and navigators. The project seeks to screen 1,000 community members. Approximately 2% are expected to screen positive for a suspicious lesion and require follow-up care. **Results:** To date, 16 health navigators have been trained and 6 screening events have been conducted in Northern San Diego County by Vista Community Clinic. A total of 126 adult participants have been screened, with 47% identifying as farmworkers. One participant screened positive for a potential skin cancer and has consented to the study. **Conclusions:** Community-based screenings linked to health-navigation programs may be effective tools to increase access to skin-cancer care among farmworkers. A telemedicine screening model is also being investigated for a second site in upstate New York to expand rural skin screening access. This model may also be useful in care coordination for other malignancies in farmworker communities such as lung cancer and lymphoma, which have also been linked to occupational pesticide exposure. Research Sponsor: Bristol Myers Squibb, Novartis Pharmaceuticals.

**Screening demographics.**

| Screening No. | Men | Women | Farmworker Men | Farmworker Women | Latinx | Rural |
|---|---|---|---|---|---|---|
| **1** | 3 | 14 | 3 | 7 | – | – |
| **2** | 2 | 19 | 2 | 9 | – | – |
| **3** | 4 | 9 | 3 | 7 | 13 | 10 |
| **4** | 2 | 13 | 1 | 5 | 13 | 12 |
| **5** | 2 | 4 | 2 | 0 | 6 | 6 |
| **6** | 16 | 27 | 10 | 5 | 37 | 10 |

## Physician referral patterns and use of adjuvant therapy among patients with stage IB-IIIA non–small cell lung cancer (NSCLC) (2010-2017).

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**Background:** As the treatment landscape for early-stage NSCLC continues to evolve with the recent approvals of targeted and immunotherapy agents in the adjuvant setting, it is important to understand physician referral patterns and predictors of adjuvant therapy (AT). This study examined physician referral patterns at key treatment phases and assessed predictors of receiving AT in stages IB-IIIA NSCLC patients. **Methods:** A retrospective study using the linked SEER-Medicare database (01/01/2010-12/31/2017) included patients newly diagnosed with stages IB-IIIA NSCLC who received surgical resection. Specialties were identified by linking NSCLC claims to AMA Physician Masterfile. AT was defined as the use of systemic chemotherapy or radiation therapy within 4 months of surgery. Multivariable logistic regression was conducted to assess predictors of receiving AT. **Results:** A total of 7,108 patients met study criteria (53% IB; 9% IIA; 19% IIB; 20% IIIA). Primary care physician (PCP) (71%), surgical oncologist (29%), medical oncologist (36%) were the most frequently visited first specialist during pre-diagnosis, diagnosis to surgery, and post-surgery phases, respectively. The median time from diagnosis to surgery was 44 days. After surgery, 74% patients visited medical oncologist (62% IB; 87% IIA; 83% IIB; 88% IIIA). About 41% received AT (21% IB; 64% IIA; 56% IIB; 69% IIIA). Of those, the median time from surgery to adjuvant therapy was 46 days. Later stage at diagnosis and shorter referral time to medical oncologist significantly increased the odds of receiving AT (Table). **Conclusions:** The strongest predictors of receiving adjuvant therapy were time to medical oncologist post-surgery and stage at diagnosis. Future studies in the era of targeted therapies can use our results as a benchmark to optimize management and outcomes as well as assess changes in referral patterns in IB-IIIA NSCLC patients. Research Sponsor: AstraZeneca.

**Significant predictors of adjuvant therapy.**

| Variable† | Level | Odds Ratio (95%CI) |
|---|---|---|
| Time to medical oncologist visit (days) (Ref: No visit to medical oncologist) | ≤ 23 | 5.343 (4.58 to 6.24)* |
| | 24 to 36 | 3.661 (3.13 to 4.28)* |
| | > 36 | 2.189 (1.87 to 2.56)* |
| Age at diagnosis (years)(Ref: 66-70) | 71-75 | 0.815 (0.71 to 0.94)* |
| | 76-80 | 0.509 (0.44 to 0.59)* |
| | 80+ | 0.340 (0.28 to 0.41)* |
| Cancer stage (Ref: Stage IB) | IIA | 5.212 (4.25 to 6.39)* |
| | IIB | 3.775 (3.26 to 4.38)* |
| | IIIA | 6.488 (5.56 to 7.57)* |

*P-value < 0.05.

**115** **Poster Session**

## Quality of care of Asian and White patients with lung cancer: Single-institution study.

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**Background:** Cancer is the leading cause of death in Asian Americans (AA), the fastest growing racial/ethnic group in the US. Lung cancer is a leading cancer diagnosis and cause of cancer death in AA. Yet data on the quality of lung cancer care in AA are limited. This retrospective study examines racial disparities in lung cancer care at an urban academic medical center serving a large proportion of Asian patients. **Methods:** Newly diagnosed patients with lung cancer from 01/01/2014 to 12/31/2019 were identified in the Tufts Medical Center cancer registry; clinical data were collected through 05/31/2022. Patient demographics, smoking status, utilization of screening low dose CT (LDCT), disease characteristics (diagnosis stage, histology, driver mutation presence), and treatment history were compared between Asian and White patients. The influence of race on presenting stage was evaluated via ordinal logistic regression. Time to treatment initiation (TTI) and overall survival (OS) in Asian and White patients were analyzed via log-rank tests. Multivariable Cox regression adjusting for baseline patient characteristics, tumor histology and stage was performed to evaluate the impact of race on OS. **Results:** Of 145 Asian and 476 White patients, the Asian cohort had significantly ($p < 0.001$) older age (72 vs 68 years), more male representation (74.5% vs 43.9%) and never-smokers (31.0% vs 9.7%). Of 45 Asian never-smokers, women comprised 75.6%. Of 216 patients eligible for lung cancer screening by the 2013 USPSTF criteria, the Asian cohort had relatively lower LDCT utilization (11.9% vs 21.3%, $p = 0.198$). Asians were 2.13 times ($p = 0.003$) more likely to be diagnosed with lung cancer at a later stage than White patients, adjusting for age, sex, income, smoking status, and histology. No difference was found in presence of CNS metastasis at diagnosis. Driver mutations were more often found in Asians (45.5% vs 29.4%). Of 206 patients with detected oncogenic mutations, EGFR alterations comprised 62.1% vs 15.0% in Asian and White cohorts, respectively. Asian patients had longer median TTI (1.13 vs 0.83 months, $p = 0.005$) and more often did not receive cancer directed therapy (12.6% vs 6.1%, $p = 0.016$). Of 536 patients who received cancer directed therapy, Asians more often received upfront targeted therapy (16.1% vs 2.2%, $p < 0.001$). No difference was seen in median OS between Asian and White (not reached vs 78.43 months, $p = 0.410$). Multivariable Cox regression suggested that Asians tended toward better OS (hazard ratio = 0.66, $p = 0.091$). **Conclusions:** This study done in Boston shows that Asian patients are diagnosed with lung cancer at more advanced stages and experience longer delays prior to treatment initiation, compared to White patients. Racial disparities persist in lung cancer care, particularly in detection/diagnosis and early management. Yet Asian patients, in aggregate, do not have inferior survival, warranting further research. Research Sponsor: None.

## Patients' perspectives on late diagnosis of breast cancer in northern Tanzania: The role of traditional healers.

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**Background:** In Tanzania majority of women are diagnosed with advanced stage of breast cancer. Factors influencing delay in diagnosis resulting in advance stage have not being investigated in the region, particularly as it relates to rural and urban patients. This study aims to explore the experience of breast cancer diagnosis amongst rural and urban patients. **Methods:** Women diagnosed and confirmed with breast cancer in outpatients setting in a Cancer Care Centre were identified by clinic nurse and introduced to the study. Semi-structured interviews were conducted and transcribed verbatim. Thematic coding using a grounded theory approach was done by two independent researchers using NVivo 12 Mac. **Results:** Twenty patients (10 rural and 10 urban) participated in the interviews. The average age was 56; 5 (25%) were married, 11 (55%) had primary education, and 10 (50%) were not employed. The majority (70%) had stage IV breast cancer, 15% had stage III and 15% had stage II breast cancer. Seventeen respondents (85%) sought care from traditional healers prior to diagnosis and treatment at the cancer center. Women largely described this pattern of care due to family or community recommendations and pressures to first seek care with traditional healers, as noted by one woman *"...neighbours who took me to the traditional healer they told me that, it is the same healer who treated the man who cured from cancer. During my visit to the healer the man who get cured used his medication also I use to see him attending to this traditional healer."*. All the participants regretted this decision at time of interview due to ineffective and costly treatment which ultimately delayed their hospital presentation and ability to receive quality treatment. One women stated, *"...the medicine cost me one thousand and fifty thousand Tanzanian shillings [75$]. The traditional healer initially want a patient to pay one hundred thousand Tanzanian shillings [50$] then the rest of the money to be paid once a patient complete the dose. I paid only hundred thousand but when used and found there are no any good progress didn't continue to take it..."* Rural patients emphasized. *''...no they cannot cure cancer. They just waste people's time there, while the disease is growing. I am saying this because when I call the traditional healer and tell him that, I am feeling sicker, instead of telling me to go and see him for the change of treatment. Instead he tells me go to hospital it means they cannot cure cancer. They took our money, waste our time and when disease goes bad they tell you to go to the hospital. I don't belief on them at all."*. **Conclusions:** Traditional healers are a critical part of the cancer delivery system in Northern Tanzania yet may contribute to delays in cancer care. Culturally sensitive interventions targeting these providers are necessary to promote early detection, decrease delay in presentation, and improve timely access to care. Research Sponsor: Kilimanjaro Clinical Research Institute.

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## Transitions in care for ER patients with a suspected cancer diagnosis.

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**Background:** The oncology nurse navigators (ONNs) at Penn Medicine's Abramson Cancer Center (ACC) observed that patients seen in the Emergency Room (ER) and found to have a suspicion of cancer were being told to call a medical oncologist. The oncologist in the ACC are highly specialized and since the patient has not had a confirmed cancer diagnosis, they were being told they couldn't schedule an appointment. Some patients waited for the ACC to call them to schedule. When this didn't happen they would call the ACC a week later. These barriers led to delays in care, poor patient experience, and a financial loss for the health system. The ONNs identified this as an opportunity to change the process to improve patient care. **Methods:** The initiative formally began in June 2021 when the ONNs reached out to the ER leadership to collaborate on a quality improvement project to streamline the process from ER visit to oncology work up and diagnosis. Direct referral to oncology nurse navigation from the ER facilitates timely navigation assessment and coordination of care. The Plan Do Study Act (PDSA) methodology was utilized. A "Consult to Nurse Navigation" order was built into the electronic medical record (EMR) for ER providers to directly refer patients to the navigation team. The ONNs contacted the patient within one business day to assess next steps. The ONNs scheduled the patient with the appropriate oncology specialist. The ONNs follows the patient through the diagnostic phase of care and assists with decreasing barriers to care. Data collection is ongoing to assess the impact of the interventions. **Results:** The EMR consult to ONNs went live April 2022. It includes 3 hospital ERs in the health system with diverse populations that often have limited access to health care. To date, 90% were appropriate referrals and triaged to cancer specialists for diagnostic workup and treatment. 90% had insurance accepted by the health system. Patients with unacceptable insurance plans were referred to ER social work and financial advocates. 70% were diagnosed with cancer and began treatment. **Conclusions:** ONNs are vital in identifying and removing barriers to care. The ONN team's clinical knowledge, assessment skills, and expertise of the Penn health system have closed a gap in care while increasing patient satisfaction, patient retention, and downstream revenue. The ONNs leadership has directly enhanced the diagnostic process and timeliness to care for patients newly effected by cancer. Research Sponsor: None.

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## Association of disability with long-term noncompliance of breast cancer screening.

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**Background:** Although the U.S. Preventive Services Task Force (USPSTF) recommends a biennial screening mammography for women aged 50 to 74 years at average risk for breast cancer, 24.6% of screening-eligible women do not follow the recommendation. Very little is known regarding the association between various types of disabilities and subsequent breast cancer screening behaviors following the initiation of screening mammography. This study examines the association of disability with short-term vs. long-term noncompliance of having a mammogram. **Methods:** Using data from 2016, 2018, and 2020 Behavioral Risk Factor Surveillance System annual surveys, we constructed the study cohort of women aged 55 to 74 years who did not have a cancer history and who received a mammogram at least once in the past. Outcomes are short-term (2 years) and long-term (5 years) noncompliance of USPSTF recommendations. Key independent variables are six binary variables of standard functional disability conditions (hearing, vision, cognition, ambulation, self-care, and independent living) in the first model and a categorized total number of disabilities (0, 1, 2, ≥3) in the second model. We employed a multivariable logistic regression model, adjusting individuals' socio-demographics, general health status, chronic conditions, health risk factors, and metropolitan statistical areas (MSA), and accounting for complex survey design. **Results:** Among the study cohort (n = 232,143; weighted n = 29,358,431), 18.1% and 7.1% of women reported not having mammography in the past two and five years, respectively, representing short- vs. long-term noncompliance. Of the study cohort, 32.8% had any type of disability (ambulation 22.7%, cognition 11.0%, independent living 8.8%). Notably, the long-term noncompliance rate was highest among women with a disability and residing in non-MSA (10.2%). In multivariable analysis, while only disability in independent living was associated with short-term noncompliance (odds ratio [OR] 1.28; 95% confidence interval [CI] 1.15-1.42), disability in independent living (OR 1.34; 95% CI 1.18-1.52), vision (OR 1.15; 95% CI 1.01-1.32) and ambulation (OR 1.12; 95% CI 1.01-1.24) were all significantly associated with long-term noncompliance. Women with ≥3 disabilities were 1.64 times more likely to be non-compliant in the long term, and the association of disability with noncompliance was more pronounced in non-MSA. **Conclusions:** This study provides the first empirical evidence on the positive association between disability and screening noncompliance, especially in the long term. It suggests disability could aggravate disparities in timely access to cancer screening, particularly in non-MSA. Understanding how various types of disabilities affect screening behavior is a critical step for public health efforts in cancer prevention and control through identifying vulnerable subgroups for targeted interventions. Research Sponsor: None.

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## Rural-urban disparities in uptake of lung cancer screening.

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**Background:** In Alabama, lung cancer is the leading cause of cancer death. High lung cancer incidence and mortality rates are attributed to high smoking rates among underserved, low-income, and rural populations. Residents in rural Alabama tend to be older, engage in risky health behaviors, and have lower adherence to preventive care than their urban and suburban counterparts. Disparities in mortality rates between rural and urban areas are substantial for lung cancer. It can be explained by increased tobacco use and the preponderance of late-stage diagnoses following the lack of uptake of lung cancer screening (LCS). Therefore, we examined factors associated with LCS uptake among patients referred for screening at the University of Alabama at Birmingham (UAB). **Methods:** A retrospective cohort of patients at UAB who were eligible for lung cancer screening between 01/01/2015 and 12/31/2020 was used to define the cohort. Eligibility was defined as individuals between 55-80 years old, without diagnostic codes for lung cancer (ICD-9 162.9 or ICD-10 C34.90 within the past ten years), and had a smoking history. Patient demographic variables included Age, Sex, Race/Ethnicity, RUCA codes, and distance from UAB. Chi-square tests and Student t-tests were used to compare screening uptake across patient demographic and clinical variables. Bivariate analyses were used to determine significant predictors of lung cancer screening uptake at UAB. **Results:** Of the 67,355 identified as eligible for LCS, only 1147 (0.017%)were screened. Sixteen individuals were not AL residents and therefore were not included in further analysis. Of those 1129 individuals screened, the mean age was 67.02, male (54.92%) and Non-Hispanic White (57.77%). Compared to those not screened (97.86%), those screened (2.14%) were more likely to live in an urbanized area. Additionally, compared to those not screened (50.52 mi), those screened were more likely to live closer to UAB (22.06 mi). **Conclusions:** Findings show a substantial disparity between adults living in rural areas and those living in more urbanized areas regarding LCS use. Furthermore, the study provides evidence that LCS has not reached all subgroups and that additional targeted efforts are needed to increase lung cancer screening uptake. Research Sponsor: U.S. National Institutes of Health.

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## Advancing equity in prostate cancer outcomes using community-facing navigation in the cancer continuum of care.

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**Background:** According to the American Cancer Society, prostate cancer is the second most common cause of cancer death in Black men. Between 2014–2018, the prostate cancer incidence rate among Black men was 73% higher than that in white men. Approximately 6,040 Black men are projected to die of prostate cancer in 2022. Many disparities contribute to prostate cancer mortality in Black men, including missed genitourinary (GU) referral appointments. Research has shown that patient navigation can be an effective, evidence-based intervention to improve health outcomes. Improving completion of GU referrals through navigation may advance equity in continuity of care. **Methods:** An algorithm was integrated into electronic medical records (EMR) to identify Black men eligible for prostate cancer screening in primary care practices of a health system North Carolina. An assessment was adapted for community-facing navigators using existing literature on patient navigation practices. Navigators were trained on culturally responsive prostate cancer education and a plan-do-study-act quality improvement (QI) model. A notice to navigate alert was implemented into the navigation workflow to alert staff of Black men with prostate-specific antigen (PSA) levels of 10 or greater. **Results:** At baseline, perceived barriers to entering the continuum of care were related to the social determinants of health, as noted by navigators. During the intervention, navigators were alerted of 25 Black men 49 – 74 years of age with PSA levels of 10 and above. Initial PSA results ranged from 10.55 to 101.61 (ng/ml). Twenty-three of them agreed to accept navigation services and were scheduled appointments to follow up with GU. Of the completed appointments, 15 were diagnosed with prostate cancer. Post-intervention, navigators noted barriers to completing GU appointments included health literacy/education, work schedules, transportation, lack of responsiveness to female navigators, the digital divide, social support, and denial of prognosis. **Conclusions:** Providing Black men with navigation services allowed common barriers to be eliminated, increased GU appointment completion, identified men with prostate cancer at earlier stages, and assisted with earlier initiation of treatment by conducting a warm handoff to clinical navigators. Future studies may seek to understand implementation of the EMR algorithm across all primary care practices, integrating the use of navigators as an intervention, and supplementing culturally—tailored patient education materials to include a digital component. Research Sponsor: Genentech and Bristol Myers Squibb Foundation.

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## Lessons learned from a lung cancer screening patient navigation program at a safety-net hospital system.

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**Background:** As part of a CPRIT prevention services grant led by UTSW, Parkland Health adapted a patient navigation model previously piloted in 2017 to optimize low-dose computed tomography (LDCT) imaging for lung cancer screening and evidence-based tobacco cessation services. **Methods:** Non-clinical patient navigators (PN) contacted patients with a LDCT order to discuss their lung scan and smoking cessation options via telephone encounters. The PN has three planned touchpoints to assess patient knowledge, identify barriers, and refer to appropriate resources. Program evaluation data has been collected monthly for enrolled patients (n = 460) from August 2021-June 2022 via REDCap and EPIC. Navigation excluded patients who were incarcerated, had no phone number listed in medical record, or patients opted out of the program on intake. **Results:** Of the LDCT-eligible patients, PNs were able to complete two or more navigation calls with 55.62% of patients assigned. 77% of patients completed their first LDCT, compared to 80% in the initial trial. The most common barriers to screening completion included transportation (n = 38), insurance coverage (n = 22), and cost (n = 9). Of the navigated patients who were active smokers (75%), 33% scheduled at least one smoking cessation-related visit. Some patients unresponsive to conversations about quitting, were responsive to language around "reducing" tobacco use. **Conclusions:** Disproportionately under- and uninsured, Parkland Health patients face a variety of barriers to screening. As a result, PN staff must balance reaching all patients with a LDCT order and spending additional time navigating patients with complex barriers. To address these barriers, the PN program facilitates coordination of patients between primary care providers, radiology operations, smoking cessation clinics, patient financial services, lung diagnostic clinic, and social work. For example, patients can schedule a smoking cessation visit directly with our PN instead of being referred. As Parkland has a decentralized LCS program model, having embedded non-clinical PNs within existing roles in the cancer center, like medical practice assistants, increases continuity of care. These individuals have the benefit from day-to-day knowledge of downstream services that bolster their ability to connect patients to external services to address barriers. Research Sponsor: Cancer Prevention and Research Institute of Texas (CPRIT).

## Mammographic follow-up before and during the COVID-19 pandemic.

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**Background:** Mammography adapted during the COVID-19 pandemic to accommodate social-distancing guidelines and minimize risk of exposure, but it is unclear how these accommodations potentially provoked existing inefficiencies or illuminated opportunities to redress them. The goal of this study was to compare rates of (1) diagnostic follow-up after a BIRADS 0 (i.e., incomplete) screening mammogram and (2) biopsy following a BIRADS 4 or 5 (i.e., biopsy recommended) diagnostic mammogram before and after onset of the pandemic. **Methods:** We included women ≥18y who underwent a BIRADS 0 screening mammogram and/or BIRADS 4-5 diagnostic mammogram at our institution from 3/15/19-3/15/21. Given seasonal variation in care receipt, pre-COVID (3/15/2019-3/15/20) and COVID (3/15/20-3/15/21) time periods were compared at a quarterly level. Case-mix adjusted associations between time-to-follow-up and COVID vs pre-COVID quarters (Q1-4) were estimated using multivariate Cox proportional hazards models. **Results:** We identified 17,918 women (Asian: 985, Black: 4054, Hispanic: 840, White: 11,302) who received a total of 14,388 BIRADS 0 screening and 6410 BIRADS 4 or 5 diagnostic mammograms. There were far fewer diagnostic mammograms in COVID Q1 vs pre-COVID Q1 (Table), and they were more likely to be followed up with biopsy (HR 1.21 [95% CI 1.03-1.44], p = 0.023). COVID Q3 (HR 0.92 [95% CI 0.86-0.98], p = 0.002) and Q4 (HR 0.88 [95% CI 0.83-0.95], p < 0.001) screens were less likely to be followed up with diagnostic mammograms but volumes were higher vs the respective pre-COVID quarters (Table). However, COVID Q3 patients with BIRADS 4 or 5 mammograms were 18% more likely to undergo biopsy than their pre-COVID Q3 counterparts (HR 1.18 [95% CI 1.07-1.31], p < 0.0001, Table) despite higher COVID volumes. **Conclusions:** Early in the pandemic, patients were more likely to receive mammographic follow-up, potentially due to lower patient volumes and enforced strategies for more efficient, less time-intensive care delivery. These gains were lost with regards to diagnostic follow-up for screening mammograms but maintained with regards to performing biopsies. As volumes return to or surpass pre-pandemic levels, health systems must work to identify and preserve operational efficiencies gained during the early pandemic. Research Sponsor: U.S. National Institutes of Health.

| | Adj HR for Diagnostic Mammogram | | | Adj HR for Biopsy | | |
|---|---|---|---|---|---|---|
| | BR 0 n = 14,388<br>Pre-COVID 7404<br>COVID 6934 | HR<br>(95% CI) | P-Value | BR 4/5 n = 6410<br>Pre-COVID 3303<br>COVID 3107 | HR<br>(95% CI) | P-Value |
| Q1 (Mar 15 – Jun 14) | Pre-COVID 1722 | Ref | - | Pre-COVID 825 | Ref | - |
| | COVID 367 | 1.12<br>(0.99-1.27) | 0.064 | COVID 339 | 1.21<br>(1.03-1.44) | 0.023 |
| Q2 (Jun 15 – Sep 14) | Pre-COVID 1764 | Ref | - | Pre-COVID 789 | Ref | - |
| | COVID 1950 | 1.05<br>(0.98-1.12) | 0.252 | COVID 887 | 0.93<br>(0.84-1.04) | 0.188 |
| Q3 (Sep 15 – Dec 14) | Pre-COVID 2062 | Ref | - | Pre-COVID 881 | Ref | - |
| | COVID 2418 | 0.92<br>(0.86-0.98) | 0.002 | COVID 951 | 1.18<br>(1.07-1.31) | < 0.001 |
| Q4 (Dec 15 – Mar 14) | Pre-COVID 1856 | Ref | - | Pre-COVID 808 | Ref | - |
| | COVID 2199 | 0.88<br>(0.83-0.95) | < 0.001 | COVID 930 | 0.91<br>(0.82-1.01) | 0.068 |

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## COVID-19 impact on multiple myeloma prescribing patterns.

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**Background**: COVID-19 has impacted several areas of oncology patient care, most notably the reduction of patient visits for treatments. Standard treatment of multiple myeloma (MM) involves a combination of intravenous (IV) and oral therapies. The purpose of this study is to assess the impact COVID-19 had on IV and oral medication prescribing patterns pre and during the COVID-19 pandemic among MM patients. **Methods**: This is a retrospective review of adult MM patients insured by a large commercial and Medicare health plan in the United States who started a new IV or oral MM agent during the study period. To assess the impact of COVID-19 on IV and oral medication prescribing patterns, we compareda pre-COVID period (March 1-August 31, 2019) to a COVID period (March 1-August 31, 2020). We utilized medical and pharmacy claims to identify patients and calculated new therapy starts per newly diagnosed patient (defined as the number of patients starting a new IV or oral medication for MM divided by the total number of patients with a first indication date of MM within the study timeframe). We compared rates using a Chi-square test; p-values $\leq 0.05$ were considered statistically significant. **Results**: 1,754 patients were enrolled in the study; there were no significant differences in demographic characteristics pre and during COVID-19 between the two groups with respect to age (67.05 vs. 66.64; $p = 0.45$), gender ($p = 0.80$), insurance plan type ($p = 0.17$), geographical region ($p = 0.26$) and medication ($p = 0.59$). During COVID-19, the number of newly diagnosed MM patients decreased by 22% (9,657 to 7,560) and the total number of new therapy starts decreased by 11% (930 to 824). When looking at rates of new therapy starts per newly diagnosed patient, both IV (11%; $p = 0.03$) and oral (51%; $p = 0.03$) medication rates significantly increased. Additionally, there were significant increases in new therapy start rates by region in the Northeast for oral (157%; $p < 0.01$) and West for IV (32%; $p = 0.02$) medications. There were no significant differences in new start rates by insurance plan type (all $p > 0.08$). **Conclusions**: While the total count of new therapy starts, a proxy for new diagnoses, decreased during COVID-19, the rate of new starts for both IV and oral therapies for patients diagnosed with MM significantly increased. These increased start rates may be explained by a remarkable 22% drop in the total number of newly diagnosed MM patients during COVID-19. As the pandemic continues, further study is warranted to understand how COVID-19 may impact IV vs. oral usage in MM. Research Sponsor: None.

**Patient demographics.**

| | Pre-COVID N = 930 | During COVID N = 824 | P-Value |
|---|---|---|---|
| **Age (mean (SD))** | 67.05 (10.93) | 66.64 (11.52) | 0.45 |
| **Gender = M (%)** | 517 (55.6) | 464 (56.3) | 0.80 |
| **Line of Business (%)** | | | 0.17 |
| **Commercial fully insured** | 56 (6.0) | 68 (8.3) | |
| **Commercial self-insured** | 293 (31.5) | 262 (31.8) | |
| **Medicare** | 581 (62.5) | 494 (60.0) | |
| **Region (%)** | | | 0.26 |
| **Mid America** | 230 (24.7) | 200 (24.3) | |
| **Northeast** | 316 (34.0) | 267 (32.4) | |
| **Southeast** | 237 (25.5) | 197 (23.9) | |
| **West** | 147 (15.8) | 160 (19.4) | |

# Real-world racial disparities in EGFR testing and third-generation EGFR TKI use among U.S. patients with stage IV NSCLC.

*Elizabeth Sacchi, You Li, Vincent A. Miller, Melissa D. Curtis, Siraj Mahamed Ali; EQRx, Cambridge, MA; Foundation Medicine, Inc., Cambridge, MA*

**Background:** Biomarker testing for EGFR mutations (EGFRm) is recommended for all newly diagnosed patients with metastatic NSCLC. Third-generation EGFR TKIs are the recommended standard-of-care therapy for patients with EGFRm+ NSCLC regardless of race, although EGFRm occur more frequently in Asian patients (Table). We investigated the association between race, EGFR testing and receipt of subsequent first-line (1L) treatment with the third-generation EGFR TKI, osimertinib. **Methods:** This retrospective, observational study used the nationwide Flatiron Health EHR-derived de-identified database. Adults with an initial diagnosis of stage IV NSCLC who initiated systemic 1L therapy between Apr 2018 (osimertinib approval) and Feb 2022 (data cutoff date) were eligible. Two cohorts were defined: those eligible for EGFR testing, and those EGFRm+ patients eligible for 1L osimertinib. Multivariable logistic regression was used to investigate odds of 1) EGFR testing, and 2) 1L osimertinib use, by race. Random-effects logistic regression was used as a sensitivity analysis to evaluate the impact of inter-practice variation on each outcome. Confidence intervals (CI) were calculated at 95%. **Results:** 9,505 patients were eligible for EGFR testing. After adjustment, Asian patients were nearly twice as likely to be tested (adjusted odds ratio [aOR]: 1.93, CI: 1.33 – 2.89, p = 0.0001), while Black patients were 25% less likely to receive testing (aOR: 0.75, CI: 0.62 – 0.90, p = 0.002), both relative to White patients. Including a random factor of practice attenuated the effect of race for Asian patients (aOR: 1.74, CI: 1.15 – 2.64, p = 0.0009) as well as Black patients (aOR: 0.8, CI: 0.65-0.97, p = 0.021). Of these patients, 1,247 were confirmed EGFRm+ and were thus eligible for 1L osimertinib. Asian patients were marginally more likely to receive 1L osimertinib, even after adjustment (*aOR*: 1.51, *CI*: 0.958 – 2.43, *p* =.082). The inclusion of a random factor of practice diminished the marginal effect of race (*aOR*: 1.46, *CI*: 0.90 – 2.36, *p* = 0.1). **Conclusions:** Retrospective analyses using real-world data revealed differences across races in EGFR testing among patients with stage IV NSCLC, suggesting disparities in quality of care. Racial disparities were also observed in 1L osimertinib use among patients with EGFRm+. Sensitivity analyses suggest that these disparities may partially be attributed to differences in care between practices. Future studies are warranted to further characterize this unexpected race-based difference in biomarker testing and treatment initiation. This work highlights the need for investigations of racial disparities in access to both biomarker testing and effective treatment options across precision oncology. Research Sponsor: EQRx.

| Ethnicity/Race | White | Black | Asian | Hispanic or Latino | Other | Unknown |
|---|---|---|---|---|---|---|
| EGFRm+ among those tested (%) by race | 14 | 14 | 54 | 29 | 17 | 18 |

**125** **Poster Session**

## Post-protocol therapies in first-line immunotherapy trials in non–small cell lung cancer (NSCLC).

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**Background:** The advent of immunotherapy (IO) has led to significant improvement in outcomes for patients (pts) with advanced non-small cell lung cancer (adv NSCLC). The rate of crossovers and receipt of post-protocol IO in pivotal trials leading to FDA approvals of IO in NSCLC has not been systematically evaluated. Here, we evaluate crossover rates and post protocol therapies for pts with adv NSCLC across multiple first-line (1L) IO monotherapy and chemotherapy/IO (chemo/IO) combination trials. **Methods:** We utilized the publicly available data from pivotal clinical trials leading to approvals of IO or chemo/IO regimens in 1L treatment of adv NSCLC. We extracted data on outcomes, rate of crossover from control arm to IO, proportion of pts in control arm receiving IO and the start dates of these clinical trials. The primary outcomes were the rates of crossover and the proportion of patients in control arms who received post-control IO. **Results:** The study included 4 trials with IO monotherapy and 12 trials with chemo/IO combinations in 1L adv NSCLC. The primary endpoints for these trials were PFS (25%), OS (19%), and both PFS and OS (56%). The crossover rate from control arm to experimental arm (with IO) ranged from 0-74% in IO monotherapy trials and 0-49% in chemo/IO trials. Two IO monotherapy trials and five chemo/IO trials did not allow crossover; among them, 3 trials had a PFS/OS co-primary endpoint, while others had OS as primary endpoint. Ten of 16 trials provided explicit information on use of subsequent post-protocol therapies in their publications. Among the two IO monotherapy trials which did not allow crossover, post-protocol IO was administered in only 20-30% of patients. Among the six chemo/IO trials with information on post-protocol therapies, 30%-59% patients on the control arm subsequently received some form of IO on progression. Nine of 12 trials started accrual after 10/2015, when nivolumab was approved in the United States as second-line (2L) therapy for adv NSCLC regardless of tumor PD-L1 expression. **Conclusions:** Despite the highly significant OS benefit from 2L IO, which was the standard of care (SOC) in the United States, the rates of crossover and post-protocol IO administration was distressingly low in 1L IO monotherapy and chemo/IO trials for 1L adv NSCLC. This low rate of 2L treatment with IO may have been due to limited global availability prior to widespread regulatory approval during the conduct of these trials. There is an increased need for consistency in reporting of crossover treatment and post-protocol treatments to allow adequate assessment of the true 1L benefit with IO. Control arms in pivotal trials require scrutiny to ensure confirmation with SOC to provide access to optimal treatments for patients and prevent magnification of observed benefits in experimental arms. The difficulty lies in the global conduct of large randomized clinical trials with differing regulatory approvals. Research Sponsor: None.

# Uptake of second-line anticancer therapy after first-line pembrolizumab in patients with stage IV non–small cell lung cancer with PD-L1 > 50%: Comparison between clinical trials and the real world.

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**Background:** In KEYNOTE-024 single agent pembrolizumab was compared to platinum-based chemotherapy in advanced non-small cell lung cancer (NSCLC) with PDL1 >50%. Patients treated with pembrolizumab had an improved progression free survival and overall survival (OS). In KEYNOTE-024, 53% of patients treated with pembrolizumab received second line anticancer therapy with a median OS of 26.3 months. The objective of this study is to characterize real-world NSCLC patients who received second line therapy after pembrolizumab. **Methods**: A retrospective study of stage IV NSCLC patients with PDL1 >50% referred to BC Cancer between 2018-2021 treated with first line pembrolizumab. Patient demographics, treatment received, and outcomes were collected retrospectively. Baseline characteristics were compared using descriptive statistics. Univariate and multivariate analysis was completed. Kaplan-Meier curves was used to calculate OS and compared using the log rank test. **Results**: Between 2018-2021, 718 Stage IV NSCLC patients received at least 1 cycle of pembrolizumab. Median duration on treatment was 4.4 months and follow up duration was 16.0 months. 567 (80%) had disease progression of which only 21% (n = 119) received second line systemic therapy. Within the subset with disease progression, median duration on treatment was 3.0 months and follow up duration was 11.7 months. Patients who received second line therapy were younger ($p < 0.001$), better baseline ECOG PS ($p < 0.001$) and had longer duration on first line pembrolizumab ($p < 0.001$). There was no difference in sex ($p = 0.519$), smoking status ($p = 0.416$) or histology ($p = 0.136$). In the multivariate model including age (OR 0.95), baseline ECOG PS (PS 0-1, OR 2.59) and duration on pembrolizumab (OR 1.05) each independently impacted receipt of second line therapy, Table. Median OS from date of diagnosis was 9.6 (IQR 8.4-10.9) months in patients who did not receive additional therapy after progression and 25.3 (IQR 22.5-28.1) months in patients who received subsequent therapy, ($p < 0.001$). **Conclusions**: In our stage IV NSCLC population, we found that only 21% of patients received second line systemic therapy despite it being associated with improved OS. Compared to KEYNOTE-024, this real-world population found that 60% less patients received second line systemic therapy. Although differences exist between a clinical and non-clinical trial population, these findings suggest significantly undertreating our stage IV NSCLC patients requiring increased rates of offering second line therapy. Research Sponsor: None.

**Multivariable analysis for characteristics associated with receipt of second line systemic therapy.**

| | OR (95% CI)Multivariate analysis | P-Value |
|---|---|---|
| Age | 0.949 (0.927-0.972) | < 0.001 |
| ECOG PS 0-1 versus = / >2 | 2.591 (1.610-4.167) | < 0.001 |
| Duration of Pembrolizumab | 1.053 (1.023-1.085) | < 0.001 |

**127** **Poster Session**

# Creating a single point of referral and standardized care pathway for patients with melanoma to improve access to care.

*Sydney Rubin Fitzgerald, Bailey Hanson, Andrew Phillip Loehrer; Darthmouth-Hitchcock Medical Center, Lebanon, NH; Dartmouth-Hitchcock Medical Center, Lebanon, NH; Massachusetts General Hosp, Boston, MA*

**Background:** Access to care is often a challenge for healthcare organizations especially as pressures on time increase and workforce availability decreases and is often complex to solve. In this quality improvement (QI) initiative, a team from a rural academic medical center deployed the Lean Six Sigma approach to develop a two-pronged method that reduced the median time to first visit for new melanoma patients. **Methods:** The project team deployed the Define, Measure, Analyze, Improve, and Control (DMAIC) processes to address access for melanoma patients after the healthcare organization set a goal that 55% of new specialty care patients be seen within 10 days. Define: Concern was raised by the melanoma clinical care team that the lack of a well-defined and standardized referral workflow for melanoma patients could delay patient care. Measure: Data from the electronic medical record (EMR) indicated that only 31% of incoming referrals were seen within 10 days, and the median number of days to first visit was 15, or 50% over the organizational standard. Analyze: Analysis found considerable waste in the existing referral system. First, untrained staff made referral and routing decisions, meaning patients could potentially be seen by inappropriate departments based on the assessment of those not specialized in melanoma care and treatment. This led to the second area of waste: rework. Every referral had to be reviewed by multiple staff in several departments to ensure the referral made was appropriate based on the characteristics of disease. This was a very labor-intensive processes that allowed too many patients to slip through the cracks of the system. Improve: Two interventions were deployed to address the identified waste. First, a centralized referral point for all melanomas monitored by the Program Coordinator. Second, a referral questionnaire developed by an interdisciplinary team to guide where routine cases should be referred. Early results show that the interventions had marked impact on the time to first appointment for all referrals, whether originating inside of the organization or out. After the intervention 54% of newly referred patients were seen within 10 days. **Results:** Control: A standard report was built to support the project team in monthly monitoring of the KPI, days from referral to patient seen. The report is monitored by a dedicated Program Coordinator who can escalate any issues during regular interdisciplinary care team meetings. **Conclusions:** Improvements in access can be achieved by adopting standard work that is targeted to reduce waste in the referral workflow. The model developed by this QI initiative is easily replicable and may be especially useful for interdisciplinary teams who provide care to complex diseases. Research Sponsor: None.

Days from referral to visit with provider.

| | Pre-Intervention (n = 146) | Post-Intervention (n = 39) |
|---|---|---|
| Min | 1 | 1 |
| Quartile 1 | 9 | 7 |
| Quartile 2 | 15 | 9 |
| Quartile 3 | 30 | 15.5 |
| Max | 290 | 27 |

## Prevalence of social risks among oncology patients in an integrated health care delivery system.

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**Background:** Social risks and needs can affect oncology treatment and outcomes, and some may be amenable to intervention before or during treatment. We surveyed Kaiser Permanente Northern California (KPNC) oncology patients to estimate prevalence of social risks among cancer patients. **Methods:** Adults undergoing treatment at KPNC infusion centers between 11/2021 – 05/2022 completed a print questionnaire that included questions about recent (past 3 month) financial strains, living, relationship, and transportation situation, and different aspects of social support. **Results:** A total of 767 patients completed surveys in English. Respondents were 63% female, median age 63y, and majority White (61% White, 19% Asian, 11% Latino, 7% Black) and college-educated (28% some college, 45% ≥ bachelor's degree). About 20% lived alone, 35% were not in a committed relationship, 13% reported they did not usually get the social or emotional support they needed, and 3% often felt lonely or socially isolated. Approximately 24% said they had no one to help them with daily activities (shopping, cooking, transportation, etc.), 8% reported need for more help with daily activities, and 8% indicated that lack of transportation made it hard to get to medical appointments. Patients with no one to help them were more likely to indicate needing more help (14% vs. 6%). Additionally, while undergoing treatment, 6% were also acting as a primary caregiver to someone who was frail, chronically ill, or had a disability. Approximately 18% had experienced at last one recent financial strain, including trouble paying for medical/dental needs (9%), debts (8%), utilities (6%), food (5%), housing (3%), phone/internet (3%), or transportation (2%). **Conclusions:** Many patients lack adequate emotional and instrumental social support and may also be experiencing difficulties paying for recommended or essential medical and dental needs while undergoing cancer treatment. These findings highlight the importance of incorporating social risk screening into the oncology intake process so that this information is available to the oncology team for care planning and referral to institutional and community resources. In this way, the oncology care team may be able to improve social support and reduce financial and other barriers that may impact patient participation in treatment and treatment outcomes. Research Sponsor: None.

**129** **Poster Session**

## Real-world variability in use of bone-modifying drugs for multiple myeloma by payer type.

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**Background:** The use of bone-modifying agents (BMAs) in multiple myeloma is gold standard. Benefits include prevention of skeletal-related events, reduction in bone pain, and improved progression-free survival. Guidelines recommend that patients with active multiple myeloma receive a BMA for up to two years. Unfortunately, real-world data has shown undertreatment with delays in initiation, interruptions in dosing, and premature discontinuation. These gaps are more pronounced for Black patients. The objective of this study was to describe real-world BMA treatment patterns across different payer types: Medicaid, Medicare, and Commercial/Exchange. **Methods:** This was a retrospective observational study using oncology prior authorization data from multiple payers in the New Century Health (NCH) database. NCH is specialty risk management company who supported over 107,000 oncology patients in 2021. All patients with a diagnosis of multiple myeloma, as indicated by the treating provider's office, were included who had a prior authorization request for anti-cancer therapy between January 1, 2021, and December 31, 2021. Use of BMA was defined as having ≥1 authorization request for zoledronic acid or denosumab any time in the prior 24 months. BMA use was also evaluated by payer: Medicaid, Medicare, or Commercial/Exchange. **Results:** A total of 4774 patients were identified as having active multiple myeloma from January 1, 2021, to December 31, 2021. Fifty-nine percent (59.6%) of patients had at least one authorization request for a BMA submitted by their treating provider any time in the preceding 24 months. While most of the identified patients had Medicare, when request for BMA was disaggregated by payer, meaningful differences were found. For patients with commercial or exchange coverage, 64.6% (281/435) had a BMA requested; for patients with Medicare coverage, 60.1% (2339/3890) had a BMA requested. However, for patients with Medicaid, only 51% (229/449) had a BMA requested. **Conclusions:** Like other studies, our findings highlight underuse of BMAs in multiple myeloma. Differences in request for BMA across payer types suggests variability in adherence to guidelines may be based on patient insurance. To achieve equitable outcomes, including for patients of lower socioeconomic status, targeted efforts must be put in place to ensure receipt of guideline-directed therapy. A strength of this study is the large population and diversity of patients from practices in 41 states with multiple payer types. However, our analysis is limited by several unknown factors such as patient contraindication to or declination of BMA in past that are not captured in the NCH database. This retrospective study, using a large real-world oncology database, highlights that many patients with multiple myeloma may not be receiving guideline-based BMA therapy and that there are meaningful differences depending on patient insurance type. Research Sponsor: None.

**130** **Poster Session**

## Access to treatment among patients with advanced kidney cancer in Mexico.

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**Background:** The socioeconomic status of patients diagnosed with metastatic renal cell carcinoma (mRCC) in developing countries could in many cases limit their access to the best available therapeutic options. We aimed to describe the clinical characteristics and access to treatment of Mexican patients with mRCC. **Methods:** We performed a retrospective analysis of all patients with a histopathologically confirmed diagnosis of renal cell carcinoma who were treated at an oncology referral center in Northeast Mexico over a 5-year period. **Results:** We included 233 patients in the analysis, of whom 63% were men. The mean age at diagnosis was 58.2 years; 87% of the tumors were histopathologically classified as clear cell carcinoma. Regarding laterality, 54% of the tumors originated from the right kidney. The distribution of cases by clinical stage (CS) was as follows: CS I 15%, CS II 8%, CS III 17%, CS IV 60%. All of the included patients had government health insurance coverage; however, specific treatment for renal cell cancer was not included in this coverage. In terms of access to first-line systemic management in the 139 patients with advanced kidney cancer who were candidates for treatment, 29% received treatment with a single-drug tyrosine kinase inhibitor (TKI), 4% were treated with combined or single-drug immunotherapy (IO), and 12% were treated with TKI combined with IO. All but one patient who was treated with a single drug or a combination of IO received these drugs in the context of a clinical trial. Fifty-five percent of patients with advanced disease did not have access to standard first-line therapy. The rate of loss to medical follow-up was 69% of cases. **Conclusions:** Despite the proven oncological benefit of the latest generation of therapies based on IO/IO or IO/TKI for mRCC, access to first-line standard management is still poor in our country, even with single agent TKI. Public health programs should be implemented to expand therapeutic options for this group of patients. Research Sponsor: None.

**131** **Poster Session**

## Cancer treatment delays among patients with cancer living with HIV during the COVID-19 pandemic in the United States.

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**Background:** The COVID-19 pandemic led to care disruptions across the cancer continuum. It is unknown if immunosuppressed patients with cancer who may be at high risk for SARS-CoV-2 infection were disproportionately impacted. Our objective was to compare delays in cancer treatment initiation between people living with HIV (PLWH) and cancer, the general cancer population (GCP), and patients with cancer and a history of solid organ transplant (SOT), another immunosuppressed patient population. **Methods:** We used data from Flatiron Health electronic health record-derived de-identified database (2018-2021) comprised of US patients with cancer from 800 sites of care across the country. We included patients with lymphomas, myeloma, and melanoma, as well as cancers of the breast, lung, prostate, head & neck, and gynecologic or gastrointestinal systems. We calculated time to cancer treatment initiation (TTI) as the difference between the date of cancer diagnosis and the earliest date that one of the following treatments was recorded: cell based treatment, other local treatment, radiotherapy, surgery, systemic therapy, or transplant. 16.4%, 19.9%, and 13.3% of the GCP, PLWH, and SOT groups, respectively, did not have treatment information in the database. This may have been due to no receipt of treatment or lack of data in the medical record. All analyses reported were conducted among patients with available treatment data. PLWH and those with a history of SOT were selected using ICD 9/10 codes. After adjusting for age, sex, and metastatic disease (yes/no), we used a difference-in-difference analysis to compute TTI for each study group both prior to and during the COVID-19 pandemic. We then determined whether study group differences in cancer patient TTI (e.g., HIV-associated treatment delays) changed during the pandemic. **Results:** The sample included 181 PLWH, 65073 GCP patients, and 195 patients with a history of SOT. Overall, no significant delay in TTI was seen between the three groups pre-COVID. However, during the pandemic, the TTI was statistically significantly delayed for PLWH compared to the HIV-uninfected GCP (median TTI 41 days vs. 27 days, $p = 0.0017$). No significant difference was observed overall between the GCP and the SOT group (median TTI 27 days vs. 20 days, $p = 0.376$), evidence that COVID-related treatment delays were specific to PLWH. Difference in difference analysis revealed that, when compared to the GCP, there was a significant increase in TTI among PLWH over time, with delays increasing by almost one month during COVID [DID: 32.6 days (8.9-56.3); $p = 0.007$]. The increase in TTI for PLWH was consistent across treatment modalities, including surgery (DID: 55.1, 95% CI: 28.8-81.3, $p < 0.001$) and systemic therapy (DID: 30.4; 95% CI: 4.6-56.3, $p = 0.021$). **Conclusions:** PLWH and cancer experienced significant delays in cancer treatment initiation after diagnosis during the COVID-19 pandemic. Research Sponsor: None.

**132** **Poster Session**

## Time to diagnosis and treatment initiation during the COVID-19 pandemic among rural patients with cancer.

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**Background:** Time to diagnosis (TTD) and treatment initiation (TTI) are important measures of access and quality of cancer care, but little is known about TTD and TTI for rural cancer patients. Rural residents experience disproportionate burdens of cancer including higher incidence and mortality, and many rural patients face challenges in health care access. Further understanding of TTD and TTI in rural areas is essential to improving the quality of cancer care delivery and cancer outcomes in rural areas. In this study, we describe TTD and TTI among rural cancer patients in Hawaii during the COVID-19 pandemic. **Methods:** Information about TTD and TTI was collected from 80 rural cancer patients enrolled on a care coordination study between Sept. 2020 and Dec. 2021. Participants were receiving active treatment for any cancer and residing in rural areas in Hawaii. We used descriptive statistics to describe TTD and TTI for the overall sample and specifically for those with breast and GI cancers, the two most common cancers in this study sample. **Results:** Participants were 56% female, with the mean age of 63 (SD = 12.1). 43% were White/Caucasian, 30% Native Hawaiian, and 25% two or more race. Reporting of symptoms to a healthcare provider led to diagnosis for 61.6% of the overall sample, whereas 38.4% received diagnosis following screening. For breast cancer, 36.8% indicated symptoms led to diagnosis, and 63.2% by screening. Among those with GI cancer, 76.5% reported symptoms led to diagnosis, and 23.5% by screening. Overall, 62.5% of participants reported TTD of within one month (< = 30 days) of screening or reporting symptoms to a healthcare provider (30-day TTD 62.5% for breast and 60.0% for GI). Median TTI for the overall sample was 60.6 days (IQR 30-62). For those with breast and GI cancers, median TTI was 61.0 (IQR 31-70) and 31.0 (IQR 0-61) days, respectively. **Conclusions:** Our results demonstrate that although TTD in this rural sample was comparable to other studies, TTI overall, and particularly for those with breast cancer, was nearly twice the TTI reported in other population-based studies. Delays in cancer treatment initiation have been associated with worse survival for breast and other cancers, especially among underserved populations. Our findings indicate that during the COVID-19 pandemic, rural residents in Hawaii experienced substantial delays in cancer treatment initiation. This study highlights the importance of addressing timely healthcare system access to minimize delays in treatment initiation and to improve health outcomes for rural cancer patients. Research Sponsor: Agency for Healthcare Research and Quality.

**133** **Poster Session**

## Patterns of molecular testing and targeted therapy use among privately insured patients with cancer.

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**Background:** Despite increased molecular testing (MT) for cancers with actionable biomarkers, the NCCN guidelines only recommend comprehensive MT for newly diagnosed patients with metastatic non-small cell lung cancer (mNSCLC). **Methods:** We used IBM MarketScan Claims to examine MT and Tx use among privately insured patients < 65 yrs. We identified 101,456 patients with new colorectal, lung, breast, ovary, or prostate cancers or melanoma between 2017-2019. We used procedure codes to identify MT receipt within 6 months after the cancer diagnosis. We divided MTs into three categories: single-gene, panel, or unspecified MTs (tests without a uniquely assigned procedure code). We also identified the use of targeted therapy in the year after the cancer diagnosis. **Results:** Among 101,456 patients, 14,657 (14.4%) received MT, and 8,166 (8.0%) received targeted therapy. Use patterns varied across cancers (Table). Patients with breast, colorectal, or ovary cancers were more likely to receive MT. Patients with lung cancer were most likely to receive panel tests. Patients with breast cancer were most likely to receive single-gene tests. Patients with lung cancer were the most likely to receive targeted therapy, with or without MT. Median days from diagnosis to MT was the shortest for lung cancer and the longest for prostate cancer. Median days from diagnosis to targeted therapy was the shortest for lung cancer and the longest for ovary cancer. **Conclusions:** We observed higher uptake of MT among individuals with lung cancer, consistent with recent guidelines. However, the high use of single-gene tests among patients with lung cancer, the receipt of targeted therapy without MT among patients with breast or lung cancers, and the use of multiple types of MT might suggest poor quality of care. Moreover, despite multiple actionable biomarkers, the uptake of MT was low in other cancers. Patients with other cancers might not benefit from the advances of cancer precision medicine due to the lack of clear guidelines. Research Sponsor: None.

| | | | Among those received MT | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Cancer | Total number of patients | Received any MT | Median number of days from DX to the 1st MT | Received single-gene tests | Received panel tests | Received unspecified tests | Median number of days from DX to the 1st Targeted Therapy | Received any Targeted Therapy | Received MT and Targeted Therapy | Received Targeted Therapy without MT |
| Breast | 39084 | 8345 (21.4%) | 16 | 7535 (90.3%) | 52 (0.6%) | 2822 (33.8%) | 48 | 4140 (10.6%) | 1160 (3.0%) | 2980 (7.6%) |
| Colorectal | 12162 | 2038 (16.8%) | 25 | 1604 (78.7%) | 282 (13.8%) | 711 (34.9%) | 103 | 385 (3.2%) | 189 (1.6%) | 196 (1.6%) |
| Lung | 9389 | 2091 (22.3%) | 12 | 1663 (79.5%) | 527 (25.2%) | 651 (31.1%) | 41 | 2506 (26.7%) | 996 (10.6%) | 1510 (16.1%) |
| Melanoma | 12582 | 785 (6.2%) | 28 | 528 (67.3%) | 88 (11.2%) | 261 (33.2%) | 66 | 919 (7.3%) | 385 (3.1%) | 534 (4.2%) |
| Ovary | 3646 | 819 (22.5%) | 49 | 716 (87.4%) | 81 (9.9%) | 292 (35.7%) | 207.5 | 164 (4.5%) | 75 (2.1%) | 89 (2.4%) |
| Prostate | 24593 | 579 (2.4%) | 51 | 182 (31.4%) | 23 (4.0%) | 458 (79.1%) | 80.5 | 52 (0.2%) | < 11 (0.0%) | 47 (0.2%) |

**134** **Poster Session**

## Evaluation of facilitators and barriers of timely breast cancer care in North Carolina (NC): A qualitative study.

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**Background:** Early detection and timely treatment of breast cancer using multi-disciplinary therapies often contributes to a goal of curative intent along with improved overall outcomes. In prior studies, Black women compared to non-Black women are at a higher chance of treatment delay (> 60 days) in NC. The care team factors that contribute to these treatment delays are unclear. **Methods:** This qualitative study utilized content analysis. The 30 participants included community stakeholders involved in breast cancer care delivery, including breast cancer clinicians and community resource providers. Participants were selected through purposive sampling. Three Area Health Education Centers (AHEC) regions (Northwest, Charlotte, and Area L) that represent the diversity of the state of NC were selected as sites for data collection. Each participant completed a one-time semi-structured interview which was audio-recorded and transcribed. Inductively derived codes were created from the previously established interview guide leading to the production of the codebook with each code conceptually defined. Transcripts were coded by 7 coders through the method of consensus coding leading to the identification of emergent themes. Code reports were generated from each code leading to the production of a narrative summary. **Results:** All participants identified perceived both facilitators and barriers to the timely initiation of breast cancer treatment. Barriers fell into several categories: geographical, financial, healthcare system related, and patient related (non-financial). Most barriers were perceived as more common among Black patients. Additionally, participants emphasized incidents of historical racism in medical care that limited Black patients from having trust in the healthcare system. Facilitators identified included: outreach through community partners, healthcare navigation, supportive healthcare providers, provision of social support services, transportation, integrative services, and raising the overall quality of cancer care. **Conclusions:** Despite the diversity of participants regarding region, years of employment, and role, stakeholders identified important common themes when reviewing the perceived facilitators and barriers of breast cancer care delivery. Perceived barriers were largely related to patients' social determinants of health, and participants perceived that Black patients had more adverse social determinants impacting their care timeliness, highlighting that structural racism contributes to delayed cancer care delivery. Future initiatives aimed at improving the delivery of timely breast cancer care must focus on evaluating marginalized communities' overall access to adequate care along with effective community engagement to build a higher level of trust from such patients and target the social determinants of health. Research Sponsor: Susan G Komen for the Cure North Carolina Triangle to Coast Affiliate.

**135** **Poster Session**

## Falling off the treatment wagon: Barriers to cancer treatment and care for people experiencing health and social inequities.

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**Background:** A key pillar of Canada's healthcare system is universal access, yet significant barriers to cancer services remain for those impacted by health and social inequities (e.g., poverty, homelessness, racism). For this reason, cancer is diagnosed at a later stage, resulting in worse patient outcomes, a reduced quality of life, and at a higher cost to the healthcare system. Those who face significant barriers to access are under-represented in cancer control services Consequently, these inequities result in people dying from cancers that are highly treatable and preventable, however; little is known about their treatment and care course. The aim of this study was to explore barriers to accessing cancer treatment among people experiencing health and social inequities within a Canadian context. **Methods:** We conducted a secondary analysis of ethnographic data informed by critical theoretical perspectives of equity and social justice. The original research draws from 30 months of repeated interviews (n = 147) and 300 hours of observational fieldwork with people experiencing health and social inequities at the end-of-life, their support persons, and service providers. **Results:** Our analysis identified four themes presenting as 'modifiable' barriers to inequitable access to cancer treatment: (1) housing as a key determinant for cancer treatment (2) health literacy and 'missing the window' for shared decision making (3) invisibility of the social/structural determinants of health (4) navigating a complex and fractured system. These inter-related themes point to how people impacted by health and social inequities are at times 'dropped' out of the cancer system and therefore unable to access cancer treatment. **Conclusions:** Findings make visible the contextual and structural factors contributing to inequitable access to cancer treatment within a publicly funded health care system. Identifying people with social and health inequities and approaches to delivering cancer services are explicitly equity-oriented are urgently needed. Research Sponsor: Canadian Institutes of Health Research (CIHR).

# Predictive factors for cancer treatment delay in an underserved urban population.

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**Background:** Incremental delays in time to treatment initiation (TTI) have been shown to cause a proportional, independent increased risk of disease specific mortality for breast cancer, colorectal cancer (CRC), head and neck (HNC), non-small cell lung cancer (NSCLC) and pancreatic cancer. Delays can partly be attributed to increasingly complex workup with modern imaging, genomic and multidisciplinary/multimodality treatments. However, studies suggest delays are associated with racial and socioeconomic disparities, implicating a target for addressing inequity. Given Montefiore Medical Center (MMC) serves a racially diverse, socioeconomically challenged population, we sought to evaluate associations between patient factors and TTI to identify those associated with delay. **Methods:** Retrospective cohort study at an urban community-based academic center of patients diagnosed with or referred for curative intent treatment of breast cancer, CRC, HNC, NSCLC and pancreatic cancer at MMC from January 2019 to December 2021. Variables of interest included tumor stage, primary treatment modality, median household income, Charlson Comorbidity Index (CCI) score, tobacco use, insurance type, language preference and inpatient (IP) admission or emergency room visit 30 days prior to diagnosis. **Results:** A total of 2543 patients (F = 1755, M = 788) were identified (mean age 63.4 ± 13.4). The median TTI was 25 days (6, 44 IQR). Factors associated with TTI delay were assessed using logistic regression (Table). Patients who were treated outpatient, and not admitted 30 days prior to diagnosis, experienced increased delay for CRC (OR 2.82) and NSCLC (2.11). Higher CCI score was associated with delay for HNC (2.63) and NSCLC (1.75). For breast cancer, uninsured and Spanish-speaking patients (1.79) were subjected to increased TTI. **Conclusions:** This study identifies predictors and opportunities for addressing delay and health inequity while improving survival. IP admission 30 days before diagnosis was associated with timely TTI for CRC and NSCLC. Other factors predictive of delay included CCI score in HNC and NSCLC, and insurance type and preferred language in breast cancer. Research Sponsor: None.

**Logistic regression assessing factors associated with TTI delay, stratified by cancer.**

| Cancer (Number of patients, %) | Breast (1120, 44.0%) | CRC (507, 19.9%) | HNC (296, 11.6%) | NSCLC (412, 16.2%) | Pancreatic (208, 8.2%) |
|---|---|---|---|---|---|
| Inpatient 30 Prior to Diagnosis OR (95% CI) | 2.12 (0.97-4.63) | **2.82 (1.71-4.66)** | 2.02 (0.93-4.37) | **2.11 (1.31-3.39)** | 0.77 (0.38-1.56) |
| Charlson Comorbidity Index Score OR (95% CI) | 0.995 (0.65-1.52) | 1.31 (0.91-1.88) | **2.63 (1.04-6.66)** | **1.75 (1.14-2.71)** | N/A |
| Private Insurance vs Uninsured OR (95% CI) | **0.44 (0.21-0.93)** | N/A | N/A | N/A | 0.56 (0.1-3.26) |
| Spanish-speaking (95% CI) | **1.79 (1.21-2.67)** | 0.76 (0.4-1.45) | 1.77 (0.85-3.68) | N/A | N/A |
| Age OR (95% CI) | **0.99 (0.97-0.996)** | 0.99 (0.98, 1.01) | 1.001 (0.98-1.02) | 0.997 (0.98-1.02) | **0.95 (0.91-0.98)** |

**137** **Poster Session**

## Association of prevalent social risks with treatment initiation among patients with cancer.

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**Background:** Social risks are adverse conditions that may serve as barriers to health care and lead to poor health outcomes. Among individuals with cancer, social risks like financial hardship have been associated with delayed treatment and increased mortality. However, little is known about the association of multiple prevalent social risks with cancer treatment initiation. In this study, we assessed the prevalence of social risks at time of cancer diagnosis and their association with treatment initiation. **Methods:** Data from patients aged ≥18, enrolled at Kaiser Permanente Northwest, diagnosed with cancer between June 1, 2017-December 31, 2019 and screened for social risks within 90 days pre-cancer diagnosis (baseline) were included. Baseline social risks included financial hardship, food insecurity, housing instability, and transportation difficulties. Cox proportional hazards regression models were used to assess the outcome of time to treatment initiation. Patients were censored at disenrollment or end of the study observation (February 29, 2020). Separate models were used to measure associations of any baseline social risks and time-to-treatment, each individual social risk, and a combined model with all 4 social risk variables. Confounding was controlled propensity score overlap weighting, estimated as a function of age at diagnosis, sex, race/ethnicity, Elixhauser comorbidity index, education, household income, NDI, cancer type, stage, and days from social risk assessment to cancer diagnosis. **Results:** Among the 549 patients, 49% were female and the mean age was 66 years (SD = 14). 105 (19%) patients reported any baseline social risk. The most common prevalent social risk was financial hardship (12.8%), followed by housing instability (9.1%), food insecurity (6.4%), and transportation difficulties (5.7%). In separate adjusted models, presence of any baseline social risk was associated with lower risk of treatment initiation (HR = 0.69, p = 0.040) and financial hardship was associated with lower risk of treatment initiation (HR = 0.63, p = 0.032). **Conclusions:** This study provides evidence that social risks at the time of cancer diagnosis are associated with lower risk of treatment initiation. Among individual social risks, financial hardship was a major barrier to initiation of cancer treatment. Our findings highlight the importance of screening for and addressing social risks at time of cancer diagnosis to reduce the risk of poor cancer care and subsequent health outcomes. Research Sponsor: None.

**138** **Poster Session**

## Pre-existing mental illness and guideline-concordant treatment for breast cancers among older women.

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**Background:** Guideline-concordant care (GCC) of breast cancer greatly improves survival. Women with mental illness experience worse survival after breast cancer; in this study, we examined whether women with mental illnesses pre-existing their breast cancer diagnosis receive GCC for breast cancer as often as women without. **Methods:** We used Surveillance and Epidemiology and End Results (SEER) cancer registry and Medicare claims (SEER-Medicare) to select cases of women (67+ years old) with Stage I-III breast cancers (n = 89,172). Mental illness was measured through diagnostic codes within 2 years before cancer diagnosis and categorized as serious mental illness (SMI: schizophrenia, bipolar disorder, depression with psychosis, and other psychotic disorders); depression or anxiety; or other mental illnesses. To determine receipt of GCC we used the National Comprehensive Cancer Network's (NCCN) treatment guidelines, commonly referenced by oncologists as best practices. Outcomes included 1. surgery and radiation completion for all cancers (complete/incomplete treatment/no surgery); 2. surgery, radiation completion, and chemotherapy initiation (complete/incomplete/no surgery) for triple negative and HER2+ breast cancers; and 3. radiation completion after mastectomy for Stage III cancers with lymph involvement. We used generalized ordinal logistic regression to compare outcomes with mental illness categories, controlling for demographic, cancer-related, and clinical factors. **Results:** We found that 28.8% of women in this study had at least one diagnosis of a mental illness in the two years prior to their breast cancer diagnosis and 1.7% had SMI. Women with SMI are more likely to not receive surgery than women without (OR = 1.24, CI = 1.02-1.60). Women with mental illnesses have a higher risk of not completing radiation after breast conserving surgery (SMI: OR = 1.24, CI = 1.01-1.30, Depression and anxiety: OR = 1.11, CI = 1.06-1.16, other mental illnesses: OR = 1.09 CI = 1.01-1.16). Women with SMI and triple negative or HER2+ cancers are more likely to not complete all treatment (OR = 1.65, CI = 1.22-2.24). **Conclusions:** Women with mental illnesses may be at higher risk for incomplete treatment or lack of treatment initiation, especially for multi-part treatment, such as completion of radiation and initiation of chemotherapy, which may contribute to worse survival outcomes. Breast cancer and mental illness are both common illnesses among older women in the United States. Health systems should consider strategies for improving GCC among women with mental illness and breast cancer. Research Sponsor: U.S. National Institutes of Health.

**139** **Poster Session**

## Measuring geographic variation in quality and equity of breast cancer care.

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**Background:** Persistent higher breast cancer mortality among Black Americans is partly due to treatment disparities. There is a paucity of surveillance data quantifying racial disparities at local levels, and the relationship of geography to racial disparities in treatment is poorly understood. We sought to develop and apply a claims-based set of breast cancer quality measures, stratified by race, across regions of North Carolina. **Methods:** We created a retrospective cohort (n = 37,021) of stage I-III breast cancers from 2004-2017 using linked cancer registry and multi-payer claims data. We assessed 4 quality measures derived from ASCO/NCCN and Commission on Cancer including chemotherapy (CT) for hormone receptor negative disease, radiation (RT) after breast conserving surgery (BCS), RT for N2-3 disease, and adjuvant endocrine therapy (ET). Each measure was limited to the ages and tumor features eligible by the ASCO/NCCN/CoC guideline. We estimated age-adjusted overall performance (%) on each measure, and the Black-White gap, at the state level and across 9 geographic sub-regions. We used multivariable Poisson regression to estimate Risk Ratios (RR) comparing quality performance for Black vs. White patients overall and across regions. Exploratory analyses adjusted for patient- and neighborhood-level social determinants of health (SDOH). **Results:** Median age of the cohort was 68 years and 19% of patients were Black. At the state level, the % of eligible patients meeting quality measures ranged from 73% for adjuvant ET to 95% for RT after BCS. There was significant inter-region variation on all 4 measures. Black patients were less likely to receive adjuvant CT (RR = 0.92, CI 0.87-0.96), post-BCS RT (RR = 0.98, CI 0.97-0.99) and ET (RR = 0.95, CI 0.93-0.98). There was no racial disparity in RT for N2-3 disease. Both overall performance and the magnitude of disparity varied widely across regions and geographic patterns were not consistent across measures. For example, the Charlotte region had the top quality performance for RT for N+ (90%), but worst for ET (70%). Similarly, the Wake region had no racial disparities in CT or RT, but the largest disparity of any region for ET (RR = 0.90, CI 0.84-0.96). Adjustment for SDOH modestly attenuated the relationship between race and quality performance, but significant disparities persisted in the regions with the largest racial gaps. **Conclusions:** Racial disparities persist in breast cancer care delivery, but with non-uniformity of performance across measures and varying local patterns of disparities. Our findings suggest that cross-cutting interventions spanning the care continuum, and/or interventions adapted to local challenges, may be needed to effectively address racial disparities. The contributions of local resources, structural, and institutional barriers to these patterns remain to be explored. Community-engaged work to share and interpret these findings is ongoing. Research Sponsor: American Cancer Society & Pfizer Global Medical Foundation.

**140** **Poster Session**

## The impact of geography on receipt of cancer treatment in Montana.

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**Background:** The challenges of cancer patients in rural areas are well-documented. Most rural hospitals do not deliver on-site cancer care services and lack infrastructure, specialty physicians and oncology-trained support personnel (i.e., nurses, advanced practice providers, and pharmacists) to deliver infusion services. Because of this, cancer patients travel long distances to receive treatment. Travel distance is associated with an increased financial burden and worse outcomes with cancer, including later stage at diagnosis, less timely receipt of chemotherapy, and delay or declination of treatment. According to America's Health Rankings, high geographic disparity within the state of Montana remains a significant challenge to overall health. Chronic understaffing of oncologists further exacerbates the geographic barrier to cancer care. **Methods:** To assess the impact of these combined access barriers to cancer treatment, we utilized 5 year cumulative data (2014-2018) from the Montana tumor registry database to assess the impact of geographic disparity on cancer care for patients in Montana. **Results:** Overall 19.2% of Montanans did not receive treatment following a cancer diagnosis. This is similar to the percentage of cancer patients in Delaware that did not receive treatment (19.1%). Although the population of Delaware is similar to Montana, it is 1.3% of the size. While this suggests that distance may not impact the receipt of treatment for cancer, further analysis of treatment data for Montana by county demonstrated broad discrepancies in the receipt of treatment: No treatment ranged from 12.5% to 30.3%. When mapped geographically the counties with the highest percentage of "no treatment" were distant from the 8 Commission on Cancer-approved cancer centers within the state. A similar county-by-county analysis demonstrated no apparent relationship of "no treatment" with either socioeconomic deprivation or lack of insurance. Distance from Commission on Cancer-approved centers also correlated with traveling out of state to receive care. **Conclusions:** This analysis provides insight into the impact of geographic barriers on cancer treatment in Montana and identifies remote sites that could benefit from robust outreach and care services to improve cancer care delivery. Research Sponsor: None.

**141** **Poster Session**

## Patient-reported outcomes: Completion, access, and equity.

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**Background:** Patient Reported Outcomes CTCAE (PROM) completion has demonstrated improvements in survival for patients with advanced cancer. Little is known about completion rates by race and gender for questionnaires assigned to all patients receiving IV infusions. **Methods:** Beginning in 2019 all patients who had a visit associated with an IV infusion were assigned a PROM PRO-CTCAE questionnaire through the EHR portal 72 hours prior to the visit and again using an in- clinic tablet if not completed upon check-in. The PROMs questionnaires are available in 6 languages via both electronic platforms. At registration, all patients self- identify as White, Black/African American, Asian or other (multiple, do not prefer to answer) by race. We collected 2021 data on all eligible patients who were assigned a questionnaire and cross referenced that by completion and self-assigned race and gender at registration. Data from breast, thoracic and GI clinics are presented. **Results:** 1715 patients were eligible and self-identified as White, Black or Asian for a PROM CTCAE questionnaire across the three clinics (519 breast clinic, 390 thoracic, 806 GI). 3872 questionnaires were completed (average 2.26 questionnaires per eligible patient). 2875 (73%) were completed by EHR portal and 1027 (27%) were completed in clinic on the tablet. White patients completed questionnaires 67% when assigned, Asian 68% and Black/African American 52% of the time. 81% of breast clinic patients completed questionnaires, 62% of thoracic patients and 54% of GI patients. Overall, in thoracic and GI clinics White women completed questionnaires 58%, Black women 41% and Asian women 70% compared to White men 59%, Asian men 56% and Black men 57%. All patients who completed questionnaires in breast clinic identified as women. **Conclusions:** We assigned PROM CTCAE questionnaires to all eligible patients who had an IV infusion encounter associated with their visits in the breast, thoracic and GI clinics by both the electronic chart portal and again in clinic by tablet, if not completed prior to the in person visit. PROM questionnaires are available in 6 languages through both methods. We identified differences in completion rates by race with fewer African American/Black patient completion rates compared to White or Asian self-identification, (52% vs 67.5%). The largest differences were between White or Asian women, 58% and 70% completion rates compared to Black women 41%. Differences in gender may explain differences across disease groups as all breast clinic patients were self-identified as female, 81% completion rate compared to 62% thoracic and 54% GI. Research Sponsor: None.

## Tele-chemotherapy and related outcomes to improve rural cancer care.

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**Background:** We previously reported the safety and feasibility of tele-chemotherapy with remote administration of chemotherapy (chemo) in rural hospitals using experienced chemo nurses with direct supervision from medical oncologist at a tertiary site. Herein we report the detailed overview of types of cancers treated, chemo-regimens administered and associated outcomes within an integrated health system. **Methods:** We retrospectively analyzed 200 patients who received chemotherapy remotely in 4 rural health hospitals in the state of Utah between 2017- 2022. Data collected included age of administration of chemo, gender, cancer type, insurance, chemotherapy regimen, number of cycles, emergency visits, hospitalizations, and infusion reactions. **Results:** 200 pts received chemotherapy at 4 rural hospitals including Sevier Valley Hospital, Cassia Regional Hospital, Sanpete Valley Hospital, and Heber Valley Hospital in Utah and Idaho. Median age of administration was 53 yrs (11- 96 yrs). Majority were male (n = 118; 59%). Insurances that covered these services included Medicare, Medicaid, Regence Blue Cross, United Healthcare, Tricare and Select Health. The most common cancer types treated included – Colorectal (n = 31), Breast (n = 24), Lung (n = 15), Lymphoma (n = 21), Multiple Myeloma (n = 11), Melanoma (n = 9), Bladder (n = 7), and other benign conditions (n = 25). 47 unique chemo regimens including 1085 cycles were administered. Chemo regimens and cycles detailed below. Among 69 pts with outcomes data available, ED visits noted in 33% (n = 23), hospitalization rate was 17% (n = 12) and infusion reaction rate was 7% (n = 5). Total mileage saved by pts receiving chemotherapy closer to home was 47,955 miles. **Conclusions:** Tele-chemotherapy is safe, feasible and provides improved access to cancer care in rural areas. Future design of pragmatic clinical trials where remote administration of standard of care treatments closer to home will allow the rural pts access cutting edge clinical trials closer to home. Research Sponsor: None.

| Chemo regimen | Cycles | N |
|---|---|---|
| ABVD/AVD | 4 | 1 |
| Azacitidine | 11 | 1 |
| Bleomycin/Etoposide/Cisplatin | 4 | 1 |
| Bevacizumab | 25 | 2 |
| Bortezomib | 4 | 27 |
| Bendamustine/Rituximab | 10 | 2 |
| 5- Fluorouracil based chemo combination | 181 | 21 |
| Carboplatin/Etoposide/Atezolizumab | 3 | 1 |
| Carboplatin/Paclitaxel | 9 | 4 |
| Carboplatin/ Paclitaxel/Pembrolizumab | 1 | 1 |
| Cetuximab | 2 | 1 |
| Cisplatin/Etoposide | 4 | 1 |
| Cisplatin/Gemcitabine | 7 | 2 |
| Cisplatin/Paclitaxel/Bevacizumab | 4 | 1 |
| Docetaxel/Cyclophosphamide | 14 | 3 |
| Docetaxel/ Cyclophosphamide/Trastuzumab/Pertuzumab | 11 | 3 |
| Dose Dense Doxorubicin/Cyclophosphamide | 4 | 1 |
| Doxorubicin liposomal | 5 | 1 |
| Gemcitabine/Nab-paclitaxel | 14 | 4 |
| Gemcitabine/Docetaxel | 9 | 2 |
| Gemcitabine alone | 8 | 2 |
| Irinotecan/Bevacizumab | 20 | 1 |
| Mitomycin/Vincristine/Doxorubicin/Cyclophosphamide | 3 | 1 |
| Paclitaxel | 6 | 1 |
| Pemetrexed/Pembrolizumab | 12 | 1 |
| R-CHOP | 6 | 1 |
| Rituximab | 41 | 9 |
| Topotecan | 2 | 1 |
| Trastuzumab/Pertuzumab | 27 | 3 |
| Durvalumab | 4 | 1 |
| Ipilimumab/Nivolumab | 6 | 2 |
| Nivolumab | 20 | 4 |
| Pembrolizumab | 62 | 11 |

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## Addressing social determinants of health for colorectal cancer in the African American population: STAT (Screen, Trust, Access, Treat) phase I study.

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**Background:** Colorectal cancer (CRC) is the third most common cancer and third leading cause of cancer deaths among African Americans, who have the highest CRC rates compared to other racial/ethnic groups, in the United States. STAT (Screen, Trust, Access, Treat) is a three-phase study assessing attitudes and perceptions related to disparities in CRC screening, treatment and clinical trial participation in the African American population. STAT Phase I surveyed attitudes/perceptions among health care providers (HCPs) and Phase II is ongoing to survey African American patients with CRC; in Phase III, data collected from Phases I/II will be used to design and test multiple interventions to reduce CRC disparities among African Americans. Here we present findings from STAT Phase I. **Methods:** Using non-probability and convenience sampling methodology, a survey link was exposed to over 3,000 HCPs through partnering non-profit health care organizations. The 20-item survey evaluated practitioner views on strategies for overcoming social determinants of health (SDOH), improving CRC outcomes among African Americans, and barriers/motivators for clinical trial enrolment. **Results:** Respondents (n = 109) comprised oncologists (53%), primary care providers (29%), gastroenterologists (2%), and representatives from other specialties (16%). They were predominantly White/Caucasian (65%); 22% were Asian/Asian American, 11% were African American/Black, and 6% were Hispanic/Latino. To overcome SDOH disparities, most HCPs used translation/interpreter services (83%), offered patients information in multiple languages (76%), and asked them to repeat back care instructions (73%); however, fewer offered provisions such as SDOH assessments (50%), access to financial assistance (66%), and transportation services (45%). Most HCPs agreed or strongly agreed they were prepared to care for patients from cultures differing from their own (91%), with health beliefs conflicting with Western medicine (71%), and with limited health literacy (83%). Increased community-based education (85%), community access to stool-based cancer screening tests (71%), and improved access to primary care physicians (69%) were viewed by HCPs as the favoured approaches to improve CRC outcomes among African Americans. Lack of awareness (43%) was reported as the predominant barrier to clinical trial enrolment, and HCPs agreed or strongly agreed that a patient eligibility screening system (86%) or clinical trial alert system (73%) would be a motivator to engage in clinical trials. **Conclusions:** Results from STAT Phase I reveal opportunities for HCPs to overcome inequities due to SDOH. Together with ongoing/planned research in STAT Phases II and III, these findings could inform strategies to reduce existing disparities in CRC care and improve outcomes for the African American population. Research Sponsor: Taiho Oncology, Inc.

# Overall survival by race and ethnicity among men with metastatic castration-resistant prostate cancer (mCRPC) in the U.S. Medicare population.

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**Background:** Previous studies reported mixed findings about racial and ethnic disparities in overall survival (OS) in mCRPC. This study describes OS by race and ethnicity among men with mCRPC in the US Medicare population. **Methods:** Men newly diagnosed with mCRPC were identified in Medicare fee-for-service claims during 1/1/2014–6/30/2019. Adult men were required to have a diagnosis of prostate cancer, metastasis diagnosis, castration-resistance using a published claims-based algorithm, and continuous insurance coverage for ≥1 year before and ≥6 months after index mCRPC diagnosis unless patients died. OS from mCRPC diagnosis and from start of first-line (1L) therapy for mCRPC for White (W), Black (B), Hispanic (H), and Asian (A) men were estimated using Kaplan-Meier analysis and Cox proportional hazards models adjusting for patient characteristics and 1L mCRPC therapy type or no treatment. **Results:** Among 14,780 men with mCRPC in this study, 75% were W, 14% were B, 6% were H, 3% were A, and 3% were of other or unknown race. Mean age at mCRPC diagnosis was 76 years among W men; B men had similar age while H and A men were slightly older than W men (Table). B, H, and A men had higher Quan-Charlson Comorbidity Index (CCI) than W men. Median follow-up after mCRPC diagnosis was 17 months. Similar proportions of W, H and A men (78%, 78%, and 79%, respectively) and lower proportion of B men (75%) initiated 1L life-prolonging therapy after mCRPC diagnosis. Among treated men, higher proportions of B, H, and A men (71%, 74%, and 73%, respectively) initiated 1L therapy with novel hormonal therapy than W men (64%). Median OS after mCRPC diagnosis was 26.0, 22.3, 22.9, and 24.2 months among W, B, H, and A men, respectively. Median OS after initiation of 1L mCRPC therapy was 23.8, 21.1, 19.9, and 24.1 months among W, B, H, and A men, respectively. After adjusting for patient characteristics and 1L treatment, OS was not different for B and H men relative to W men, while A men had lower risk of death. (Table). **Conclusions:** This study found no statistically significant differences in overall survival in mCRPC for B and H men and lower risk of death for A men relative to W men after adjusting for patient characteristics and treatment in the US Medicare population. Research Sponsor: Pfizer Inc.

| Characteristics/Outcomes | W N = 11,033 | B N = 2,079 | H N = 824 | A N = 381 |
|---|---|---|---|---|
| Age in years, mean (p value vs W) | 76 | 76 (0.34) | 77 (< 0.01) | 79 (< 0.01) |
| CCI, mean (p value vs W) | 2.0 | 2.7 (< 0.01) | 2.4 (< 0.01) | 2.6 (< 0.01) |
| OS from mCRPC diagnosis in months, median (95% CI) | 26.0 (25.2-26.8) | 22.3 (20.4-24.1) | 22.9 (20.3-25.8) | 24.2 (20.6-28.1) |
| Adjusted OS from mCRPC diagnosis, HR (95% CI) | Ref | 1.02 (0.95-1.09) | 1.00 (0.90-1.10) | 0.87 (0.75-1.00) |
| N men with 1L mCRPC therapy | **8,640** | **1,566** | **643** | **302** |
| OS from 1L in months, median (95% CI) | 23.8 (23.1-24.7) | 21.1 (19.4-22.8) | 19.9 (17.0-21.7) | 24.1 (19.7-27.4) |
| Adjusted OS from 1L, HR (95% CI) | Ref | 1.00 (0.93-1.07) | 1.08 (0.97-1.21) | 0.85 (0.72-1.00) |

**145** **Poster Session**

# Racial/ethnic disparities in surgery access and outcome among non-metastatic HCC with an emphasis on Asian Americans.

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**Background:** Hepatocellular carcinoma (HCC) has the highest incidence and mortality in Asia. Though the incidence in the US has been decreasing, Asian Americans (AA) continues to face a significant burden from HCC. We aim to examine disparities in patients with non-metastatic HCC in receiving surgery and outcome, with an emphasis on AA ethnic subgroups. **Methods:** Patients diagnosed with localized or regional HCC were extracted from SEER 17 (1989-2019). Race was categorized into non-Hispanic White (NHW), non-Hispanic Black (NHB), Hispanic, Alaska Indian/American Native (AI/AN) and 12 AA subgroups. Multivariate logistic regression and Cox regression models were used to calculate the odds of receiving surgery and overall mortality, respectively. **Results:** Among the total of 71,552 patients with non-metastatic HCC (Table), after accounting for multiple comparison, Chinese and Japanese were significantly more likely to receive surgery while NHB, Hispanics, AI/AN, and Laotians were less likely to receive surgery compared to NHWs. Among those who received surgery, Chinese, Korean and other APIs had improved survival while NHB and Samoan had significantly increased overall mortality than NHWs. **Conclusions:** Although prior studies have combined AAs into a single group, considerable heterogeneity exists amongst AA ethnic subgroups. Further studies are needed to evaluate if socioeconomic status, cultural background, health behaviors, tumor biology, and health care access may underline these disparities and to help identify potential inventions to improve outcomes in this growing but heterogenous population. Research Sponsor: None.

| | | Odds of receiving surgery | | Overall mortality | |
|---|---|---|---|---|---|
| Race/ethnicity | # (%) | OR (95%CI)[a] | Bonferroni-adjusted p-value | HR (95%CI)[a] | Bonferroni-adjusted p-value |
| NHW | 34,171 (47.8) | Ref | | Ref | |
| NHB | 8,439 (11.8) | 0.83 (0.78-0.88) | < 0.0001 | 1.24 (1.16-1.32) | < 0.0001 |
| Hispanics | 14,835 (20.7) | 0.65 (0.62-0.68) | < 0.0001 | 1.06 (1.00-1.11) | 1.00 |
| AI/AN | 779 (1.1) | 0.67 (0.56-0.80) | < 0.01 | 0.97 (0.80-1.18) | 1.00 |
| Chinese | 3,152 (4.4) | 1.38 (1.27-1.50) | < 0.0001 | 0.68 (0.63-0.74) | < 0.0001 |
| Vietnamese | 2,984 (4.2) | 1.13 (1.04-1.23) | 0.43 | 0.91 (0.84-0.99) | 1.00 |
| Filipino | 1,864 (2.6) | 0.89 (0.79-0.99) | 1.00 | 0.91 (0.81-1.02) | 1.00 |
| Korean | 1,426 (2.0) | 1.21 (1.07-1.36) | 0.21 | 0.77 (0.68-0.86) | < 0.01 |
| Japanese | 973 (1.4) | 1.42 (1.23-1.63) | < 0.001 | 0.99 (0.88-1.12) | 1.00 |
| Hawaiian | 346 (0.5) | 1.24 (0.98-1.57) | 1.00 | 1.04 (0.83-1.31) | 1.00 |
| Indian/Pakistani | 500 (0.7) | 0.95 (0.78-1.16) | 1.00 | 1.09 (0.88-1.36) | 1.00 |
| Cambodian | 352 (0.5) | 0.66 (0.51-0.85) | 0.18 | 1.37 (1.05-1.80) | 1.00 |
| Laotian | 233 (0.3) | 0.49 (0.34-0.69) | 0.01 | 1.83 (1.26-2.65) | 0.11 |
| Thai | 113 (0.2) | 1.09 (0.72-1.64) | 1.00 | 0.85 (0.52-1.39) | 1.00 |
| Samoan | 100 (0.1) | 0.81 (0.51-1.30) | 1.00 | 2.26 (1.49-3.51) | 0.01 |
| Other APIs | 1,285 (1.8) | 0.99 (0.88-1.13) | 1.00 | 0.56 (0.47-0.67) | < 0.0001 |

[a] Model adjusted for age, sex, income, living area (rural vs urban), year of diagnosis, stage, tumor size, lymph node involvement.

**146** **Poster Session**

## Pathologic complete responses and overall survival after neoadjuvant chemotherapy for muscle-invasive bladder cancer: Analyzing the impact of race.

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**Background:** Neoadjuvant chemotherapy (NAC) has been demonstrated to improve overall survival (OS) after radical cystectomy (RC) in patients with muscle-invasive bladder cancer (MIBC). We compared pathologic complete response (PCR) rates and OS after NAC between African American (AA) and Caucasian patients with MIBC. **Methods:** We queried the National Cancer Database for Caucasian and AA patients with localized MIBC (cT2-T4aN0M0) with urothelial histology who received NAC + RC between 2007 and 2018. We excluded patients who belonged to other races, had nodal or distant metastases, non-urothelial histology, did not receive NAC, or had missing pathological data. Logistic regression was used to analyze PCR and residual disease (RD) and Cox proportional hazards regression to analyze OS, with adjustment for age at diagnosis, race, stage, grade, insurance, treatments received, and comorbidities. STATA/IC 16.0 was used for analysis and a two-sided p-value $< 0.05$ was considered significant. **Results:** A total of 7008 Caucasians and 424 AAs with MIBC were identified. 75.6% were males and 24.4% were females. Among those who received NAC, only 12.6% (n = 933) attained PCR and 87.4% (n = 6499) had RD. Among Caucasians, 12.76% (n = 894) attained PCR and 87.24% (n = 6114) had RD. Among AAs, 9.2 % (n = 39) had PCR and 90.8% (n = 385) had RD. AA had more likelihood of attaining PCR when compared to Caucasians, but was not statistically significant (OR = 1.35, 95% CI = 0.966 – 1.90, p = 0.078). The median OS of patients with PCR and RD were 144 and 47 months respectively. Patients who had RD had significantly higher mortality risk when compared to those who attained PCR (HR = 3.67, 95% CI = 3.14-4.29, $p < 0.01$). In the PCR group and RD groups, AA vs Caucasian race was not associated with a statistically significant mortality benefit in univariate or multivariate analysis. Within PCR and RD groups, AAs were found to have mortality risk compared to Caucasians (PCR group: HR = 1.53, 95% CI = 0.2-1.43, p = 0.21 and RD group: HR = 1.07, 95% CI = 0.93- 1.2, p = 0.34). **Conclusions:** PCR with NAC in localized MIBC was associated with significantly improved overall survival. AA or Caucasian race was not independently predictive of PCR or OS after NAC in MIBC. Research Sponsor: None.

**147** **Poster Session**

## Trends in the improvement in survival among patients with diffuse large B-cell lymphoma (DLBCL).

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**Background:** Advances in treatment for patients with DLBCL have led to improved patient outcomes, but whether disparities exist with regards to improved survival outcomes remains understudied. We sought to describe changes in DLBCL survival rates over time and explore potential differential survival patterns by patients' race and age. **Methods:** We utilized the Surveillance, Epidemiology, and End Results (SEER) database to identify patients diagnosed with DLBCL from 1980-2009 and determined 5-year survival rates for all patients, categorizing patients by year of diagnosis. We used descriptive statistics and logistic regression, adjusting for stage and year of diagnosis, to describe changes in 5-year survival rates over time by race/ethnicity and age. **Results:** We identified 43,564 patients with DLBCL eligible for this study (median age 67 years [ages: 18-64 = 44.2%, 65-79 = 37.1%, 80+ = 18.7%], 53% male, 40% stage III/IV). Most were White race (81.4%), followed by race/ethnic groups of Asian/Pacific Islander (API) (6.3%), Black (6.3%), Hispanic (5.4%), and American Indian/Alaska Native (AIAN) (0.05%). Overall, the 5-year survival rate improved from 35.1% in 1980 to 52.4% in 2009 across all patients (odds ratio (OR) for 5-year survival with increasing year of diagnosis = 1.05, p <.001). Patients in race/ethnic minority groups (API: OR = 0.86, p <.0001; Black: OR = 0.57, p <.0001; AIAN: OR = 0.51, p =.008) and older adults (ages 65-79: OR = 0.43, p <.0001; ages 80+: OR = 0.13, p <.0001) had worse 5-year survival rates adjusting for race, age, stage, and diagnosis year. We found consistent improvement in the odds of 5-year survival for year of diagnosis across all race and ethnicity groups (White: OR = 1.05, p <.001; API: OR = 1.04, p <.001; Black: OR = 1.06, p <.001; Hispanic: OR = 1.05, p <.005; AIAN: OR = 1.05, p <.001) and age groups (ages 18-64: OR = 1.06, p <.001; ages 65-79: OR = 1.04, p <.001; ages 80+: OR = 1.04, p <.001). **Conclusions:** In this analysis of SEER data, we found that patients with DLBCL experienced improvements in 5-year survival rates from 1980 to 2009, despite ongoing disparities demonstrating worse survival among patients in race/ethnic minority groups and older adults. Notably, we did not find differential improvement in the odds of 5-year survival within subgroups of race and age, underscoring the need for ongoing investigations to address disparities in cancer care delivery and outcomes. Research Sponsor: None.

**148** **Poster Session**

## Persistent racial and ethnic inequities in cancer-specific mortality of head and neck cancers by human papillomavirus infection.

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**Background:** Overlapping racial and ethnic disparities exist in the prevalence of risk factors that drive the prognosis of head and neck cancers in the US, including the use of tobacco products, socioeconomic status and human papillomavirus (HPV) infection. Our objective was to describe inequities in cancer-specific survival among patients diagnosed with head and neck cancers by HPV status and racial/ethnic group. **Methods:** We conducted a retrospective cohort study using the Surveillance, Epidemiology and End Results Head and Neck with HPV Status Database. Patients diagnosed with first primary cancers of the hypopharynx, nasopharynx, oropharynx, pharyngeal tonsil, other pharyngeal, soft palate and tongue base between 2010 and 2016 were included, and information on clinical and demographic characteristics including tumor information, cancer-directed treatment, area-level socioeconomic status and HPV status were collected from population-based cancer registry data. Estimates of 5-year cancer-specific survival were calculated using the Kaplan-Meier method, and multivariable Cox proportional hazards models were used to estimate adjusted hazard ratios (HR) and 95% confidence intervals (CI) for racial/ethnic inequities in survival stratified by HPV status. **Results:** Among 15,393 patients diagnosed with head and neck cancer with documented HPV status, the median age was 59 years (interquartile range 53-66) and 10,457 (68%) were HPV+. Compared to patients diagnosed with HPV- head and neck cancers, a higher proportion of patients with HPV+ head and neck cancers were male (87% vs. 77%), diagnosed at stage IV (75% vs. 66%) and non-Hispanic White (84% vs. 68%%); and a lower proportion of HPV+ patients were non-Hispanic Black (6% vs. 13%) and uninsured or had Medicaid coverage (13% vs. 25%). Overall, 5-year cancer-specific survival was higher among HPV+ patients (82%) than among HPV- patients (62%), with a wider disparity observed among Black head and neck cancer patients (HPV+ 74%, HPV- 44%). In multivariable models, significant differences in cancer-specific survival were found across racial/ethnic groups and HPV status (P-interaction: 0.045). Compared to White patients, persistent inequities in cancer-specific survival were observed among Black HPV+ (HR 1.49, 95% CI 1.19-1.87) and HPV- (HR 1.42, 95% CI 1.21-1.66); and among Latinx HPV+ patients (HR 1.32, 95% CI 1.03-1.69). **Conclusions:** In this population-based study of patients with head and neck cancers, significant disparities in cancer-specific survival were observed that differed by both race/ethnicity and HPV status. The complex inequities in outcomes of head and cancers likely reflect the clinical impacts of socioeconomic and demographic risk factors in addition to HPV-related dysregulation of tumor metabolism and the immune microenvironment. Research Sponsor: NA.

**149** **Poster Session**

## Clinical and nonclinical factors associated with a complete family history in a statewide quality improvement consortium.

*Shayna Weiner, Manlan Liu, Elizabeth Rizzo, Jennifer J. Griggs; University of Michigan, Ann Arbor, MI*

**Background:** A complete family history is critical in identifying cancer patients who should be referred to genetic counseling and testing. Despite the importance of a detailed family history, defined as any cancer diagnoses in first- or second-degree relatives and their age at diagnosis, only about one third of cancer patients have a complete family history documented in their medical record. The Michigan Oncology Quality Consortium (MOQC), a physician-led consortium of oncology practices across the state of Michigan, selected documentation of a complete family history in oncology patients as a quality measure. The purpose of this study was to identify clinical and non-clinical factors associated with the quality of the family history. **Methods:** Beginning in 2020, MOQC began collecting completeness of documentation of cancer family history from the medical oncology records of patients with invasive cancer from MOQC practices twice per year in the Quality Oncology Practice Initiative (QOPI) database. QOPI data from 2020 and 2021 were combined for analyses. A multivariate model was built to determine the clinical and non-clinical factors, including age, sex, race, ethnicity, and cancer diagnosis, associated with documentation of a complete family history. **Results:** Between January 2020 and December 2021, 10,800 patients' records were abstracted. Of these, 30% had a complete family history documented in their medical record. Factors independently and significantly associated with not having a complete family history included increasing age and Black race. Patients with breast cancer (AOR 1.94, 95% CI 1.72, 2.19) and colorectal cancer (AOR 1.2, 95% CI 1.05, 1.37) were more likely to have a complete family history than all others. Patients with prostate, pancreas, or endometrial cancer—all of which are associated with cancer syndromes—were no more likely than other patients to have a complete family history. Sex and ethnicity were not significantly associated with documentation of a complete family history. **Conclusions:** Patients may qualify for genetic testing based on family history alone. It is therefore crucial that clinicians know a patient's complete family history to identify those patients eligible for genetic risk assessment. We have identified gaps in the quality of the family history with increasing age, in Black patients, and, except for breast and colorectal cancer, in patients with cancers associated with an inherited susceptibility. Our findings highlight an opportunity to improve care. Research Sponsor: Blue Cross Blue Shield of Michigan.

| Patient Characteristic | AOR | 95% CI |
|---|---|---|
| Age (continuous) | 0.99 | (0.988, 0.995) |
| Race | | |
| Black | 0.76 | (0.66, 0.87) |
| Asian | 0.94 | (0.66, 1.33) |
| White | Referent | |
| Native American | 0.92 | (0.50, 1.72) |
| Alaska Native/Pacific Islander | 1.34 | (0.35, 5.05) |
| Hispanic ethnicity | 1.39 | (0.99, 1.32) |
| Female | .096 | (0.84, 1.09) |

AOR, adjusted odds ratio; 95% CI, 95% confidence interval.

## Disparities in overall survival (OS) outcomes based on treating facility volume in pancreatic neuroendocrine tumors.

*Sri Harsha Tella, Anuhya Kommalapati, Aakash Desai, Patrick Walsh McGarrah, Timothy J. Hobday, Thorvardur Ragnar Halfdanarson; Mayo Clinic, Rochester, MN; Mayo Clinic, Rochester, Rochester, MN*

**Background:** Pancreatic neuroendocrine tumors (pNETs) comprise less than 5% of all pancreatic tumors and 7% of all neuroendocrine tumors (NETs). There has been considerable progress in understanding the biology of pNETs and numerous therapeutic options emerged, especially with the collaboration of various specialties in the multidisciplinary setting. In this this study, we sought to analyze the association of facility volume, treatment modalities offered, and different risk adjusted outcomes in pNETs. **Methods:** We extracted data from National Cancer Data Base (NCDB) that covers 70% of all newly diagnosed cancer cases in the U.S and Puerto Rico. Patients with pNETs diagnosed between 2004 & 2017 were included and classified into tertiles based on hospital volume. Volume–outcome relationship was determined by using Cox regression adjusting for patient demographics, comorbidities, tumor characteristics, insurance type and therapy received. Kaplan Meier estimates of OS were compared with log-rank test. The primary predictor of interest was the facility volume defined as number of pNETs treated/year. A total of 7202 patients with pathologically confirmed pNETS were treated at 840 facilities. The median annual facility volume was 5patients/year. Facilities were classified into (T:mean cases/year) T1: < 3; T2:4-8; T3:≥9 cases/year. **Results:** A total of 7202 pNET patients were treated at 840 facilities. The median annual facility volume was 5 patients/year. Facilities were classified into (T: mean cases/year) T1:<3; T2:4-8; T3:≥9 cases/year. The unadjusted median OS by facility volume was: T1: 71 months (m), T2: 136 m, and T3: not-reached ($p < 0.001$). On multivariable analysis, compared with patients treated at T3 facilities, patients treated at lower-tertile facilities had higher risk of death [T2 hazard ratio (HR), 1.17 (95% CI, 1.03-1.33); T1 HR, 1.45 (CI, 1.30-1.67), $p < 0.0001$] and such a difference in OS was more pronounced in stage IV disease (Table). Patients at T3 facilities (vs T1) were more likely to receive surgical resection of the primary tumor (75 vs 49%), lymph node dissection performed at the time of surgery (70 vs 42%), and a better R0 resection (72 vs 46%) ($p < 0.01$). **Conclusions:** Patients who were treated for pNETs at high-volume centers (> 9cases/year) had significantly higher OS and were more likely to receive surgical resection along with lymph node dissection and R0 resection. There was a 45% increased risk of death in patients treated at low volume centers (< 3/year) as compared to high-volume centers (> 9/year). While OS difference was noticed in all stages, the difference was more pronounced in stage IV disease demonstrating the importance of multi-disciplinary approach in pNETs management and incorporating such quality measures in low-volume facilities. Research Sponsor: None.

| | OS (%) | | |
|---|---|---|---|
| Facility | 1-year | 3-year | 5-year |
| Low-volume | 49 | 31 | 21 |
| Intermediate-volume | 68 | 47 | 34 |
| High-volume | 78 | 54 | 41 |

**151** **Poster Session**

# Association of race, ethnicity, and socioeconomic characteristics as predictors of cachexia risk and survival in stage IV non–small cell lung cancer (NSCLC).

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**Background:** Cachexia, seen in more than a third of patients with non-small cell lung cancer (NSCLC), directly leads to functional and survival detriments. As screening and interventions for cachexia and NSCLC improve, deficits of healthcare access and quality among patients disadvantaged by race and socioeconomic factors must be addressed. **Methods:** Through retrospective and prospective data collection, we established a cohort of 957 patients diagnosed with stage IV NSCLC between 2014-2020 in Dallas, Texas. Presence of cachexia at diagnosis was determined using consensus criteria for substantial (5% for BMI≥20 and 2% for BMI < 20) unintentional weight loss in the 6 months leading to diagnosis. Analyses including multivariate logistic regression and log-rank testing evaluated for significant associations of variables with cachexia incidence and survival. **Results:** Black race and Hispanic ethnicity independently associated with more than a 70% increased risk of cachexia at NSCLC diagnosis (Table; P < 0.05). Inclusion of private insurance status as a covariate diminished this finding for Hispanic patients only. Black patients presented at younger ages than White patients (Kruskal-Wallis P =0.0012; T-test P = 0.0002), with an average difference of 3 years. Cachexia at diagnosis was a major predictor of survival, highlighting the importance of addressing differential cachexia risk across race/ethnicity. **Conclusions:** The elevated cachexia risk observed for Black patients independent of insurance status reveals broader causative factors of disparity. A lack of private insurance may be a primary contributor in Hispanic cachexia prevalence. Targeting these differences could mitigate survival detriments linked to cachexia in minority groups. Supported contributors in broader NSCLC outcome inequities include poor representation in trials substantiating USPSTF guidelines as well as preventable barriers to primary and preventative care. Our interpretation of NSCLC outcome disparity in the context of cachexia demonstrates further consequences of these deficits. Moreover, our findings suggest novel targets for health policy by highlighting the prevalence of undiagnosed unintentional weight loss in minority populations with late-stage NSCLC. Research Sponsor: Conquer Cancer Foundation of the American Society of Clinical Oncology, U.S. National Institutes of Health.

**Multivariate analysis of cachexia incidence at cancer diagnosis.**

| Parameter | Odds ratio (95% CI) | P-value |
|---|---|---|
| Age at diagnosis | 1.00 (.99-1.02) | *.5675* |
| Female Sex | .70 (.51-.96) | ***.0287*** |
| Race | | |
| Non-Hispanic White | - | ***.0089*** |
| Black | 1.75 (1.21-2.54) | ***.0033*** |
| Asian | .91 (.45-1.81) | *.7816* |
| Hispanic | 1.72 (1.01-2.93) | ***.0477*** |
| Charlson comorbidity score | 1.00 (.95-1.06) | *.8953* |
| Pretreatment BMI | .98 (.95-1.00) | *.1166* |
| Alcohol use | .99 (.72-1.37) | *.9588* |
| Tobacco use | 1.63 (1.06-2.50) | ***.0257*** |
| Histology | | |
| Adenocarcinoma | - | *.2591* |
| Squamous | 1.40 (.93-2.12) | *.1084* |
| Large Cell | 1.28 (.43-3.82) | *.6591* |
| Mixed | 1.46 (.87-2.44) | *.1539* |

**152** **Poster Session**

## Survival of the Hmong population diagnosed with colorectal cancer in the United States.

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**Background:** The Hmong people constitute an Asian-American subgroup, accounting for 0.1% of the United States (US) population. Originating from Laos and Vietnam, Hmong individuals fought as secret soldiers for the US during the Vietnam War and later immigrated to the US, with the largest settlements in Minnesota, Wisconsin, and California. The Hmong population has faced various health disparities in the domains of mental health, chronic disease, and cancer. This study seeks to investigate trends in colorectal cancer (CRC) survival in the US Hmong population. **Methods:** Cases of colon and rectal adenocarcinoma diagnosed between 2004-2017 were identified within the National Cancer Database. Summary statistics of demographic, clinical, socioeconomic, and treatment variables were calculated. Multiple Cox proportional hazard models were constructed using sets of demographic, clinical, socioeconomic, and treatment variables to identify factors associated with overall survival (OS) within the Hmong population diagnosed with CRC. **Results:** One hundred and twenty (0.01%) Hmong individuals were identified within a total of 881,243 CRC cases. Their average age at diagnosis was 58.9 years, compared 68.7 years for Non-Hispanic White (NHW) individuals ($p < 0.01$). Over half of Hmong individuals (52.5%) were diagnosed with Stage III or VI disease (NHW, 42.5%, $p < 0.03$), and they more frequently resided in the lowest median income quartile ($p < 0.01$), the lowest high school degree achievement quartile ($p < 0.01$), and had higher rates of Medicaid coverage ($p < 0.01$) compared to NHWs. When adjusting only for age, sex, stage, and Charlson-Deyo comorbidity score, Hmong individuals had a greater hazard of death compared to their NHW counterparts (HR 1.43, $p < 0.01$). However, in a multivariable model accounting for all variables suspected to be associated with CRC outcomes, OS was similar between these groups (HR 1.01, $p < 0.93$). **Conclusions:** Hmong individuals diagnosed with CRC appear to have similar overall survival to Non-Hispanic Whites despite belonging to lower socioeconomic groups, being diagnosed at a younger age and with a higher proportion of Stage III/VI disease. This may point to a robust response to treatment and resilience within the Hmong community. Future efforts will focus on disseminating this information and developing community-based approaches for health screening and prevention. Research Sponsor: U.S. National Institutes of Health.

**153** **Poster Session**

## Socioeconomic factors and outcomes among patients with recurrent/metastatic head and neck cancer receiving immunotherapy.

*Natalie F. Uy, Kevin Ng, Jenna M. Voutsinas, Vicky Wu, Cristina Maria Merkhofer, Diane Tseng, Nicholas Peter Giustini, Sylvia Lee, Christina S Baik, Rafael Santana-Davila, Keith D. Eaton, Cristina P. Rodriguez; University of Washington, Seattle, WA; Fred Hutchinson Cancer Center, Seattle, WA; Fred Hutchinson Cancer Research Center, Seattle, WA; Stanford University, Stanford, CA; University of California San Diego, San Diego, CA; Seattle Cancer Care Alliance, Seattle, WA*

**Background:** Immune checkpoint inhibitors (ICI) are now a therapeutic standard for recurrent/metastatic head and neck squamous cell cancer (R/M HNSCC). There is limited data on the impact of demographics and socioeconomic (SES) factors on outcomes in this population, and we sought to evaluate these in our single institution cohort. **Methods:** R/M HNSCC patients (pts) receiving ICI were retrospectively reviewed from an institutional database. SES factors included income, distance to center (dist), marital status, race, and insurance. Median household income by residence zip code was obtained from the US Census Bureau. Time to ICI initiation (TTI) was time from initial visit recommending ICI and first ICI dose. Opiate use was calculated using morphine equivalents prior to ICI initiation and either at best response or end of ICI if no response. Associations between SES factors with overall survival (OS) and TTI were assessed using Cox proportional hazards regression. Binary outcomes were assessed using logistic regression and included ER visits/unplanned hospitalizations (UH) and increase in opioid use. Analyses were adjusted for disease characteristics, smoking status, ECOG, and demographics. **Results:** Between 1/2012-12/2019, 152 pts received ICI; 124 (82%) were male, with median age of 64 years (range 23-90), and 103 (68%) were partnered/married. The most common races were 114 white (75%), 14 Asian (9%) and 6 Hispanic, any race (4%). Out of 149 (98%) insured pts, 27 (18%) were Medicaid and 69 (46%) Medicare. Median dist was 39 miles (Q1 21, Q3 100), and median income was $80,586 (Q1 $61,202, Q3 $103,059). The most common primary sites were oropharynx (36%), oral cavity (22%), and nasopharynx (7%); 29 (19%) had an ECOG ≥2. While on or within 100 days of ICI, 69 (45%) had ER visits, and 57 (38%) had UH. Increased dist was associated with improved OS ($4^{th}$ vs $1^{st}$ quartile, p = 0.0002; HR 0.33; 95% CI [0.18,0.59]); we observed no other SES association with OS. Increased opioid use was associated with Medicaid/no insurance (p = 0.05; OR 2.89; 95% CI [1.02,8.77]). No SES association with TTI was found, although there was a nonsignificant trend of higher TTI with increasing dist. We saw no correlation with ER/UH and any SES variables. **Conclusions:** Among R/M HNSCC pts receiving ICI, insurance had an impact on opiate usage, suggesting more advance disease/higher burden of symptoms and indicating need for augmentation of supportive care in this group. Higher dist was associated with improved OS, even accounting for performance status, which may reflect increased resources in this group. Further studies should examine pt factors that may contribute to disparities in the setting of novel therapies for R/M HNSCC pts. Research Sponsor: None.

**154** **Poster Session**

## Survival outcomes by insurance status for patients with cancer ages 18-64 and 65 or older treated in clinical trials.

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**Background:** Prior studies using cancer population data have shown that patients with Medicaid or no insurance (M/NI) have worse survival outcomes than other patients, likely due to differences in access to care, staging, and treatments received. However, little research has examined the relationship between patient insurance status and outcomes for patients enrolled to cancer clinical trials, who have uniform access to protocol guided treatment and are uniformly staged and treated. **Methods:** We examined survival outcomes for patients enrolled to phase III or large phase II clinical treatment trials conducted by the SWOG Cancer Research Network between 1992-2019. We compared patients with M/NI to all other patients with known insurance. Patients with military/VA insurance were excluded. Multivariable Cox regression frailty models were used, with cancer cohort as a random effect and covariate adjustment for age, race, and sex. We also adjusted for clinical risk by deriving a composite prognostic score based on key cancer-specific clinical risk factors. Separate analyses were conducted for those < 65 years vs. those 65 or older. Overall, progression-free, and cancer-specific survival outcomes were analyzed. **Results:** In total, 29,423 patients from 51 trials comprising 27 cancer-specific cohorts were examined. Overall, 31.1% of patients were ≥ 65 years, 64.0% were female, 9.6% were Black, and 11.6% had M/NI. For all three survival outcomes, patients with M/NI had statistically significantly worse outcomes in patients under the age of 65, including a 24% increased risk of death (HR = 1.24, 95% CI, 1.16-1.32, p <.001), a 12% increased risk of progression (HR = 1.12, 95% CI, 1.06-1.18, p <.001) and a 19% increased risk of cancer-specific death (HR = 1.19, 95% CI, 1.11-1.27, p <.001). Consistent findings were observed when comparing patients with Medicaid to all other patients, and separately, when comparing patients with no insurance to all other patients. In contrast, in those 65 or older, there was no statistically significant difference in overall, progression-free, or cancer-specific survival between patients whose insurance included Medicaid (i.e., dual eligible) vs. those with Medicare alone or Medicare plus private insurance. **Conclusions:** Access to protocol-guided therapy ameliorates much but not all of the insurance-related disparities in outcomes previously observed using cancer population databases. For those < 65 years, despite receipt of treatment in a clinical trial, remaining disparities for those with M/NI may be due to limited access to supportive services, worse access to post-protocol therapy, or management of non-cancer related conditions. In contrast, these factors are less likely to be relevant for individuals 65 or older receiving Medicare. These findings suggest that an individual's health insurance can meaningfully impact cancer outcomes over the longer term. Research Sponsor: American Cancer Society, U.S. National Institutes of Health.

**155** **Poster Session**

## Health literacy screening in pediatric oncology and stem cell transplant caregivers: A cross-sectional cohort study.

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**Background:** Despite advances in childhood cancer outcomes, disparities among socially vulnerable populations persist. Associations between educational attainment, English proficiency and outcomes suggest that factors impacting communication and comprehension may contribute. Health literacy (HL) is the degree to which individuals can process and act on health information. It is reported that up to 35% of adults in the U.S. have limited HL, with prevalence rising to 50% in those from low-income households. While studies from medical oncology report associations between limited HL and inferior outcomes, there remains a paucity of data on HL rates and associated outcomes in pediatric oncology and stem cell transplant (SCT) populations. We evaluated HL rates in a group of pediatric oncology and SCT parents/caregivers at a large academic medical center, and explored associations with self-reported demographics. **Methods:** English or Spanish-speaking parents of children (1 – 18 years) receiving chemotherapy or SCT were eligible. Self-reported sociodemographics were collected via survey, and HL was measured via bilingual interview using the *Newest Vital Sign* screening tool. Scores indicating likelihood of limited (0 – 1), moderate (2 – 3) and high (4 – 6) literacy were calculated and associations between HL, demographics, social determinants of health, and clinical characteristics were explored. **Results:** In total, 48 caregivers had evaluable HL and demographic data; 33% were Hispanic, 27% were non-Hispanic Black, and 25% were Spanish speaking only; 53% had public insurance, and 12% did not complete high school. Forty-four patients (90%) had cancer, 51% of whom had leukemia or lymphoma. Mean HL score was 3.27 (+/- 1.90). Nine caregivers (18%) had limited HL, 18 (37%) had moderate HL, and 21 (43%) had high HL. When comparing the limited/moderate HL group to the high HL group in univariate analysis, a significantly higher proportion of those in the limited/moderate group were Spanish speaking only ($p = 0.035$), received less than a high school education ($p = 0.002$), were unemployed ($p = 0.038$), and endorsed material hardship (e.g., food insecurity) ($p = 0.001$). Across all participants, 69% sought information about their child's diagnosis from providers, and 55% sought information from the internet. **Conclusions:** Among this diverse population of pediatric oncology and SCT caregivers, over 50% are at risk of limited HL. Univariate models indicate that limited literacy is associated with Spanish language preference, low educational attainment, and material hardship, however larger patient numbers are needed to evaluate adjusted associations. Analyses measuring the contribution of HL to clinical outcomes are ongoing, with early results indicating that interventions addressing both material hardship and limited literacy are urgently needed. Research Sponsor: None.

**156** **Poster Session**

## Evaluating healthcare system–level racial disparities in mortality following lung cancer resection among Medicare beneficiaries.

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**Background:** Racial inequities in lung cancer surgical quality are well documented yet understanding the variation in racial inequities across healthcare systems remain limited. Therefore, in this study the variation in racial disparities mortality across healthcare systems was evaluated. **Methods:** Using 100% Medicare fee-for-service claims, we analyzed data on Medicare beneficiaries between the ages of 65- and 99-years old undergoing resection for lung cancer. All patients undergoing resection for lung cancer between 2014 and 2018 were included. Clinical risk-adjusted 30-day post-operative mortality rates for an overall health care systems as well as rates for non-Hispanic Black and non-Hispanic white patients within each of system were evaluated using multivariate logistic regression. The variation across all healthcare systems performing at least 5 operations for each racial group was performed. A total of 216 healthcare systems were included. **Results:** Overall, 82,978 patients were included with mean (SD) age of 73.7(5.5) years and racial composition of 7,124 Black patients (8.6%) and 75,854 White patients (91.7%). Of these 216 systems, 90 (41.7%) had significant disparities with the worst mortality in Black beneficiaries. Of these systems with significant worst mortality for Black patients undergoing resection for lung cancer, the odds of mortality of Black compared to White patients ranged from OR 1.04 (95% CI 1.01-1.08; P < 0.001) to OR 2.9 (95% CI 2.6-3.2; P < 0.001). There was weak but statistically significant association between system overall mortality and the Black-White difference in mortality (R = 0.14; P < 0.04). **Conclusions:** Our findings provide justification for system-level interventions to address disparities in surgical care for Black patients undergoing resection for lung cancer. Moreover, our findings suggest that quality improvement efforts to improve overall quality of surgical care that do not focus on the care of Black patients may be insufficient for reduction of disparities. Research Sponsor: U.S. National Institutes of Health.

| | Mean System Mortality Rate % (95%CI) | Mean System Black Mortality Rate % (95%CI) | Mean System White Mortality Rate % (95%CI) | P-Value | Black Mortality Variation Fold Difference, Range | White Mortality Variation Fold Difference, Range |
|---|---|---|---|---|---|---|
| **Total 216 Systems** | 3.5% (3.3%-3.7%) | 3.8% (3.4%-4.1%) | 3.3% (3.1%-3.5%) | 0.03 | 19.9 (0.8%-17.9%) | 10.5 (1.0%-10.5%) |

**157** **Poster Session**

## The association of limited health literacy with frailty, health-related quality of life (HRQoL), and health care utilization among older adults with cancer: The CARE Registry.

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**Background:** Health literacy (HL) is a patient's ability to obtain, process, and understand health information. Limited HL can act as a barrier to communication and access to medical treatment and lead to poor identification and management of comorbid conditions, resulting in frailty and impaired HRQoL; these issues remain unstudied in the geriatric oncology populations. We aimed to (1) describe the prevalence of limited HL; (2) examine the association between limited HL and frailty, HRQoL and healthcare utilization in older adults with cancer. **Methods:** The CARE registry prospectively enrolls older adults (≥60y) with cancer seen at UAB. Patients complete a patient-reported geriatric assessment. A single-item screening measure of HL (Stagliano *et al*. JABFM 2013) was also completed by the participants. Frailty was defined using the 44-item CARE frailty index (based on deficit accumulation). Multivariable analysis examined association of limited HL with CARE frailty index, HRQoL, and health care utilization, adjusting for age, race, sex, education, cancer type/stage and treatment phase. **Results:** The cohort included 475 participants with a mean age at enrollment of 69.4y; 61.9% were male; 18.9% were non-Hispanic Black. The most prevalent cancer types included colorectal (34.9%), pancreatic (17.5%) and hepatobiliary (11.4%) cancers. The prevalence of limited HL was 33.3%. Participants with limited HL were less educated (< HS: 23.4% vs. 4.7%, $p= 0.01$), older (71 vs. 68.5 years, $p< 0.001$), more likely to self-report as Black (26.6% vs. 15.1%, $p= 0.009$), and disabled (19.6% vs. 11.7%, $p< 0.001$). Patients with limited HL had a higher prevalence of frailty (57.6% vs 22.1%, $p< 0.001$) and hospitalizations (57.0% vs 45.4%, $p= 0.036$), as well as lower physical (39.5 vs. 46.4 $p< 0.001$) and mental (42.9 vs. 49.2 $p< 0.001$) HRQoL. In multivariable analysis, older patients with limited HL had 3.9 higher adjusted odds (aOR) of frailty (95% CI 2.4-6.3), worse physical (aOR 2.2, 95%CI 1.4-3.6) and mental (aOR 3.2 95%CI 2.0-5.2) HRQoL, and increased hospitalizations (aOR 1.8 95% CI 1.2-2.8), compared to those with adequate health literacy. **Conclusions:** Older cancer patients with limited HL had higher adjusted odds of frailty, lower physical and mental HRQoL scores, and higher odds of a recent hospitalization. Interventions to address limited HL should be explored in this vulnerable and growing cancer population. Research Sponsor: U.S. National Institutes of Health.

## Socioeconomic deprivation and patient-reported outcomes in symptom management trials for patients with breast cancer.

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**Background:** Patient-reported outcomes (PROs) provide important metrics to guide treatment decision making and have been shown to be predictive of clinical outcomes. Neighborhood socioeconomic deprivation, characterized by lower levels of income, education, and housing quality, has been shown to be associated with worse outcomes in clinical trials. However, the relationship between deprivation and PROs in clinical trials has not been systematically examined. **Methods:** We examined the relationship between multiple PRO domains and deprivation using data from 3 randomized trials (S0927, S1200, S1202) of interventions for aromatase inhibitor (AI)-associated musculoskeletal symptoms (AIMSS) among female breast cancer patients. The studies were conducted by the SWOG Cancer Research Network. Deprivation was measured using patients' residential zip code linked to the area deprivation index (ADI), measured on a 0-100 scale and categorized into tertiles based on national ADI distribution. Multivariable linear regression was used with adjustment for patient age, race, ethnicity, cancer stage, days on AI, and body mass index (BMI). Secondary models adjusted for rurality and insurance (Medicaid/no insurance v. private/Medicare). Average joint pain and pain interference (each on 0-10 scales) based on the Brief Pain Inventory, and physical and functional wellbeing (PWB, FWB) based on the FACT-ES (on 0-28 scales), at baseline were analyzed. **Results:** Overall, 761 patients were examined. Median age was 60 years, 8% of patients were Black, 5.5% were Hispanic, 87% had Stage I or II disease, and median duration on AI was 365 days. 51% of patients were from least deprived areas (bottom tertile of ADI), while 15% were from the most deprived areas (top tertile). Compared with patients from the least deprived areas, patients in the most deprived areas had worse FWB ($\beta$ = -1.53, 95% CI: -2.7, -0.4; p =.01) and average pain scores ($\beta$ = 0.51, 95% CI: 02, 0.8; p = 0.002) at baseline. Patients from more deprived areas (middle tertile of ADI) had worse FWB ($\beta$ = -1.3, 95% CI: -2.1, -0.4; p =.005) and pain interference ($\beta$ = 0.5, 95% CI: 0.2, 0.9; p =.002) compared to those from least deprived areas. For pain outcomes, the ADI coefficient was attenuated but statistically significant with adjustment for insurance. The association of FWB with ADI was not statistically significant after adjusting for insurance. No statistically significant differences were noted for PWB. **Conclusions:** Patients with AIMSS who live in neighborhoods with higher social needs had slightly worse FWB joint pain, and pain interference at baseline, but similar PWB. The effect of insurance on the PRO-ADI association indicates that individual access to healthcare explains some of the area-level differences in PROs. Future work will examine differences in PRO trajectory by ADI, adjusted for insurance, over the course of patient participation in these trials. Research Sponsor: The Hope Foundation for Cancer Research, U.S. National Institutes of Health.

**159** **Poster Session**

## Designing and implementing an evidence-based and longitudinal implicit bias training curriculum for school of medicine members and health care providers.

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**Background:** Implicit biases negatively influence decision making and communication in healthcare. The School of Medicine (SOM) at Wayne State University (WSU), based in the diverse yet segregated city of Detroit, Michigan, has faced the consequences of bias. Fortunately, within SOM/WSU, expertise on the problem of and solutions to implicit bias have flourished. We leveraged that expertise to design and implement a comprehensive and longitudinal implicit bias curriculum for SOM members and healthcare providers, including hematology/oncology faculty, providers, and trainees. We designed the curriculum to satisfy State of Michigan implicit bias training requirements for all healthcare providers. To date, we have implemented two modules. Prior to the second module, we received IRB-approval to recruit curriculum participants as study participants and tested effectiveness. **Methods:** The curriculum is comprised of $1\frac{1}{2}$ hour modules offered every three months. Topics include how implicit bias influences clinical communication with a focus on the oncology care context, how structural racism influences health policy, among others. To evaluate, we utilize Kirkpatrick's Four-Level Training Evaluation Model, to assess outcomes at 4 levels: 1. reaction, 2. learning, 3. behavior change and 4. long-term results. After obtaining passive consent from participants, we gathered effectiveness data at levels 1 and 2. **Results:** We implemented two modules (How Patient and Physician Race-Based Attitudes Influence Clinical Communication & Structural Racism 101: Basic Training for Doctors) in 2021 via Zoom. More than 160 people attended each module with many participants representing oncology-focused hospitals and academic departments. All participants received a certificate of participation as a part of the state requirements for implicit bias training, and CME credit. For Session 2 we asked participants to respond to a survey before (n = 106) and after (n = 35) the session assessing Levels 1 and 2. Participant evaluations (Level 1) were very positive, with many participants noting that they plan to put what they have learned into practice immediately. A common critique was the desire for more topics and more time to discuss. Findings show increased knowledge (Level 2) of structural racism (pre: 92% vs. post: 97%); spatial racism (pre: 87% vs. post: 91%); and how racism influences health policy (pre: 80% vs post: 86%). **Conclusions:** We successfully implemented a longitudinal implicit bias curriculum for SOM members and healthcare providers. Next steps include continuing to implement and assess the curriculum, and collecting data at Levels 3 and 4. This type of curriculum could be an important tool to decrease bias in cancer care and improve cancer care equity. Research Sponsor: Wayne State University.

**160** **Poster Session**

## Understanding the barriers and experiences of veterans with lung cancer.

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**Background:** Veteran populations have higher lung cancer incidence and lower overall survival rates than non-veterans. Despite clinical advancements in lung cancer which reduce lung cancer death rates and access to care, many Veterans face barriers in receipt of such guideline-based care due to many factors including complex comorbidities, low health literacy, and significant economic and social disadvantages. In fact, the underrepresentation of Veterans in clinical trials confer even more difficulty to ensure cancer treatment and prognosis thoughtfully considers their unique challenges and needs. Few studies have evaluated Veterans' perspectives regarding unmet needs and potential solutions to address equitable care delivery among these populations. The objective of this study was to evaluate Veterans' perspectives regarding their lung cancer care to identify modifiable barriers that could be addressed to improve care. **Methods:** We conducted semi-structured interviews with fourteen Veterans diagnosed with lung cancer at the VA Palo Alto Health Care System. All interviews were recorded, transcribed and analyzed interviews using the constant comparative method of qualitative analysis. **Results:** All participants noted the main barrier to lung cancer care was transportation with inadequate financial coverage for gas and extensive commutes that contributed to significant anxiety and stress regarding their cancer care. Participants noted challenges in navigating the health system and suggested better understanding of the structure and function of cancer care team members to overcome these barriers. Participants noted difficulty comprehending and interpreting their cancer prognosis and were unaware of advance directives. All participants were unaware of precision medicine, namely molecular tumor testing or genomic cancer sequencing and its implications on their treatments. **Conclusions:** This study revealed critical gaps in lung cancer among Veterans in one VA facility. Targeted solutions should be considered to address barriers identified which include transportation access, proactive distress management, and knowledge regarding lung cancer care delivery. Research Sponsor: None.

**161** **Poster Session**

## Geographic disparities in head and neck cancer mortality and place of death in the United States from 2003 to 2019.

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**Background:** Survival has significantly improved for patients with head and neck cancer (HNC) in the last decade in the US. Unfortunately, social determinants of health continue to impact patient outcomes. HPV vaccine uptake and access to quality end-of-life care vary notably between geographic areas. We investigated potential disparities in rural-urban age-adjusted mortality rates (AAMRs) and place of death for individuals with head and neck cancer (HNC). **Methods:** We used the CDC WONDER database to identify patients who died from HNC between 2003 and 2019 within the following 2013 US Census population classifications: large metropolitan (≥1 million), medium/small metropolitan (50,000-999,999), and rural areas (< 50,000). AAMR (per 100,000 individuals) was stratified by geographic area, age, and race/ethnicity. Annual percentage changes (APC) in AAMR were estimated with linear regression models of the log-scale AAMR (including population size as weights) and differential changes over time by geographic area were assessed with interaction tests. Odds ratios (OR) for the association between each place of death and individual-level characteristics were calculated using logistic regression, adjusting for year of death. **Results:** From 2003 to 2019, 221,861 deaths related to HNC occurred (48.5% large metropolitan, 31.9% medium/small metropolitan, 19.7% rural). Total AAMR declined from 6.7 to 5.8 during this period. Rural areas consistently had a higher AAMR and also slower annual improvement over time (APC –0.11; 95% CI, –0.36 to 0.13; $p < 0.001$) than medium/small metropolitan (APC –0.51; 95% CI, –0.78 to 0.24) and large metropolitan areas (APC –1.19; 95% CI, –1.39 to –1.0; $p < 0.001$). Non-Hispanic (NH) Black patients had the highest overall AAMR, but quickest annual improvement (APC –2.91; 95% CI, –3.28 to –2.55; $p < 0.001$) compared to Hispanic (APC -1.42, 95% CI, -1.9 to -0.93) and NH White patients (APC –0.26, 95% CI, –0.44 to 0.07). Individuals in rural areas died less often in a hospice facility (5.6% rural vs 10.8% large metropolitan vs 12% medium/small metropolitan) and slightly more often at home (46.3% rural vs 40.1% large metropolitan vs 43.7% medium/small metropolitan). Relative to patients in rural areas, patients in large metropolitan (OR 1.77; 95% CI, 1.74 to 1.81) and medium/small metropolitan areas (OR 2.27; 95% CI, 2.23 to 2.31) had higher odds of dying in a hospice facility compared to a medical facility. **Conclusions:** Rural residents with HNC experienced higher mortality rates and had lesser improvement compared to urban areas, with notable sociodemographic differences, and disparities in place of death. Public health interventions to combat health inequities for patients with HNC are required. Further, as EOL care is increasingly complex and the role of unpaid caregiving burdensome, policy interventions targeted to support disadvantaged populations and communities are urgent and necessary. Research Sponsor: None.

**162** **Poster Session**

## Social vulnerability and cancer-related mortality among U.S. counties, 2013 to 2019.

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**Background:** Substantial differences exist among US counties with regards to cancer-related mortality. Social determinants of health (SDOH) can predispose underserved communities to poor cancer outcomes. We investigated the impact of county-level social vulnerability on age-adjusted cancer mortality rates (AAMRs). **Methods:** We linked cancer-related deaths across US counties from 2013 to 2019 in the CDC WONDER database to county-level Social Vulnerability Index (SVI) data from the CDC/ATSDR. Scores for overall SVI and its 4 subcomponents (socioeconomic status; household composition and disability; minority status and language; housing type and transportation) were calculated using 15 SDOH attributes. These were presented as percentile rankings by county and classified into quartiles based on their distribution among US counties (1st [least vulnerable] = 0 - 0.25; 4th [most vulnerable = 0.75 - 1.00]). AAMRs per 100,000 individuals across US counties were compared between 1$^{st}$ and 4$^{th}$ SVI quartiles using robust linear regression models with a log scale. **Results:** There were 4,107,273 deaths with overall AAMR 173 per 100,000 individuals. Highest AAMRs were noted among older adults > 65 years, men, non-Hispanic Black, and rural counties. AAMRs increased proportionally when moving from least to most vulnerable counties. Counties in 4$^{th}$ SVI quartile had 20% higher AAMRs compared to 1$^{st}$ SVI quartile (rate ratio; RR 1.08, 95% CI [1.08, 1.09], p < 0.001). This was pronounced for ages 45-65 (42% increase; RR 1.21, 95% CI [1.12 – 1.24]), Hispanic race (26% increase; RR 1.11, 95% CI [1.06, 1.16]), and rural counties (21% increase; RR 1.17, 95% CI [1.15, 1.19]). Increase in AAMR between 1$^{st}$ and 4$^{th}$ SVI quartile from vulnerable socioeconomic status was most pronounced in rural counties (RR 1.17; 95% CI [1.15, 1.2]), women (RR 1.17; 95% CI [1.15, 1.2]) and ages 45-65 (RR 1.15; 95% CI [1.09, 1.14]). Vulnerable household composition/disability was most pronounced for rural residents (RR 1.12; 95% CI [1.09, 1.14]), and housing/transportation barriers for Hispanic individuals (RR 1.15; 95% CI [1.09, 1.21]). **Conclusions:** This study highlights the most socially vulnerable US counties have higher cancer mortality rates than the least vulnerable US counties. Furthermore, non-Hispanic blacks, older adults, and rural counties face highest risks of health inequities. Our findings inform ongoing congressional deliberations on transportation, telehealth, and rural infrastructure to achieve geographic parity. Research Sponsor: None.

**Mortality rate and social vulnerability.**

| | AAMR (1$^{st}$ SVI quartile) | AAMR (4$^{th}$ SVI quartile) | RR, 4$^{th}$ vs 1$^{st}$ Overall SVI, 95% CI |
|---|---|---|---|
| **Overall** | 159 | 190 | 1.09 (1.08-1.10) |
| **45-65** | 170 | 242 | 1.21 (1.19-1.2) |
| **> 65** | 919 | 1018 | 1.04 (1.06-1.05) |
| **Male** | 191 | 234 | 1.11 (1.09-1.12) |
| **Female** | 159 | 192 | 1.06 (1.05-1.07) |
| **Hispanic** | 106 | 133 | 1.11 (1.06-1.16) |
| **White** | 161 | 191 | 1.1 (1.09-1.11) |
| **Black** | 919 | 1018 | 1.11 (1.09-1.13) |
| **Urban** | 160 | 184 | 1.025 (1.01-1.04) |
| **Rural** | 159 | 192 | 1.17 (1.15-1.19) |

**163** **Poster Session**

## Racial/ethnic disparities in HPV-associated anogenital cancers among males in the United States (2005-2016): A population-based retrospective cohort study.

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**Background:** Among the HPV-associated cancers, research has primarily focused on understanding prevention and outcomes among females with cervical cancer. Limited data is available on health outcomes of male HPV-associated anogenital cancers, particularly among racial/ethnic minority groups. **Methods:** This population-based retrospective cohort study included 39,601 males diagnosed with HPV-associated invasive penile and anorectal cancers between 2005-2016 in the North American Association of Central Cancer Registries. Outcomes included: age-adjusted incidence, late-stage diagnosis, survival, and cancer-specific mortality. We evaluated association of race/ethnicity with outcomes using multivariable logistic regression, adjusted survival curves, and Cox proportional hazard modeling, adjusting for age, insurance, residential characteristics (metropolitan/non-metropolitan, area poverty, and geographic region), stage, and treatment. **Results:** Hispanic and Non-Hispanic (NH) Black males had the highest age-adjusted incidence of penile and anorectal cancer, respectively. Higher odds of late-stage penile cancer were observed among NH Black (adjusted odds ratios [aOR] 1.22, 95% CI 1.07-1.39) and Hispanic males (aOR 1.17, 95% CI 1.04-1.31). Higher odds of late-stage anorectal cancer were observed among NH Black (aOR 1.25, 95% CI 1.14-1.36) and NH Other males (aOR 1.29, 95% CI 1.01-1.66). Compared to all other groups, NH Black males had the lowest cumulative and mean survival of both cancers and higher cancer-specific mortality (penile adjusted hazards ratios [aHR] 1.23, 95% CI 1.01-1.49; anorectal aHR 1.25, 95% CI 1.10-1.42). Adjusting for treatment attenuated associations but did not eliminate the observed cancer-specific mortality. **Conclusions:** Hispanic males had the highest incidence of penile cancer and were diagnosed at later stages than non-Hispanic (NH) White counterparts. NH Black males had the highest incidence of anorectal cancers, and regardless of anatomic site, they had the highest rates of late-stage diagnosis and mortality even when controlling for all other covariates, including treatment. The findings highlight the necessity of interventions to increase HPV vaccination rates, early detection, and treatment of anogenital cancers in males, particularly among men of color. Research Sponsor: None.

**164** **Poster Session**

## The concerning disaggregation of gender disparity and racial disparity investigation at recent ASCO annual meetings.

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**Background:** There has been a recent emphasis in the peer-reviewed oncology literature on examining disparities by gender. Such emphasis provides an excellent opportunity to provide parallel disparities analysis. The degree to which gender disparities research has been performed concomitantly with racial disparities research at prominent oncologic societies has yet to be investigated. **Methods:** Abstracts presented at the American Society of Clinical Oncology (ASCO) annual meeting, the largest worldwide clinical oncology conference, were reviewed. Highly-valued abstracts selected for the elite oral abstract or clinical science symposium sessions at the 2020, 2021, and 2022 annual meetings were stratified to determine the amount of gender disparities research presented. Such research was then further assessed to determine whether racial disparities were examined simultaneously. **Results:** From 2020-2022, a total of 1,217 abstracts were presented at the ASCO annual meetings oral abstract or clinical science symposium sessions. Of these, seven involved gender disparities examination, of which only two (29%) concomitantly examined race. No study since 2020 concomitantly examined gender and racial disparities. **Conclusions:** More than 70% of elite gender disparities work presented at ASCO has been disaggregated from concomitant racial disparities examination, with complete disaggregation since 2021. Gender disparities work remains a miniscule aspect of the overall elite research landscape. Future work in examining gender disparities may be best aggregated with racial disparities in order to optimize timely solutions in both areas; such work could potentially be incentivized by stipulations of future funding mechanisms. Research Sponsor: None.

**165** **Poster Session**

## Factors predicting pathological complete response in patients with localized breast cancer receiving neoadjuvant chemotherapy.

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**Background:** Pathological Complete Response (pCR) after Neoadjuvant Chemotherapy (NAC) is associated with improved survival outcomes in early-stage breast cancer. However, data regarding the factors predicting pCR are limited. We analyzed the clinical and pathological factors associated with the attainment of pCR after NAC. **Methods:** We queried National Cancer Database for non-metastatic breast cancer patients who received NAC between 2010 and 2016. All associations were compared using Kruskal-Wallis, Pearson's Chi-Squared, and Fisher's Exact Tests. Multivariate logistic models were used to analyze association of race, sub-type, age, clinical stage, grade, histology, insurance, comorbidity index with pCR. Odds ratios, 95% confidence intervals, and p-values for each predictor were recorded and adjusted for confounders. All analyses were conducted in RStudio v4.0.2 at a significance level of 0.05. **Results:** A total of 137140 female and 741 male patients were identified. Majority of the patients were Whites (n = 95909) followed by Blacks (n = 23736), and Hispanics (n = 11023). 58.4% (n = 80556) patients were > 55 years. 64% of the patients had private insurance, 31.1% (n = 42930) had government insurance (Medicare and Medicaid) and 3.6% (n = 4904) were uninsured. Majority of the patients had Charlson comorbidity index (CCI) equal to 0 (87%). Hormone-receptor positive and HER2 negative (HR+HER2-) comprised 37.9% (n = 51283), HER2+ were 35.2% (n = 47794) and triple-negative breast cancer (TNBC) were 26.9% (n = 36401). Compared to TNBC, HER2+ had higher and HR+HER2- had lower chance of attaining pCR. Blacks had lower (OR = 0.95, $p < 0.001$) and Hispanics had higher chance of pCR (OR = 1.1 $p < 0.001$) when compared to Whites in the overall population which includes all subtypes. Younger patients had lower chance of attaining pCR compared to elderly. Stage I and II patients had more chance of PCR compared to stage III. Patients with government insurance had lower odds of attaining PCR compared to those with private insurance. Patients with CCI 0 had higher chance of pCR when compared to those with CCI > = 3 (OR = 1.15, 95% CI = 1.08-1.2, $p < 0.001$). **Conclusions:** Patient and tumor factors play an important role in response to NAC in breast cancer patients. Identifying modifiable factors associated with odds of lower pCR rates such as, government insurance would help us intervene to improve the quality of care of breast cancer patients. Research Sponsor: None.

| Variables | Odds ratio | 95% CI | P-value |
|---|---|---|---|
| Blacks vs Whites | 0.95 | 0.91-0.98 | < 0.0001 |
| Hispanics vs Whites | 1.1 | 1.056-1.16 | < 0.001 |
| Stage I vs III | 1.1 | 1.07-1.14 | < 0.001 |
| Stage II vs III | 1.15 | 1.13-1.17 | < 0.001 |
| HER2+ vs TNBC | 2.07 | 2.03-2.1 | < 0.001 |
| HR+ vs TNBC | 0.39 | 0.38-0.4 | < 0.001 |
| Age < = 55 vs > 55 | 0.92 | 0.9-0.93 | < 0.001 |
| Government vs Private | 0.91 | 0.88-0.95 | < 0.001 |
| No insurance vs Private | 0.97 | 0.9-1.03 | 0.38 |

## Harnessing academic-community partnerships to improve colorectal cancer screening rates in medically underserved communities.

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**Background:** Colorectal cancer continues to be very common, and a widening racial disparity has been demonstrated. Wisconsin's Comprehensive Cancer Control Program which is a program of the University of Wisconsin Carbone Cancer Center partnered with nine Federally Qualified Health Centers (FQHCs) on this five-year program to increase colorectal cancer (CRC) screening. **Methods:** This project was funded by the CDC and was a partner of a state's comprehensive cancer control program and a variety of community health centers. Activities included clinical and environmental assessment and baseline data review of CRC screening, identification of a CRC screening team at each clinic, selection and implementation and evaluation of a panel of evidence-based interventions (EBI) per the The Community Guide to Preventive Services. Ongoing implementation data tracking and monitoring strategies were used to create opportunities for data-informed decisions at each clinic. **Results:** FIT kits were the preferred CRC screening modality. The preferred EBI were patient reminder systems, provider reminders, reducing structural barriers, professional education, EMR improvements and small media. Screening rates for CRC increased by 17% over the course of the project with a peak weighted average of screening at 51.8% for eligible average risk adults, which was up from a baseline of 34.8%. Over 9,000 take-home stool kits were distributed, and a 60.7% completion rate was achieved. The positivity rate for the FIT kits across all centers was 7.6%. A subset of the patients with a positive FIT (n = 97) were reviewed and 53.7% (n = 51) did not have a documented colonoscopy in their electronic medical record. **Conclusions:** This project of an academic-community partnership was successful in increasing CRC screening in medically underserved communities in Wisconsin. The positivity rate in this high needs population was higher than expected based on prior publications. Further efforts should focus on decreasing the gap between positive FIT testing and completion colonoscopy. Research Sponsor: Centers for Disease Control and Prevention.

| Health System | A | B | C | D | E | F | G | H | I |
|---|---|---|---|---|---|---|---|---|---|
| # of patients 50-75 | 1087 | 5242 | 1824 | 5633 | 2070 | 911 | 529 | 2012 | 782 |
| # of PCPs | 19 | 26 | 9 | 101 | 15 | 9 | 7 | 21 | 4 |
| Racial/ethnic population served | 40% Hispanic<br>38% NHW<br>23% Black<br>2% Asian<br>1% AI/AN | 4% Hispanic<br>5% NHW<br>91% Black | 7% Hispanic<br>21% NHW<br>72% Black | 88% Hispanic<br>6% NHW<br>5% Black<br>2% Asian | 3% Hispanic<br>7% NHW<br>86% Black<br>5% Asian | 88% Hispanic<br>4% NHW<br>3% Black<br>4% Asian | 32% Hispanic<br>18% NHW<br>16% Black<br>49% AI/AN | 30% Hispanic<br>43% NHW<br>24% Black<br>7% Asian<br>4% AI/AN | 15% Hispanic<br>81% NHW<br>2% Black<br>1% Asian |

**167** **Poster Session**

## Factors associated with timely receipt of COVID vaccination in patients with cancer.

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**Background:** In many jurisdictions patients with new hematological cancers, or those receiving hematopoietic stem cell transplant or immunosuppressive agents, were prioritized for COVID vaccination due to increased risk of infection and death. In Ontario, Canada those residing in congregate settings, or regions with high positivity rates or high proportions of essential workers were also prioritized. While vaccine inequities exist, it remains unclear whether they persisted amongst the prioritized cancer population. **Methods:** We undertook a retrospective, population-based study to evaluate factors associated with COVID vaccination in patients residing in Ontario, Canada, >18 years of age, and diagnosed with cancer between 01/2010 and 09/2020. Factors associated with time from vaccine approval to full vaccination (two doses) and third doses were evaluated using multivariable Cox proportional hazards regression models. **Results:** The cohort consisted of 356,535 patients; as of 30 January 2022 of which 86.8% had received at least two doses. Compared to patients with more remote diagnoses (> 1 year), newly diagnosed patients rate of vaccination was lower (HR: 0.89, 95%CI: 0.88-0.91, $p < 0.01$) and a greater proportion were unvaccinated (13.6% vs 11.8%; $p < 0.01$). Conversely, rate of vaccination was higher in patients treated with systemic therapy in the last 6 months (HR: 1.04, 95%CI: 1.03-1.05, $p < 0.01$). Rate of vaccination was 25% lower in recent (HR:0.74,95% CI: 0.72-0.76, $p < 0.01$) and non-recent immigrants (HR: 0.80, 95% CI: 0.79-0.81, $p < 0.01$), and a greater proportion remained unvaccinated, compared to those who were Canadian-born (20.1 and 16.6% vs 10.9%; $p < 0.01$). Compared to the most advantaged quintiles, quintiles with the lowest socioeconomic status (14.5% vs 9.4%; $p < 0.01$), or highest residential instability (13.3% vs 10.8%; $p < 0.01$), material deprivation (10.5% vs 9.6%; $p < 0.01$), or ethnic concentration quintiles (13.7% vs 10.4%; $p < 0.01$) had higher proportions of unvaccinated patients. Rate of vaccination was 20% lower in patients with the lowest socioeconomic status (HR: 0.83, 95% CI: 0.81-0.84, $p < 0.01$) and those with highest material deprivation (HR: 0.80, 95% CI: 0.79-0.82, $p < 0.01$) relative to more advantaged groups. Similar trends were observed for receipt of third doses in the eligible cohort. **Conclusions:** Despite direct government funding of COVID vaccines and distribution policies aimed a prioritizing high-risk populations marginalized patients with cancer were less likely to be vaccinated than other cancer patients. Differences in receipt of vaccination are likely due to the interplay between systemic barriers to access (low trust, transportation barriers, work schedules), and cultural/ social influences impacting uptake. Future efforts should work directly members of high-risk communities to understand how to improve vaccine delivery among these communities. Research Sponsor: Princess Margaret Cancer Foundation, Other Foundation.

**168** **Poster Session**

## Patient-reported outcomes in a linguistically diverse cancer population: Addressing barriers to access.

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**Background:** The census metropolitan area served by BC Cancer is Vancouver which has a population of 2.4 million. Census Canada noted the mother tongue learned in childhood and still spoken was: 54% English, 17% Indo-European, 16% Chinese, 10% Indo-Iranian, 3% English+other language, 2% other. At BC Cancer, implementation of patient reported outcomes (PROs) was launched 1 year ago with consideration of preferred language. Our goal was to examine the implementation of PROs with respect to equity of access and language preferences. **Methods:** BC Cancer Vancouver implemented PROs including the Edmonton Symptom Assessment Scale Revised, Canadian Problem Checklist and EQ5D in April 2021 using a web-based platform. A 1-year cohort was reviewed for patients' mother tongue and the language used for the PROs. Qualitative interviews were undertaken for non-English mother tongue patients to ask for preferred language of PROs and reasons for the choice if mother tongue was not selected. **Results:** 86 patients were enrolled in the PRO program. Baseline characteristics: 66% female, age 30% < 60/ 31% 60-69/ 39% >70, primary site 54% lung/ 34% colorectal/ 18% other. Ethnic origin: 53% North American and European, 40% East and Southeast Asian, 2% Latin/Central and South American, 3% South Asian, 1% Indigenous, 1% other. Mother tongue: 52% English, 48% non-English (39% English proficient, 9% low English proficiency). Patient preferred language for PROs: 81% English, 11% Chinese, 7% other. Reasons for non-English mother tongue preference for English language included comfort with written English, use of family assistance completing questionnaires for both language and familiarity with electronic devices. **Conclusions:** In the Vancouver linguistically diverse cancer population, the majority of patients preferred English language PROs. Reasons for this include proficiency in the written language and the use of family members to complete the questionnaires. With 39% of patients over the age of 70 in our study, the use of electronic devices for completion may have introduced an additional barrier to access. In clinic iPad questionnaires with nursing and care aide support have been introduced to help address this gap. Clinical trial information: NCT05057234. Research Sponsor: Roche, Other Foundation.

**169** **Poster Session**

## Social determinants of health—to screen or not to screen? How, when, and what to do next are really the questions.

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**Background:** Social determinants of health (SDOH) have a considerable impact on the health outcomes of chronically ill patients. Although the implementation of social needs screening in clinical settings has been studied, patient perspectives of discussing SDOH with health care providers has not been thoroughly investigated. This study sought to explore the experience and perspectives of limited-resource patients with cancer regarding SDOH discussions. **Methods:** This cross-sectional analysis used data from a nationwide survey distributed in May 2022 by Patient Advocate Foundation (PAF). The survey was fielded via email to patients who received PAF services in 2020. Inclusion criteria included a valid email, aged >19 and a current or previous cancer treatment. Frequencies and percentages were calculated for categorical variables. Questions focused on individual experiences with SDOH screening, conversations and expectation around information use and assistance. **Results:** A total of 481 survey respondents with cancer completed the survey. Most respondents were female (73%), aged 56-75 (52%), household income < $48,000 (66%), and insured (98%); 38% were Black, Indigenous or Persons of Color (BIPOC). The most common cancer types were hematologic (42%) and breast (34%); 30% were diagnosed < 2 years prior and 82% received treatment in past 6 months. One quarter (26%) stopped or delayed care in past 12 months due to cost and 66% reported that social needs interfered with treatment in past 12 months. Two-thirds (64%) reported conversations about social needs in the past 12 months. Transportation (36%), food insecurity (32%) and personal safety were the most cited nonmedical needs. Conversations were most often initiated by nurse/PA (30%), social worker (30%) or doctor (29%) and patients reported being 'extremely comfortable' being asked these questions by the same providers; doctor (54%), nurse/PA (48%), social worker (46%). Over half (53%) reported comfort with SDOH information being part of their medical record; 61% wanted to be asked SDOH questions face-to-face. If a social need was identified, patients trusted patient advocacy groups (64%), social worker (61%) and charitable non-profit organizations (49%) to help them locate assistance. Only 21% indicated knowledge of availability of needs navigation services. **Conclusions:** Although patients are open to sharing social issues with providers, our data suggests that conversations may not be routinely initiated in clinical settings. There is also a need to increase awareness of resources in response to SDOH screening. Challenges in trust and privacy persist when disclosing this information. Achieving health equity requires culturally responsive strategies to embed screening and referrals into workflow to ensure cancer patients' needs are identified and they are linked to appropriate nonmedical resources and services. Research Sponsor: None.

**170** **Poster Session**

## "It really does not matter to me, they can be two purple unicorns": Barriers and facilitators to sexual orientation and gender identity (SOGI) measurement in the NCI Community Oncology Research Program (NCORP).

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**Background:** Despite recommendations from numerous clinical bodies (e.g., ASCO), less than 20% of NCORP-affiliated practices regularly collect SOGI data. This gap compromises the ability to identify and correct care inequities experienced by sexual and gender minority (SGM) individuals. Therefore, we evaluated provider- and clinic- level barriers and facilitators to SOGI collection at NCORP practices across the US. **Methods:** We conducted 14 interviews across seven NCORP oncology practices via Zoom. We purposefully sampled to ensure geographic, racial, and ethnic diversity of patient populations. We interviewed one clinician (oncologist, advanced practice provider) and one clinic staff member per practice. The Consolidated Framework for Implementation Research (CFIR) informed thematic analysis that identified barriers and facilitators to SOGI data collection. Interviews were recorded, transcribed, and coded by two coders who adjudicated any discordance. Analyses were conducted in NVivo. **Results:** Thematic saturation occurred after interviews at six practices, with interviews at the seventh practice confirming saturation. Participants represented five geographic regions and included three Minority Underserved practices and two rural practices. Several organizational context characteristics influenced SOGI data collection: access to knowledge, information technology infrastructure, staff processes, and perceived relative priority of SOGI for an oncology visit. All oncologists expressed a low relative priority of sexual orientation data for oncology care. Gender identity had higher priority because it influences how clinicians should address patients. At the clinic level, this low relative priority coincides with a lack of processes and policies for collecting SOGI from all patients. At the oncology care team level, perceived irrelevance to oncology care was related to discomfort in asking SOGI, fear of patient discomfort, and limited awareness of SOGI in electronic health records. Suggested solutions included: normalizing asking SOGI questions, giving patients privacy to complete SOGI, and clarifying relevance of SOGI for clinical purposes. Understanding how SOGI improves patient experiences was a facilitator for collection. **Conclusions:** Within this NCORP practice sample, SOGI data collection barriers included clinician-perceived low relative priority for collection, and perceptions that SOGI disclosure does not influence care quality, despite most interviewees expressing a strong desire to show respect to patients and provide high quality cancer care. Oncology teams may benefit from training on culturally sensitive SOGI collection, education on SOGI data relevance to oncology practices, and support for implementing SOGI data collection policies. Research Sponsor: U.S. National Institutes of Health.

**171** **Poster Session**

## Preliminary findings from a consensus building process to update financial advocacy services guidelines.

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**Background:** In 2018, the Association of Community Cancer Centers (ACCC) developed the Financial Advocacy Services Guidelines to support cancer programs and practices with proactively addressing patients' financial concerns along the cancer care continuum. Since then, research on financial hardship has expanded and the field of financial advocacy has continued to grow and evolve, necessitating new guidelines. **Methods:** To assess the current landscape of cancer financial advocacy interventions, ACCC conducted a literature scan of articles published between 2016 and 2021 using key words including financial advocacy, navigation, toxicity, oncology, and cancer. In May 2022, ACCC convened a multidisciplinary group of 49 national experts to begin developing new guidelines through a consensus-based Delphi process. To identify changes and additions to the 2018 guidelines, the panel completed a brief qualitative survey that asked which services are most important to include as a part of financial advocacy programs and necessary resources for effective delivery. Responses were compiled in a document and grouped by similarity using a rapid qualitative analysis approach. **Results:** The literature scan yielded a total of 55 articles. Several key recommendations emerged including the need to further integrate financial advocacy into care planning services, more training across team members to address financial toxicity, and ensuring services are accessible and equitable. Additional areas for research were ways to leverage technology to enhance services, when and how to screen for financial distress, and the development of care models. From the survey, responses clustered in the following domains and sub-domains: Financial Advocacy Services and Functions (Benefits Verification, Pre-Authorization, & Insurance Optimization; Financial Distress Screening; Patient Communication & Education; Financial Assistance); Program Management Functions (Staffing/Roles & Responsibilities, Staff Training, Infrastructure & Information Exchange, Monitoring & Evaluation); and Stakeholder Management Functions. **Conclusions:** Early input from the panel illuminated numerous areas for defining new guidelines to increase comprehensiveness, incorporate an explicit focus on health equity, and begin to tease out minimal and optimal services and program components and structure. The information from the literature scan and survey are being used by ACCC and a guidelines task force of field experts to draft new financial advocacy services guidelines, which will then go through at least two rounds of rating by the Delphi panel in order to find areas of consensus. ACCC will also hold a series of roundtables with patient advocacy, commercial, and pharmaceutical stakeholders to allow an opportunity to comment on the guidelines as well. The finalized guidelines are expected to be released before June 2023.
Research Sponsor: Pfizer, Bristol Myers Squibb, Johnson & Johnson, Pharmacyclics, Genentech, Daiichi Sankyo.

**172** **Poster Session**

## Financial concerns of people enrolled in the CAFÉ cancer financial navigation trial.

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**Background:** CAFÉ is a three-arm randomized controlled trial testing whether financial navigation for people with cancer improves quality of life and financial distress compared to enhanced usual care at two integrated health systems (Kaiser Permanente Washington, KPWA; and Kaiser Permanente Northwest, KPNW). Our current objective was to describe financial concerns reported by a subset of participants enrolled and receiving financial navigation in the trial. **Methods:** We descriptively summarized the financial concerns in participants randomized to receive financial navigation between August 2021 and May 2022 (Total n = 135; KPWA = 75 and KPNW = 60). Participants received either one or three proactive outreach with financial concerns assessment plus any participant-initiated assessment. Navigators followed up with personalized liaison and warm handoff to resources and coordinated with oncology care team and organizational partners about participant cost concerns. We used the study's bespoke REDCap database, including participant sociodemographic and clinical characteristics and discrete notes entered by CAFE financial navigators. During financial concerns assessments, CAFE navigators recorded the type of each concern: planning and budgeting; care decision-making; or acute financial needs; resource referrals provided; and time to concern resolution. **Results:** The sample was 36% male; mean age 61 years; and 62% married or living with a partner. Self-reported race/ethnicity was 9% Black, 15% other, and 76% White; 6% reported Hispanic/Latino ethnicity. 43% reported less than four-year college education. Cancer types were 38% breast; 16% prostate; 6% colorectal; 4% lung; and 36% other types. 5% had Medicaid and 44% Medicare. 58% reported < $75,000 total family income in 2021. 16% were enrolled in the KP medical financial assistance (MFA) program. Navigators documented 179 assessments. Number of concerns/participant ranged from zero to 5 (mean = 1.3 concerns/participant). Participants reported a financial concern at 61% of assessments. The most common concern was planning/budgeting (68%), followed by acute financial needs (28%) and care decision-making (3%). Mean time-to-resolution was 22 days (planning/budgeting); 27 days (acute needs) and 33 days (clinical decision-making). The most common resource referrals included the KP MFA (77 times); coordination with KP member services (73 times) (e.g., for cost estimates), community resource navigators (35 times) and nurse navigators (25), and patient financial services (i.e. billing, 10). **Conclusions:** Proactive assessment by oncology financial navigators identifies financial concerns related to planning for cancer care expenses and acute financial needs. Concerns related to financial hardship as a factor in clinical decision-making were rare. Resource referrals varied by concern type, with time-to-resolution ranging from 22-33 days. Clinical trial information: NCT05018000. Research Sponsor: U.S. National Institutes of Health.

**173** **Poster Session**

## Racial disparities in access to prescription medications among American patients with cancer.

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**Background:** Though the associations between Black race and increased rates of financial toxicity, as well as Black race and reduced cancer survival, are well-established, further exploration of the mechanisms connecting these two phenomena is required. One channel that has not yet been explored regards access to necessary medications. Cancer may cause financial toxicity, which in turn may reduce patients' abilities to obtain their required medications, further exacerbating the quantity and/or intensity of medical conditions. In this study, we investigate self-reported access to prescribed medications in the ten cancers with greatest incidence in the United States, regressing on Black race while controlling for covariates. **Methods:** From the National Health Interview Survey (NHIS) from 2000 – 2020, we extracted data on Breast, Prostate, Lung, Colon, Melanoma, Bladder, Lymphoma, Kidney, Uterine, and Pancreatic cancers. The key outcome measure of financial toxicity used was the NHIS entry "needed but couldn't afford prescription medicines, past 12 months," a dichotomous variable. Multivariable logistic regressions on being Black (with reference variable White), controlling for sex (except for in Prostate and Uterine cancers), age first diagnosed with the cancer of interest, having an undergraduate degree, United States citizenship, having annual income greater than $50,000, having health insurance, and year of survey, were run in RStudio (Version 2021.09.1), separately for each cancer. Alpha was set at $p < 0.05$. **Results:** In the following six cancers, Black individuals were significantly more likely to not have been able to afford a needed prescription medicine in the last 12 months: Breast (OR = 2.05, $p < 0.001$, n = 7328), Prostate (OR = 2.91, $p < 0.001$, n = 4782), Colon (OR = 2.21, $p < 0.001$, n = 2330), Melanoma (OR = 6.58, $p < 0.001$, n = 2780), Lymphoma (OR = 2.29, $p = 0.004$, n = 1202), and Uterine (OR = 1.66, $p = 0.030$, n = 1640). **Conclusions:** Financial toxicity-induced disparities in access to prescription medications permeate six of the ten most common cancers in the United States. Given the self-reinforcing feedback loop nature of cancer-related financial toxicity, missing needed medications, and economic standing, particularly for Black patients, there is an urgent need for public investment in programs targeted at increasing prescription medication access. Such policies could substantially reduce racial disparities in American oncology. Future research should include additional biological covariates (such as disease severity) and further address the social determinants of health. Research Sponsor: None.

**174** **Poster Session**

## A qualitative study of Black adults' perceptions of virtual visits in oncology care.

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**Background:** During the COVID-19 pandemic, many oncology practices began offering virtual visits via video and/or telephone. How such visits are perceived by Black adults receiving cancer care, a category of patients often facing access barriers and poorer outcomes, is not known. We elicited Black patients' perceptions of oncology virtual visits. **Methods:** We conducted in-depth, semi-structured telephone interviews with Black adults aged ≥21 years who received oncology care between 6/1/19 - 3/20/21 for head & neck cancer, prostate cancer, and multiple myeloma within two US-based academic health systems. The interview guide elicited perceptions within predefined themes (e.g., ease of use, usefulness, communication quality, appropriateness). Interviews were audio-recorded, transcribed verbatim, and coded for a priori themes and new ones identified during data immersion. One trained research assistant coded all transcripts, using Atlas.ti for data management. **Results:** Forty-nine Black adults diagnosed with cancer completed an interview between 9/2021 and 2/2022 (n = 16 head & neck, n = 16 prostate, n = 17 multiple myeloma); mean age 62 years (range: 26-79), 55% male, and 59% reported ever having a virtual visit (n = 21 experienced video virtual visit(s), n = 8 telephone only). Perceptions of virtual visits varied. Some expressed a desire for continued use and noted advantages, including factors associated with the comfort and convenience of being home and not needing to travel (e.g., not needing to get up and dressed; reduced time and gas/parking costs). Others emphatically indicated preferring in-person visits due to the face-to-face/one-on-one/person-to-person interaction. Those with positive perceptions endorsed similarities between information exchanges, communication, and physician knowledge in in-person compared to virtual visits, but often noted insurance coverage, working technology and the need for clinical appropriateness (e.g., "it was just a follow up visit;" "I didn't need any labs") as foundational. Those expressing concerns discussed the inability for vital signs assessment/physical exams/laboratory testing, and raised concerns regarding interpersonal communication, including the inability to be physically present with one another and assess each other's body language. For some respondents this led to concerns about trust/honesty and physicians being distracted and/or missing something during the visit. Technology-related obstacles (e.g., confidence and connectivity) when experienced were reported as overcome with assistance or via switching to telephone. **Conclusions:** We found Black adults with cancer generally receptive to virtual visits and that telephone-only options increased access. Virtual visit acceptability among Black adults may be enhanced by improved interpersonal connectedness during visits, technology support, and patient-centered scheduling options. Research Sponsor: Genentech.

**175** **Poster Session**

## Assessing the needs of those who serve the underserved: A national survey among cancer care clinicians.

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**Background:** In 2009, ASCO confirmed that addressing cancer care disparities is critical for the Society and committed to approaches to eliminate such disparities. Yet, gaps remain in identifying the best approaches to do so. It remains unknown which cancer care providers serve patients from "underserved populations" (defined as individuals who have historically received inadequate health care and health care services), what unmet needs they experience in their cancer care delivery, and how best to engage and support these providers. The objectives of this study were to explore challenges faced by providers serving underserved patients to inform development of a broader online survey and identify solutions that ASCO can implement to better support these providers. **Methods:** A multi-phase mixed-methods approach was utilized. Phase 1 involved key informant semi-structured interviews with 12 oncology providers caring for adult patients in the US from April to May 2021. Phase 2 involved survey development based on themes identified in Phase 1. The survey assessed: provider needs; processes for eliciting, documenting, and addressing social and economic needs of patients; and how ASCO could best support these providers. Phase 3 involved email distribution of the online survey in May 2022 to 5800 individuals identified through ASCO's customer database. Eligibility criteria included providing care for adults with cancer in the US and prior consent to receive ASCO survey communications. **Results:** Of 477 respondents, the majority were ASCO members (88%), in an academic practice (57%), medical oncologists (77%), non-Hispanic (89%) and/or Caucasian/White (67%) and had > 15 years' clinical experience (57%). A majority (60%) provided ≥25% of their clinical time providing cancer care to underserved populations and routinely engaged with administration to secure resources (61%) and local community organizations to obtain services (42%) for patients. Most (43-77%) indicated that a social worker/case manager was primarily responsible for addressing patient social needs. The majority reported that identification and dissemination of best practices (55%) and development of a return-on-investment business model (60%) would best help address patient needs. Some respondents expressed a desire to collaborate with ASCO on policy reform (32%) and for ASCO to help build or strengthen partnerships with local initiatives (29%). **Conclusions:** This is the first US-based survey assessing barriers and solutions to delivering cancer care among underserved populations. The findings from this work provide insights about how ASCO can help equip practices to address the social needs of their patients. Further work will be conducted to develop and implement suggested solutions. Research Sponsor: Conquer Cancer Foundation of the American Society of Clinical Oncology.

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## Increasing research to address cancer care disparities in an NCI-sponsored community oncology network.

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**Background**: Improving the delivery and outcomes of cancer care should be informed by research that aims to reduce disparities among underserved populations and those underrepresented in clinical studies. The NCI Community Oncology Research Program (NCORP), a community-based clinical trials network, conducts such research. In this analysis, we aimed to identify opportunities to develop a robust program of disparities-relevant cancer care delivery research (CCDR). **Methods**: We reviewed NCORP CCDR studies approved between August 2014-May 2022. Any study with at least one aim addressing care delivery in NIH-health disparity or underrepresented populations was deemed disparities-relevant. Studies were categorized as: *primary* if they were focused exclusively on cancer disparities within populations of interest; *secondary* if they had a disparities-related aim in a broader study; and *exploratory* if the aim assessed differences by race, ethnicity, income, insurance status, or practice-level characteristics. For each CCDR protocol, study and disparities-related characteristics were abstracted by two reviewers, who resolved any disagreements by discussion. Descriptive statistics are summarized. **Results**: Of 23 CCDR studies, a majority had at least one disparities-relevant aim: 4 primary, 3 secondary, and 10 exploratory. Studies with primary and secondary aims focused on racial/ethnic minorities, rural residents, older adults, adolescent/young adults and socioeconomically disadvantaged populations. Cancer care delivery gaps addressed by these studies included shared decision making, guideline adherence, case management, healthcare expenditures, and healthcare accessibility. Most studies focused on patients undergoing active treatment and included multilevel interventions. Only one of the disparities-relevant studies was available to non-English speaking patients. **Conclusions**: The inclusion of disparities-relevant aims in most of the care delivery studies is encouraging. The fact that most studies with a primary or secondary aim included an intervention demonstrates strong interest in generating evidence that will support improved cancer care delivery. Studies also addressed several distinct disparity populations across a range of care delivery gaps. These results represent opportunities for targeted network efforts to increase the disparities research portfolio and may inform strategies to optimize equitable care delivery that meets the needs of diverse cancer patient/survivor populations. Research Sponsor: None.

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## "If [multiple myeloma] is just for Black people, they don't care to study it, maybe that's why it is no cure": Dyadic perspectives on the legacy of Tuskegee and trust in medical care for multiple myeloma.

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**Background:** Older Black adults are disproportionately burdened by multiple myeloma (MM) yet continue to face significant challenges in accessing high-quality cancer care, including opportunities to engage in research. Knowledge of experiments such as the Tuskegee Study, where Black persons experienced deliberate harm from research, has created mistrust of the healthcare system, especially in the Black community. We sought to examine racial differences in dyadic (patient-informal caregiver) knowledge of the Tuskegee study and understand their perceptions of care received for MM. **Methods:** We conducted 21 in-depth semi-structured interviews with racially concordant patient-informal caregiver dyads living in North Carolina. Dyads were asked open-ended questions about the Tuskegee Study, mistrust, and their healthcare experiences. We used the Sort and Sift, Think and Shift approach for qualitative data analysis. **Results:** Between November 2021 and April 2022, we enrolled 44 participants [(mean age, patients: 70 years (range = 57-90), caregivers: 68 years (range = 37-88)], and interviewed 42 (11 Black and 10 White dyads). Fourteen (67%) dyads (6 White, 8 Black) reported knowledge of the Tuskegee Study. We identified Black-White differences in how this knowledge influenced perceptions about the care received for MM, including provider and healthcare system interactions, where Black dyads reported mistrust because of this knowledge ("*if [MM] is just for Black people, they don't care to study it, maybe that's why it is no cure*"). Conversely, most White dyads reported no impact of this knowledge on their current level of trust in the healthcare system and expressed their discomfort with discussing the Tuskegee Study and other events that led to the deliberate harm of Black persons. Black dyads stressed the persistent nature of racial injustice in the healthcare system, creating a shared consciousness within the Black community that *"Black patients don't get the attention... the care, that [their] counterpart does."* Black dyads emphasized the need for self-advocacy when interacting with providers and proactively sought to gain knowledge about their disease. Black and White dyads highlighted the importance of having a caregiver as an advocate, but Black dyads perceived caregiver presence as a potential mitigator of discrimination ("*seeing a husband [and] wife, together. I think that makes a difference*"). **Conclusions:** Black dyads often expressed knowledge of the Tuskegee Study, the related legacy of mistrust in the healthcare system, the need for self-advocacy, and knowledge of the disease when interacting with providers. These factors, including transparent communication with providers and acknowledgment of drivers of mistrust, are critical for enhancing the care experiences of older dyads affected by MM. Research Sponsor: U.S. National Institutes of Health.

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## Resource needs screening and matching at an academic oncology center: RESOURCE preliminary results.

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**Background:** The social determinants of health contribute to patient (pt) health status throughout the cancer care continuum. Here we describe preliminary results of RESOURCE, a pragmatic intervention to ID and intervene on pt resource needs at an academic oncology center. RESOURCE is an EHR-integrated questionnaire (qst), given when establishing oncology care, that IDs the following needs: transportation; financial, food, & housing security; cost of care; education & employment; and caregiving burden. Pts from an HUP population or reporting resource needs on the cancer center's intake qst are screened with RESOURCE. Those randomized to the intervention reporting a resource need receive an EHR-mediated referral to internal resource specialist and financial assistance teams. **Methods:** All adult cancer pts may complete the EHR-integrated intake qst. We compared historic rates of reported vulnerability from the intake qst with resource needs reported in RESOURCE. Intake qst data from 6/2015 – 4/2022 included 21,343 respondents with data on financial security, social isolation, health literacy, and health numeracy. RESOURCE data from 6/2021 – 6/2022 on the domains above included 75 respondents (125 will be accrued in total; no conditions will end accrual early). The intake qst is available for all adult cancer pts (response rate 24%; RESOURCE response rate of 87%). and The following were compared with $\chi^2$ tests: the demographic profile of each pt population; and the proportion of respondents with any one need ID'd by RESOURCE vs the intake qst. These preliminary results allow us to determine if we may prepare to scale RESOURCE upon the study's completion. **Results:** The enriched pt population of RESOURCE means that there is a statistically significant difference in demographics between the general pt population responding to the intake qst and the RESOURCE pts responding to the RESOURCE by each category (p-values $< 0.01$). A higher proportion of pts identified a need on the intake qst (61%) than on RESOURCE (41%). RESOURCE pts most commonly reported the following needs: paying utility bills (24%), food security (20%), and cost of care (19%). **Conclusions:** While a larger proportion of pts reported a resource need on the intake qst, the RESOURCE qst had a far superior response rate; this discrepancy makes it difficult to determine which qst is better at determining resource needs. The RESOURCE qst allows us to see the type of need in greater detail. Collecting this data systematically allows us to quantify the resource needs of our pts so we can provide adequate support staff and resources. Research Sponsor: Consano.

| | Any resource need RESOURCE, # (%) | Any resource need intake qst, # (%) | P-Value |
|---|---|---|---|
| **Overall** | 31 (41) | 13,151 (63) | < 0.001 |
| **RESOURCE** | Needs reported, # (%) | | |
| **Transportation** | 9 (12) | | |
| **Food security** | 15 (20) | | |
| **Paying utility bills** | 18 (24) | | |
| **Housing security** | 13 (17) | | |
| **Cost of care** | 14 (19) | | |
| **Education & employment** | 8 (11) | | |
| **Caregiving** | 7 (9) | | |

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## Innovation in recruitment and curricular design for diversity, equity, and inclusion (DEI) education for hematology-oncology (HO) trainees.

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**Background:** Alongside persistent disparities in healthcare outcomes in HO, there is an inability to adequately recruit, maintain and promote a diverse and inclusive work force nationwide. To our knowledge, a structured approach to DEI education/recruitment in HO training is lacking. We sought to establish a longitudinal curriculum aimed at educating HO trainees in structural barriers impacting cancer equity and developing tools to enhance Underrepresented in Medicine (URiM) recruitment. **Methods:** Trainee-led DEI framework was presented to program leadership and officially adopted into the curriculum for the 2021-22 academic year. This consisted of initiatives across 4 domains: 1. Curricular Development (emphasis on disparities during trainee orientation, didactic lectures on cancer disparities, financial toxicity, workforce diversity, pandemic impact on cancer inequities) ; 2. Recruitment & Retention (implicit bias training, targeted recruitment from HBCUs, trainee-led discussions on enhancing recruitment); 3. Engagement & Mentorship (local community mentorship within institution, external mentorship through ASCO URM MSR program); 4. Disparities Research (career guidance sessions with invited faculty, development of registry-based studies to evaluate disparities). Impact of new curriculum was measured through anonymous surveys, at 1, 7, and 12 months during the academic year. A 5-point Likert scale (strongly disagree to strongly agree) was utilized. **Results:** At baseline, surveyed trainees were predominantly PGY5 (33%), ages 31-40 (66%), and self-identified as White or Caucasian (47%). Over the academic year, trainee recognition of structural barriers that prevented oncologic care delivery increased. More trainees felt departmental/fellowship-wide DEI efforts were transparent and impactful leading to quantifiable changes, and creation of new mentorship opportunities. Trainees rated the following as most helpful to address biases in the workplace: opportunities to mentor minority high school/college-level students, implicit bias training, and formal lectures. Anonymous qualitative feedback from fellows favored small group discussions and encouraged a top-down approach to promoting diversity in leadership. One trainee-mentored URiM medical student presented work at the ASCO annual conference on cancer disparities, while program leadership efforts led to incoming trainee class comprised of 25% URiM. **Conclusions:** We demonstrate feasibility of a longitudinal DEI curriculum in HO trainee education and recruitment that raises awareness and creates opportunity for URiM. Future efforts will build on this curriculum utilizing trainee feedback and departmental buy-in with the goal of building an oncologic workforce that better reflects the patients we care for. Research Sponsor: None.