



NATIONAL CANCER INSTITUTE

4th NCI Symposium on **Cancer Health Disparities**

April 4–5, 2023

Porter Neuroscience Building
Building 35
Room 610/620/630/640
NIH Bethesda

4th NCI Symposium on Cancer Health Disparities

AGENDA

TUESDAY, APRIL 4, 2023

8:20 a.m.

Welcome and Opening Remarks

Monica Bertagnoli, M.D., Director, National Cancer Institute, NIH

SESSION 1 Achieving Clinical Trial Diversity and How it May Reduce Disparities in Cancer Care

Chair: Tiffany Wallace, Ph.D., Center to Reduce Cancer Health Disparities, NCI

8:35 a.m.

Minority and Underserved Accrual to a New Generation of Clinical Trials

Worta McCaskill-Stevens, M.D., M.S., Division of Cancer Prevention, NCI

9:00 a.m.

Advancing Diversity in Clinical Trials: Observations, Obstacles and Opportunities to Reduce Disparities

Vanessa Sheppard, Ph.D., Virginia Commonwealth University

9:25 a.m.

Identifying Barriers and Developing Solutions to Equity and Inclusion in CCR Clinical Trials: The Work of the Clinical Trials Diversity, Equity and Inclusion Committee

Terri Armstrong, Ph.D., ANP-CB, FAAN, FAANP, Center for Cancer Research, NCI

SESSION 2 Keynote Lecture

Chair: Jongeun Rhee, Sc.D., M.S., Division of Cancer Epidemiology & Genetics, NCI

9:40 a.m.

Health Equity Matters: The Power of REHAB and Cultural Competence and their Role in Health Equity

Loriana Hernandez-Aldama, ArmorUp for LIFE

SESSION 3 Keynote Lecture

Chair: Sheila Rajagopal, M.D., M.P.H., M.Sc., Center for Cancer Research, NCI

10:10 a.m.

Advancing Patient-Centered Innovation to Improve Equity and Outcomes

Sylvie Leotin, CEO of Equify Health

10:40 a.m.

Coffee Break

SESSION 4 **Keynote Lecture**

Chair: Stefan Ambs, Ph.D., M.P.H., Center for Cancer Research, NCI

10:50 a.m.

**Investing into STEM Programs and Data Science Literacy at HBCUs:
The Role of Industry Partnerships**

Chad Womack, Ph.D., United Negro College Fund

SESSION 5 **Cancer Control Research in Persistent Poverty Areas**

Chair: Shobha Srinivasan, Ph.D., Division of Cancer Control & Population Sciences, NCI

11:20 a.m.

Overview of Persistent Poverty: Definitions and Areas

Shobha Srinivasan, Ph.D., Division of Cancer Control & Population Sciences, NCI

11:25 a.m.

**County-Level Persistent Poverty: Epidemiological Evidence for Disparities
Across the Cancer Control Continuum**

Jennifer Moss, Ph.D., Pennsylvania State College of Medicine

11:35 a.m.

**SEER Cancer Registry Data with Census-tract Attributes – Including
Persistent Poverty, SES Indices and Measures of Rurality**

Kathy Cronin, Ph.D., M.P.H., Division of Cancer Control and Population Sciences, NCI

11:45 a.m.

Panel Discussion

12:10 p.m.

Lunch

SESSION 6 **Abstract Driven Short Talks**

Chair: Choi Jiyeon, Ph.D., M.S., Division of Cancer Epidemiology & Genetics, NCI

1:00 p.m.

**Evaluating the Relationship Between County-Level Structural Racism and Black-White
Disparities in Treatment Delay Among Females Diagnosed with Early-Stage Breast Cancer**

Bradford Jackson, Ph.D., University of North Carolina at Chapel Hill

1:15 p.m.

The Effect of Exposure to Neighborhood Violence on Stress Response and Lung Cancer

Sage Kim, Ph.D., School of Public Health, University of Illinois Chicago

1:30 p.m.

Addressing Cancer Care Disparities in Sexual and Gender Minority Patients

Ruta Rangel, M.S., George Washington University

1:45 p.m.

**Quantifying Sociodemographic Disparities in Airborne Exposure to
Industrial Emissions of Probable Carcinogens Across the United States**

Jessica Madrigal, Ph.D., M.S., Division of Cancer Epidemiology & Genetics, NCI

SESSION 7 **Structural Racism: What it is and How it Contributes to Cancer Disparities**

Chair: Brittany Lord, Ph.D., M.P.H., M.S., Division of Cancer Epidemiology & Genetics, NCI

2:00 p.m.

**Transdisciplinary Approaches to Measuring Social and Structural Determinants
of Cancer Health Disparities**

Chanita Hughes-Halbert, Ph.D., University of Southern California

2:25 p.m.

Studying Structural and Social Drivers of Health in Cancer Health Disparities Research

Scarlett Lin Gomez, Ph.D., M.P.H., University of California San Francisco

2:50 p.m.

**Place, Race, and Racism: Epidemiologic Approaches to Achieving Justice
in Breast Cancer Outcomes**

Lauren McCullough, Ph.D., M.S.P.H., Emory University

3:15 p.m.

Break

SESSION 8 Influence of Ancestry and the Environment on Tumor Biology

Chair: Sheila Rajagopal, M.D., M.P.H., M.Sc., Center for Cancer Research, NCI

3:30 p.m.

Scaling Breast Cancer Disparities Research from Molecules to Communities

Melissa Troester, Ph.D., M.P.H., University of North Carolina at Chapel Hill

3:55 p.m.

Using Quantified Genetic Ancestry in Cancer Disparities Research

Rachel Martini, Ph.D., Weill Cornell Medicine

SESSION 9 Using Epidemiologic Methods to Improve Health Disparities Research

Chair: Wayne Lawrence, Dr.P.H., M.P.H., Division of Cancer Epidemiology & Genetics, NCI

4:20 p.m.

Breaking Down Barriers: Using Epidemiology to Address Health Disparities

Jasmine McDonald, Ph.D., Mailman School of Public Health, Columbia University

4:45 p.m.

Back to Basics: Centering Cancer Health Equity Using Epidemiologic Methods

Mya Roberson, Ph.D., M.S.P.H., University of North Carolina at Chapel Hill

5:10 p.m.

Adjourn for the day

WEDNESDAY, APRIL 5, 2023

SESSION 10 Keynote Lecture

Chair: Sheila Rajagopal, M.D., M.P.H., M.Sc., Center for Cancer Research, NCI

8:30 a.m.

Applying a Global Lens to Cancer Health Equity

Satish Gopal, M.D., M.P.H., Center for Global Health, NCI

SESSION 11 Health Disparities in the LGBTQ+ Community: From Measuring Sex, Gender Identity and Sexual Orientation to Intervention

Chair: Ann Geiger, Ph.D., M.P.H., Division of Cancer Control & Population Sciences, NCI

9:00 a.m.

Introduction

Ann Geiger, Ph.D., M.P.H., Division of Cancer Control & Population Sciences, NCI

9:10 a.m.

Cancer Risk in LGBTQIA+ Populations

Sarah Jackson, Ph.D., Division of Cancer Epidemiology and Genetics, NCI

9:25 a.m.

Mitigating Barriers to Cancer Clinical Trials for Transgender People to Promote Justice and Data Accuracy

Ash Alpert, M.D., MFA, Brown University School of Public Health

9:40 a.m.

Cancer Care in LGBTQIA+ Populations: Where Are We and Where Can We Go?

Megan Mullins, Ph.D., The University of Texas Southwestern Medical Center

9:55 a.m.

Panel Discussion

10:15 a.m.

Break

SESSION 12 Cancer Disparity Research in the NCI Intramural Program I

Chair: Alexandra Harris, Ph.D., M.P.H., M.S., Division of Cancer Epidemiology and Genetics, NCI

10:30 a.m.

The Impact of Neighborhood-level Factors on the DNA Methylome in Breast Cancer Disparities

Brittany Lord, Ph.D., M.P.H., M.S., Division of Cancer Epidemiology & Genetics, NCI

10:55 a.m.

Cancer Treatment Inequities in People Living with HIV in the United States, 2001-2019

Jennifer McGee-Avila, Ph.D., M.P.H., C.H.E.S., C.P.H., Division of Cancer Epidemiology & Genetics, NCI

11:20 a.m.

Chromatin Accessibility Landscape of Human Triple-Negative Breast Cancer Cell Lines Reveals Variation by Patient Donor Ancestry

Alexandra Harris, Ph.D., M.P.H., Division of Cancer Epidemiology & Genetics, NCI

11:45 a.m.

Lunch

12:30 p.m.

Poster Session

SESSION 13 Cancer Disparity Research in the NCI Intramural Program II

Chair: Constanza Camargo, Ph.D., Division of Cancer Epidemiology & Genetics, NCI

2:00 p.m.

The DCEG Portfolio for Health Disparity Research and Some Future Plans

Anil Chaturvedi, Ph.D., Division of Cancer Epidemiology & Genetics, NCI

Barry Graubard, Ph.D., Division of Cancer Epidemiology & Genetics, NCI

2:25 p.m.

Trends in Cancer Mortality Among Black Individuals in the United States

Wayne Lawrence, Dr.P.H., M.P.H., Division of Cancer Epidemiology & Genetics, NCI

2:50 p.m.

Breast Cancer Survivorship Inequities Among Asian American, Native Hawaiian, and Other Pacific Islander Women

Jacqueline B. Vo, Ph.D., R.N., M.P.H., Division of Cancer Epidemiology & Genetics, NCI

SESSION 14 The Future Role of Telemedicine in Overcoming Cancer Health Disparities in the United States

Chair: Stefan Ambs, Ph.D., M.P.H., Center for Cancer Research, NCI

3:15 p.m.

Telehealth to Improve Cancer Control and Care Delivery in Underserved Areas

Debra Friedman, M.D., M.S., Vanderbilt University Medical Center

3:40 p.m.

Telemedicine Engagement to Reduce Disparities in Care for Cancer Patients

Josephine Feliciano, M.D., The Johns Hopkins University School of Medicine

SESSION 15 Policy Panel Discussion: Racism as a Driver of Cancer Health Disparities. What Do We Know and How Can Research Make a Difference and Provide Solutions?

Chair: Brenda Adjei, Ed.D., M.P.A., Division of Cancer Control & Population Sciences, NCI

4:10 p.m.

Chanita Hughes-Halbert, Ph.D.,

USC Norris Comprehensive Cancer Center

Scarlett Lin Gomez, Ph.D., M.P.H.

University of California San Francisco

Lauren McCullough, Ph.D., M.S.P.H.

Emory University, Rollins School of Public Health

Robert Winn, M.D.

Virginia Commonwealth University Massey Cancer Center

5:10 p.m.

Concluding Remarks

Glenn Merlino, Ph.D., Scientific Director for Basic Research, Center for Cancer Research, National Cancer Institute, NIH

Oral Presenter

Abstract Author List

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ORAL PRESENTATION 1

EVALUATING THE RELATIONSHIP BETWEEN COUNTY-LEVEL STRUCTURAL RACISM AND BLACK-WHITE DISPARITIES IN TREATMENT DELAY AMONG FEMALES DIAGNOSED WITH EARLY STAGE BREAST CANCER

JACKSON BE¹, KUO TM¹, BAGGETT CB^{1,2}, YANGUELA J³, LEBLANC MR^{1,4}, GREEN L¹, WHEELER SB^{1,3}, and REEDER-HAYES KE^{1,5}

¹Lineberger Comprehensive Cancer Center, University of North Carolina-Chapel Hill

²Department of Epidemiology, UNC Gillings School of Public Health

³Department of Health Policy and Management, UNC Gillings School of Global Public Health

⁴School of Nursing, University of North Carolina-Chapel Hill

⁵Division of Oncology, University of North Carolina-Chapel Hill

Background: Structural racism is multifaceted and both impacts and is impacted by several social determinants of health. Many studies represent race/racism using a single variable, potentially missing out on its multidimensionality. We sought to adapt a multidimensional measure of structural racism to cancer outcomes research and evaluate the association with treatment delay among Black and White early stage breast cancer patients.

Methods: We identified, insured, self-identified Black and White, stage I-III breast cancer patients who received initial treatment within the first year of diagnosis using North Carolina Central Cancer Registry data from 2003-2018. To construct the structural racism score, we measured county-level performance across five domains from census data (Family & Social Support, Education, Employment, Income, and Health) separately for Black and White populations. The ratio of Black to White performance was then min-max scaled (0-100) and averaged to estimate each county's degree of structural racism, where higher scores suggest larger gaps between Black and White residents within the county. Our primary outcome was treatment delay (surgery or chemotherapy) greater than 60 days after diagnosis. Given our hypothesis that structural racism would affect Black and White populations differently, we assessed the interaction between race and structural racism with treatment delay. We estimated odds ratios (OR) and 95% confidence intervals (CI) for the associations with treatment delay using hierarchical logistic regression.

Results: Our analytic cohort comprised 25,905 White and 6,190 Black patients. In our multivariable model we found significant interaction between race and county-level structural racism ($P < 0.0001$). After adjusting for age, hormone receptor status, insurance, stage, rurality, distance to care, and region, we found a statistically significant association between 10 unit increases in county-level structural racism and treatment delay for Black patients (OR=1.30; 95%CI: 1.08-1.56) but not White patients (OR=1.05; 95%CI: 0.93-1.20). Racial disparity (Black vs White) in treatment delay increased as structural racism score increased: no difference at the lowest structural racism scores (OR=1.07; 95%CI: 0.86-1.58), but significant disparity at the median (OR=1.51; 95%CI: 1.33-1.70) and highest structural racism scores (OR=2.52; 95%CI: 1.91-3.33).

Discussion: Area level structural racism impacts Black and White patients differently, where higher levels of structural racism yielded greater racial disparity in treatment delay. Our findings point toward the potential benefit of policy interventions on area-level social determinants of health to address racial disparities. This novel adaptation of structural racism may be useful in health disparities research in oncology, but studies to evaluate its properties with other outcomes are warranted.

ORAL PRESENTATION 2

THE EFFECT OF EXPOSURE TO NEIGHBORHOOD VIOLENCE ON STRESS RESPONSE AND LUNG CANCER

KIM S¹, MAHMOUD AM², BENDINSKAS K³, MATTHEWS AP⁴, MADAK-ERDOGAN Z⁵

¹School of Public Health, University of Illinois Chicago, Chicago, Illinois, USA

²Department of Medicine, Division of Endocrinology, University of Illinois Chicago, Chicago, Illinois, USA

³Department of Chemistry, State University of New York, Oswego, New York, USA

⁴College of Nursing, Columbia University, New York, New York, USA

⁵College of Agricultural, Consumer and Environmental Sciences, University of Illinois Urbana-Champaign, USA

Despite the lower prevalence and frequency of smoking, lung cancer disparities persist among Black Americans. Chronic exposure to social stressors, such as high crime and violence, has downstream physiological stress responses, which may contribute to the risk of developing lung cancer. Thus, we explored the relationships between neighborhood violence, hair cortisol concentration, and lung cancer at the neighborhood and individual levels.

We utilized electronic medical records of patients who received a diagnostic test for lung cancer from an academic medical center in Chicago. Patient addresses were geocoded, and neighborhood measures were appended. We examined the unique contribution of individual and neighborhood-level variables on the risk of developing lung cancer. We then extrapolated lung cancer risks to the population of Chicago using a synthetic population.

We also recruited Black men above 45 years of age through 4 barbershops located in predominantly Black communities in Chicago. Participants completed survey questions concerning perceived stress, Post traumatic stress disorder, discrimination experiences, fear of crime, exposure to violence, social support, community quality, and collective efficacy. We also collected hair samples from corresponding patients and examined cortisol concentration as a measure of response to stress.

Of the 7,255 unique patient records included in the analysis, 9.8% were diagnosed with lung cancer. A higher proportion of Black patients were diagnosed with lung cancer than White and Hispanic patients. Patients who were 60 and older, who were smokers and were living in neighborhoods with high homicide rates, had the highest likelihood of being diagnosed with lung cancer. Living in neighborhood areas with high homicide rates increased the odds of developing lung cancer by 31%, controlling for race/ethnicity, sex, smoking history, and age.

Furthermore, of the 128 participants, the level of hair cortisol concentration was significantly higher among those who lived in neighborhoods with the top 25th percentile homicide rates compared with those who lived in neighborhoods with the lowest 25th percentile homicide rates, controlling for age, obesity, smoking status, education, marital status, and employment.

Exposure to neighborhood violence increased the risk of developing lung cancer in our study. Despite relatively lower smoking rates, a greater proportion of Black residents reside in high-crime neighborhoods, which may explain the increased risk of lung cancer in Black communities. In conclusion, neighborhood context is a significant factor that needs to be considered in lung cancer screening guidelines.

ORAL PRESENTATION 3

ADDRESSING CANCER CARE DISPARITIES IN SEXUAL AND GENDER MINORITY PATIENTS

RANGEL R,^{1,2} KERCH S,¹ and PRATT-CHAPMAN, M.L.¹⁻³

¹George Washington University Cancer Center

²Milken Institute School of Public Health, George Washington University

³Department of Medicine, School of Medicine & Health Sciences, George Washington University

Background: Sexual and gender minorities (SGM) have unique healthcare needs that often remain unmet by healthcare professionals. Reluctance to seek care due to stigma and experienced or anticipated discrimination may perpetuate health disparities and result in detrimental health outcomes, particularly in cancer care. To reduce health disparities in cancer care for SGM patients, the George Washington University Cancer Center developed a training for healthcare professionals to improve competence in providing care and enhance the quality of service for advancing equitable, accessible and patient-centered cancer care through improved patient-provider communication, cultural sensitivity, shared decision-making, and attention to health literacy. The Together, Equitable, Accessible, Meaningful (TEAM) Cancer Care for SGM Patients Training consisted of asynchronous and synchronous sessions.

Methods: Participants were required to complete asynchronous lectures (total of 2.5 hrs) and attend twelve 1-hour synchronous sessions hosted by subject matter experts. The participants completed pre- and post-tests based on Queering Individual and Relational Skills and Knowledge Scales (QUIRKS)-Provider survey to assess changes in providers' confidence, attitudes, knowledge, and behaviors. The respondents were asked to use 5-point Likert scale to indicate their agreement with the statements from 0 = strongly agree to 4 = strongly disagree. The teams created action plans and their progress was assessed at three and six months post-training. Patient experience was assessed using independent sample t-tests comparing baseline data to data at 26 weeks.

Results: Seven teams (27 participants) from organizations across six US states completed the training. Paired sample t-tests of QUIRKS-Provider factors were conducted to assess the change from pre- and post-intervention. Statistically significant improvements were found in four of the five factors: Environmental Cues ($t(21) = 2.56, p = .018$), Knowledge ($t(21) = 2.15, p = .043$), Clinical Preparedness ($t(7) = 3.89, p = .006$), Clinical Behaviors ($t(21) = 2.48, p = .022$). The Attitudes factor did not show any significant improvement between pre- and post-assessments, possibly due to strong affirming attitudes at baseline. Regarding patient experience, n=90 completed the baseline surveys and 187 the post-intervention surveys; however, the results were null. All seven teams reported progress at three and six months; resources and buy-in from leadership were noted as facilitators for advancing the organizational changes, but limited staff engagement remained a barrier.

Conclusion: TEAM SGM is an effective, comprehensive training to build capacity for cancer care professionals seeking to provide equitable patient-centered care to sexual and gender minorities. Additional research is needed to understand organizational changes' impact on patient experience.

ORAL PRESENTATION 4

QUANTIFYING SOCIODEMOGRAPHIC DISPARITIES IN AIRBORNE EXPOSURE TO INDUSTRIAL EMISSIONS OF PROBABLE CARCINOGENS ACROSS THE UNITED STATES

Madrigal J¹, Flory A², Fisher J¹, WARd M¹, Jones R¹

¹Occupational and Environmental Epidemiology Branch, Division of Cancer Epidemiology and Genetics, National Cancer Institute, National Institutes of Health, Department of Health and Human Services, Rockville, Maryland, USA

²Westat Inc., Rockville, MD, USA

Background/Aim

Few studies have investigated how airborne carcinogenic exposures are distributed among the general population. We previously demonstrated sociodemographic disparities in airborne exposure to known carcinogens in the United States (US). Here, we describe disparities in exposure to industrial emissions of probable carcinogens among sociodemographic groups across the US.

Methods

We linked the US Environmental Protection Agency's 2018 Toxics Release Inventory to sociodemographic characteristics in 2010 Census tracts. Tract characteristics included total population, educational attainment, Yost deprivation index, family poverty, and percentages of Black, Hispanic, Asian, and White populations. We considered the tract population to be exposed if there were emissions of ≥ 1 of the 33 probable carcinogens as classified by the International Agency for Research on Cancer. We estimated odds ratios (ORs) and 95% confidence intervals (CIs) using multinomial logistic regression, comparing Q5 to zero air emissions (sum of all chemicals and for 8 individual chemicals emitted in ≥ 50 tracts) per 10% increase in population characteristics.

Results

An estimated 16.3 million people lived in tracts with 4,530 facilities that emitted 871 million pounds of probable carcinogens. The odds of living in the highest exposed (Q5) tracts compared to unexposed were greater for Black (OR=1.05, 95% CI=1.01-1.09) and Hispanic populations (OR=1.09, 95% CI=1.05-1.13), whereas the pattern was inverse for White (OR=0.94, 95% CI=0.92-0.97) and Asian (OR=0.83, 95% CI=0.69-1.01) populations. The odds of being highly exposed were greater for populations with low educational attainment (OR=1.33, 95% CI=1.25-1.40) and experiencing poverty (OR=1.21, 95% CI=1.14-1.28), overall and for Whites, Blacks, and Hispanics. These patterns persisted for creosote, lead, and styrene.

Conclusions

Our novel assessment demonstrates that potential exposure to airborne probable carcinogenic emissions is not homogeneously distributed among the US population and that differences are driven by socioeconomic status. These findings indicate the importance of considering joint effects of sociodemographic and environmental factors when evaluating associated health disparities.

Poster Presenter

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POSTER 1

THE ROLE OF CLINICAL DECISION SUPPORT SYSTEMS IN REDUCING CANCER DIAGNOSIS DISPARITIES FROM PATIENTS WITH SOCIO-ECONOMIC DEPRIVATION

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BACKGROUND: There is substantial evidence that socio-economic deprivation affects outcomes for patients with cancer, where the highest areas of deprivation have the worst cancer outcomes. Whilst the underlying causes of this is likely multifactorial, clinical decision support systems (CDSS) in primary care have not yet been tested to narrow the gap.

C the Signs is a CDSS which uses artificial intelligence, mapped with the latest evidence and guidance, to assist healthcare professionals in identifying patients at risk of cancer and determining the most appropriate pathway for diagnosis.

AIM: The aim of this study is to establish if CDSSs can improve cancer detection in primary care in an area of high socio-economic deprivation.

METHOD: A retrospective observational study was conducted in the National Health Service in England within the region of South Yorkshire. South Yorkshire is in the top quartile of most deprived areas in England according to the Index of Multiple Deprivation 2019. The 106 practices using the C the Signs CDSS between June 6th 2021 and March 31st 2022 were analyzed, with the rest of the practices in the area acting as controls (78 practices). Two outcome measures were evaluated through independently published Public Health England (PHE) data: cancer detection in primary care (the percentage of patients diagnosed with cancer in primary care – a surrogate marker which correlates strongly with early stage detection), and conversion rate (the percentage of specialist cancer referrals from patients who turned out to have cancer – a measure of healthcare resource activity). Cancer detection and conversion rates were compared to the previous year (without access to C the Signs).

RESULTS: In practices using the C the Signs CDSS, cancer detection rates significantly improved from 48.6% to 50.8% ($p < 0.05$). This was compared to practices not using the CDSS seeing their cancer detection rate fall from 48.2% in 2020-21 to 47.7% in 2021-22. Despite an increase in cancer detection, the conversion rate for practices using the CDSS remained stable at 7.1%. However, practices not using C the Signs saw a fall in conversion rates from 7.3% to 7.0% in 2021-22.

CONCLUSION: This study provides early evidence that CDSS platforms like C the Signs can help to reduce the disparities in cancer outcomes in socioeconomic deprived communities by identifying patients in primary care early and without increasing the burden on healthcare resources. Further research is needed to confirm true stage shift.

POSTER 2

RARE ENDOBRONCHIAL PRESENTATION OF DIFFUSE LARGE B CELL LYMPHOMA IN A RURAL MIDWESTERN PATIENT

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We present a case of a rural, underserved patient from Northwest Missouri with an extremely unusual presentation of diffuse Large B-Cell Lymphoma (DLBCL) in an endobronchial region. DLBCL in an endobronchial region is so rare that existing literature does not report the statistical prevalence (1, 2). This case is of particular interest in the context of cancer disparities given that oncology literature documents survival differences in lymphoma patients based on place of residence and treatment. (3, 4) This patient is a 68-year-old Caucasian male with an income level below the regional poverty line, and who has cardiovascular comorbidities and a 72-pack-year smoking history. He currently resides alone in trailer park housing with minimal local family support. Key interventional aspects that equalize rural patient oncology outcomes include proper assessment, diagnosis, and prompt treatment of unusual or unlooked-for presentations of disease. Prior to the diagnosis, the patient presented to the hospital complaining of a cough, shortness of breath, nausea, and generalized weakness. The chest X-ray and CT revealed a suspicious consolidation in the left upper lobe; a follow-up bronchoscopy revealed an endobronchial lesion in the left lingulae. A biopsy of the tumor confirmed a rare endobronchial lymphoma and an active diagnosis of DLBCL. Following standard treatment with Rituxan-CVP, the patient is currently in remission and being treated for a lingering comorbid fungal lung infection consequent to his immunosuppressed state. His case represents a successful intervention in the rural, underserved Northwestern Missouri region of an exceedingly rare lymphoma presentation.

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POSTER 3

ADDRESSING COLORECTAL CANCER PREVALENCE AND SCREENING DISPARITIES IN ARKANSAS: A COMPUTATIONAL FRAMEWORK TOWARDS TARGETED PERSONALIZED INTERVENTIONS.

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High prevalence of colorectal cancer (CRC) is a major public health issue in Arkansas (AR). We have analyzed BRFSS, Claims and AR Cancer Registry data to estimate incidence rates, screening rates and associated risk factors in Arkansas from 2014 to 2020. Spatiotemporal modeling highlighted specific clusters and hotspots, particularly in the eastern delta region of the state. Significant disparities were associated with race, age, gender and location in incidence rates and screening rates. Age-adjusted mortality rates were higher in males, particularly among the blacks. Social Determinants of Health (SDOH) factors like education level, household income, area deprivation index were correlated with higher CRC incidences, advanced stage and lower screening rates. However, our interest lies in examining whether disparities exist in factors beyond what may be attributable to differences in socioeconomic status, such as modifiable health and behavioral risk factors. So far only neighborhood level measures of SDOH factors have been considered for CRC predictive models. Towards our two-pronged objective of 1) identifying modifiable behavioral risk factors and 2) initiating targeted, personalized interventions, we are creating a computational framework of individualized social and behavioral determinants of health (SBDOH) resource that will be contextualized with a neighborhood component, will be current, on-demand, semantically mapped, interoperable, adaptable and equipped with a deep-learning model based missing value and bias mitigation component. Preliminary data will be presented on this individualized SBDOH framework. In partnership with community stakeholders, we plan to use this framework to target individuals at risk for CRC incidence in the counties within the catchment area of the University of Arkansas for Medical Sciences, for health literacy campaigns.

POSTER 4

RACIAL AND DEMOGRAPHIC CONTRIBUTORS TO HEALTH-RELATED QUALITY OF LIFE DISPARITIES AMONG ENDOMETRIAL CANCER SURVIVORS

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Purpose: Black-White endometrial cancer mortality disparities are well-established and continue to widen over time. Obesity-related comorbidities and sociodemographics can contribute to racial disparities in mortality, and potential disparities in health-related quality of life (HRQoL). We examined the influence of individual-level factors on HRQoL among endometrial cancer survivors.

Methods: The Carolina Endometrial Cancer Study is a prospective, population-based cohort that enrolls women recently diagnosed with endometrial cancer across North Carolina. Participants complete questionnaires about key demographic, lifestyle, HRQoL, and medical characteristics. Sociodemographic survivor characteristics included race, income, insurance coverage type at diagnosis, education, and body mass index (BMI). HRQoL was assessed overall and across five subscales (physical, social/family, emotional, and functional well-being and endometrial cancer specific) using the Functional Assessment for Cancer Therapy-Endometrial (FACT-En) questionnaire, where higher scores indicate better quality of life.

Results: Among 463 endometrial cancer survivors, 31% were non-Hispanic Black (NHB). Mean age at diagnosis was 61.2 years (SD=10.6) and time from cancer diagnosis was 10.9 months (SD=8.5). Survivors had a high quality of life overall (139.7 out of a possible 172 points) and sub-scale specific scores were on the favorable half of the possible range as well. Similar overall and sub-scale specific FACT-En scores were observed by race (FACT-En overall score: 141.4 among women versus 139.3 among Black women, $p=0.4$). Overall and sub-scale specific HRQoL tended to be higher among survivors with higher income ($p=0.003$), who had Medicare (FACT-En overall score: 143.7, compared to no insurance (127.2), private insurance (140.2) or government-sponsored insurance inclusive of Medicaid and military (127.9, $p<0.001$), and higher educational levels ($p<0.001$). In comparison to normal weight BMI categories, or Class I, II, or III obesity, overall HRQoL was highest among overweight survivors (defined as BMI between 25 and 29.9 kg/m², $p=0.001$), although this pattern was not consistent across sub-scale specific HRQoL. Notably, overweight survivors had higher HRQoL on physical (FACT-En score: 24.1 out of a possible 28 points) and emotional (FACT-En score: 20.6 out of a possible 24 points) well-being subscales than normal or obese BMI survivors.

Conclusions: In our sample, there was limited evidence of overall and sub-scale specific HRQoL disparities by racial identity. Yet, there is evidence of beneficial associations with overweight BMI and more privileged backgrounds (high income, education, and insurance coverage) for HRQoL overall and across sub-scales.

POSTER 5

EXPLORING QUALITY OF LIFE EXPERIENCES AND CONCERNS OF BLACK BREAST CANCER SURVIVORS: A NARRATIVE APPROACH

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Black breast cancer survivors (BCS) in comparison with White BCS are more likely to experience suboptimal quality of life (QoL). QoL is a multi-dimensional concept that focuses on different aspects of wellbeing (e.g., emotional wellbeing). Evidence suggests that physical activity (PA) can improve QoL among cancer survivors. However, very few studies have investigated the QoL experiences (e.g., PA can improve QoL) as well as the QoL concerns (e.g., sexual dysfunction) of Black BCS. The purpose of this study was to explore the QoL experiences and QoL concerns of Black BCS. Primary data was collected in semi-structured interviews and analyzed using a thematic analysis. A detailed account of a group of themes within the data instead of a rich description of the entire dataset were provided to address the study purpose. A narrative approach was used to better understand the research topic among Black women with a personal history of breast cancer. This qualitative method explores detailed stories or life experiences (e.g., spoken word or personal reflections of a major event) of a small group of people. Ferrell's Conceptual Framework on QoL in Breast Cancer was used to guide the development of the interview questions and codes. There were 10 Black BCS, averaging 58 years of age. About 40% of the BCS were divorced or separated. More than half of the BCS (90%) had at least some college education. Two coders achieved a moderate level of agreement (i.e., Kappa) of 0.77. Five major themes emerged: defining QoL (what QoL means to them), behavioral changes (e.g., altering behaviors due to cancer or other major life events), phases of cancer (e.g., breast cancer diagnosis), QoL experiences and factors affecting QoL (e.g., the influence of breast cancer on social wellbeing), and impactful statements from cancer survivors (other meaningful information shared by the participants). The survivors reported multiple QoL concerns such as rapid aging, fear of recurrence, and financial challenges. Most participants believed that PA could improve their QoL. The survivors expressed the benefits of engaging in PA. The findings on the QoL experiences and QoL concerns warrant supportive care interventions and increased education efforts to target the needs and health behaviors of Black BCS.

POSTER 6

HEARING LOSS & CANCER: ASSESSING THE MODERATION OF RACE USING THE *NIH ALL OF US* DATASET

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Background: Approximately 37.5 million US adults over the age of 18 have some level of hearing loss. People with hearing loss often experience inequities related to cancer screenings and cancer related information. Previous research has shown low healthcare utilization among adults with hearing loss, especially related to cancer screenings. Similar patterns have been found amongst racial minority groups. However, there is a dearth of work conducted within individuals who have intersectional identities of hearing loss and racial or gender minority. The goal of this study is to assess cancer incidence among adults with intersectional identities of hearing loss and racial/ethnic identities. The purpose of this study is to expand understanding of how cancer diagnosis and racial minority identity can impact healthcare experience for adults with hearing loss.

Methods: Lung cancer, prostate cancer, breast cancer and colorectal cancer are investigated in this study. The National Institutes of Health *All of Us* data set was used for this project. Survey and electronic medical record data will be utilized for analysis.

Results: The sample (N=329,070) includes n= 5,492 adults with hearing loss. Racial composition of the same is Black (n=67,897), Hispanic (n=60,535), White 172,753), Asian (n=10,747), and 10,979 who identify as other race. T-test was used for continuous variables, and fisher's exact test or Pearson's χ^2 test was used for categorical variables, to conduct bivariate analysis. Bivariate analysis indicates a significant relationship between hearing loss and the diagnosis of colorectal cancer and prostate cancer. Multiple logistic regression was conducted to analyze this relationship between hearing loss and cancer diagnosis after adjusting age, gender, race, education, and Income. Likelihood ratio tests show that race is not a moderator for breast cancer (p=0.757), colorectal cancer (p=0.104), prostate cancer (p=0.156), and lung cancer(p=0.323), so race is treated as a covariate. People with hearing loss are more likely to develop colorectal cancer [OR, 1.38; 95% CI, 1.01-1.85] and less likely to develop lung cancer [OR, 0.68; 95% CI, 0.48-0.94] compared to people without hearing loss.

Conclusion: Understanding more about these relationships can help public health practitioners and clinicians strategize the most meaningful ways to increase cancer screenings and reduce risk of cancer among racial minorities with hearing loss. Results of this study will help inform medical and public health practitioners about cancer rates among the hearing loss population.

POSTER 7

MIDDLE-AGED CENTRAL AMERICAN MEN'S PERCEPTIONS OF A HEALTHY BODY WEIGHT, ITS RELATION TO CHRONIC DISEASES, AND FACTORS THAT INFLUENCE AND INCREASE AWARENESS OF WEIGHT GAIN: QUALITATIVE FINDINGS

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Objective: To examine middle-aged overweight and obese Central American immigrant men's perceptions related to the meaning of healthy body weight and the role weight management plays in the development of chronic diseases.

Methods: In-depth qualitative interviews were conducted with low-income, middle-aged, overweight and obese Central American men (n=25) living in Washington D.C. in fall 2020. Participants were recruited from community centers, churches, and local fairs. Participants were asked to elicit thoughts related to: (a) the meaning of having a healthy weight, and (b) the role of weight management in the development of chronic diseases. Audio-recorded interviews were transcribed and content analyzed to identify themes using NVivo v12.

Results: Participants were low-income men with a mean age of 52.6±6.9 years who had resided in the U.S. for 23.7±10.2 years. They defined healthy weight as: (1) a balance between height and weight, (2) not carrying extra fat, (3) an absence of chronic diseases (i.e., diabetes, cardiovascular disease), and (4) having energy to exercise and engage in daily activities. They also reported being overweight or obese increased the risk of developing cardiovascular disease, diabetes, COVID, and death. Additionally, they discussed factors that influenced them to gain weight: (1) having an unbalanced diet and not engaging in physical activity, and (2) getting older. Finally, participants discussed factors that increased their awareness of their own weight status: (1) advice from doctors and (2) their clothes not fitting well.

Conclusion: Low-income, Central American immigrant men who were overweight or obese perceived healthy weight was related to having energy to carry on activities and not having chronic diseases. Participants seemed to be aware that an unbalanced diet and lack of physical activity caused weight gain, and that being overweight or obese increased the risk of developing chronic diseases. Interestingly, they did not discuss being overweight or obese could increase the risk of developing cancer.

Implications: While the link between overweight and obesity and the development of chronic diseases is well established, the literature is limited on overweight or obese Central American men's perspectives on having a healthy weight and its relation to chronic diseases. Health promotion interventions among Central American men should capitalize on their awareness of what constitutes a healthy weight, and the relation of a healthy weight and development of chronic diseases. Future research should examine perceptions of weight management for the prevention of cancer among Central American men.

POSTER 8

MEASURES OF AREA VULNERABILITY OR DEPRIVATION AND SYSTEMIC THERAPY RECEIPT AMONG OLDER US PATIENTS WITH METASTATIC RENAL CELL CARCINOMA FROM 2015-2019

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Disparities in receipt of systemic therapy have been previously reported in Medicare beneficiaries diagnosed with metastatic renal cell carcinoma (mRCC). However, in addition to individual-level factors, barriers to health care access may also be driven by local inequities in social determinants of health. In this study, we investigated the association between measures of area vulnerability or deprivation and mRCC systemic therapy utilization among Medicare beneficiaries from 2015-2019. Indices of Concentration at Extremes (ICEs), social vulnerability (SVIs) and deprivation indices (SDIs) were determined from census data and linked to patients at the county or zip code-level. A total of 15,407 patients met inclusion criteria. We examined claims from 2014-2020, categorizing by the first systemic therapy received within a year of diagnosis as follows: oral anti-cancer agent (OAA), immunotherapy (IO), other treatment, or no treatment. We calculated both county and zip code-level ICEs using population size, income and education inputs. We determined county-level SVIs based on criteria from the Center for Disease Control/Agency for Toxic Substances and Disease Registry (CDC/ATSDR) and the Office of Minority Health (OMH), dichotomizing SVIs by the 75th percentile. Both indices capture socioeconomic status, household composition, housing type, transportation, and minority/language status; however, the OMH SVI further accounts for variations in health care access and medical vulnerability. We further linked the Graham Center Social Deprivation Index (SDI) at the zip code-level. We used multinomial logistic regression models to assess the relationship between area ICEs, SVIs, or SDIs and mRCC systemic therapy usage, adjusting for race and ethnicity, sex, year of diagnosis, age, Kim claims-based frailty index, Elixhauser comorbidity score, metropolitan residential status, Medicare/Medicaid dual-eligibility, and Part D Low Income Subsidy eligibility. In unadjusted analyses, county-level SVIs and ICEs were not associated with receipt of any treatment (all $P \geq 0.01$), while zip code-level SDIs and race-related ICEs were associated with receipt of any treatment (all $P < 0.001$). In fully-adjusted models, none of the area measures were associated with receipt of any treatment or a specific type of treatment (all $P \geq 0.01$). Thus, area vulnerability or deprivation measures were not associated with systemic therapy utilization among Medicare beneficiaries diagnosed with mRCC from 2015-2019. While shown in other settings to impact health outcomes, area vulnerability measures do not impact treatment utilization for mRCC, an incurable and terminal illness.

POSTER 9

RACIAL AND ETHNIC DISPARITIES IN CERVICAL CANCER INCIDENCE, SURVIVAL AND MORTALITY BY HISTOLOGIC SUBTYPE

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Background: While Black women in the U.S. have a higher incidence of cervical cancer overall and cervical squamous cell carcinoma (SCC; approximately 68% of cases) compared to White women, they have a lower incidence of cervical adenocarcinoma (ADC; approximately 21% of cases). So far, no population-based study has explored whether mortality rates differ by histologic subtype and race/ethnicity. We conducted an integrated population-based analysis of subtype-specific cervical cancer incidence, survival and incidence-based mortality by race/ethnicity.

Methods: Using the most updated data from the Surveillance, Epidemiology and End Results (SEER) 21 and 18 registries, age-adjusted incidence and mortality rates with 95% confidence intervals stratified by histologic subtype and race/ethnicity were estimated and corrected for hysterectomy using hysterectomy prevalence estimates from the Behavioral Risk Factor Surveillance System. Incidence rates were further stratified by county-level socio-economic measures (estimated from the 2000 Census Bureau; household income, educational attainment, and family poverty) as a proxy for access to care and screening. 5-year relative survival was estimated using the Ederer II method and stratified by histologic subtype, race/ethnicity, and stage at diagnosis. All cases were reviewed by an expert pathologist to minimize misclassification.

Results: Black women had the highest hysterectomy-corrected rates of SCC (13.8), but lowest rates of ADC (2.0). SCC incidence rates were higher among counties with a lower median household income, higher percentage of families in poverty and lower percentage of women with a bachelor's degree among White, Black, Hispanic and Asian/Pacific Islander women, while ADC incidence rates did not vary substantially by these factors across most racial and ethnic groups. Black women had the highest mortality-rate and lowest 5-year relative survival overall and at every stage for SCC and ADC; particularly, Black women had poor survival for regional and distant stage ADC (37.6% and 9.2%, respectively).

Conclusions: Despite having lower incidence of ADC, Black women with ADC have higher mortality and lower survival compared to every other racial and ethnic group.

POSTER 10

FUNCTIONAL ANALYSES OF PAN-AFRICAN GENETIC VARIATION

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Human phenotypic diversity is vast, with a significant amount of its underlying genetic variation apportioned across human populations. Single nucleotide polymorphisms (SNPs), constituting approximately 0.5% of the genome, account for many of the differences between human populations. In this study, we generate a special subset of SNPs, referred to as ancestry informative markers (AIMs), to distinguish African populations from other continental groups and, subsequently, identify phenotypes/diseases enriched for these pan-African AIMs. Using data from the 1000 Genomes Project, highly informative African-based SNPs were identified using *AIMsetfinder* based on an Informativeness (In) estimate for the following population pairs; Africa vs. East Asia, Africa vs. South Asia, and Africa vs. Europe. We found that the populations were well-differentiated by visualizing the AIM sets using principal component analyses. Variant annotation using ANNOVAR revealed that over 80% of the AIMs are located in intronic and intergenic regions, whereas less than 5% were in exonic sequences. Analyses of the top pan-African AIMs showed them to be near genes that drive such diseases as malaria, acrodermatitis, dermatosparaxis, and lung disease, all previously found to prevail in African subpopulations. Overall, our study contributes to the existing pool of AIMs for African populations, provides a framework to study the genetic basis of population-specific disease pathways, identify potential selective targets, and acts as a starting point to explore the mutational landscape of understudied populations.

POSTER 11

MAMMOGRAPHY HISTORY AND OVERALL PRE-DIAGNOSTIC CARE UTILIZATION AS DETERMINANTS OF BREAST CANCER TUMOR CHARACTERISTICS AT DIAGNOSIS.

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Background: Inequitable access to preventive healthcare may contribute to disparities in breast cancer outcomes between Black and non-Black women. Our objective was to explore potential disparities in pre-diagnostic care utilization and mammography history, and their roles as determinants of tumor characteristics at diagnosis.

Methods: We leveraged data from phase 3 of the Carolina Breast Cancer Study (CBCS), a population-based cohort of women (n=2,998) diagnosed with invasive breast cancer between 2008 and 2013. Black and younger women (<50 years) were oversampled during randomized recruitment, such that equal numbers of Black/non-Black and older/younger were included. The two exposures of interest were assessed in the baseline survey. For care utilization, participants reported the setting where they usually received care in the 10 years before diagnosis, classified as either ambulatory care (primary/specialty) or emergency/non-ambulatory care (ER/urgent care/health department). For screening history, participants reported the number of mammograms received between ages 40-50 and 50+. Outcomes of interest were obtained by medical and pathology record abstraction. Logistic regression was used to evaluate associations between each healthcare exposure and tumor characteristics at diagnosis, and analyses were stratified by race and age group to assess for potential subgroup effects.

Results: Black women were likely to rely on emergency/non-ambulatory care group (17% vs 7%), and were more likely to be under-screened (43% vs 35%). Membership in each healthcare group was also associated with income, educational attainment, and census tract-level socioeconomic status. Advanced stage (3/4) at diagnosis was more common among the emergency care vs ambulatory group (OR= 2.6, 2.0-3.6) and among the under-screened vs screening-compliant group (OR= 3.1, 2.4-4.0). Significant associations were also observed for tumor size, grade, nodal status, and mode of cancer detection (observed lump vs mammogram). ORs were significant for both Black and non-Black women, although the screening effects were somewhat stronger in Black women. Finally, we found that effects of emergency care reliance were present in under-screened women (e.g., advanced stage OR= 2.4, 1.5-3.8) but not screening-compliant women (OR= 0.9, 0.4-2.2).

Conclusions: Accessibility of preventive health services (ambulatory care and screening) in the CBCS is linked to multiple socio-demographic characteristics and likely reflects the products of racism and other forms of structural discrimination. These healthcare patterns are associated with more aggressive breast cancer tumor characteristics. When stratified by screening history, differences in care utilization effects suggest intervention is most urgently needed among the “double exposed” group of women who lack either form of preventive care.

POSTER 12

ADDRESSING STRUCTURAL RACISM BY ASSESSING REPRESENTATION AND ENGAGEMENT WITHIN COMPREHENSIVE CANCER CONTROL COALITIONS

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Health inequities are rooted in our society because of centuries of systemic bias and racism. Structural and political injustices, alongside intersectional factors such as social class, race, gender, disability and sexual identity, lead to increased discrimination and power imbalances that affect population health outcomes. Comprehensive cancer control (CCC) coalitions are a promising mechanism to address health inequities and improve cancer outcomes for all persons. These multi-sectoral and multi-disciplinary collaboratives are uniquely positioned to address social determinants of health to advance health equity if they acknowledge the lived experiences of those they serve. As a Centers for Disease Control and Prevention (CDC) funded technical assistance and training (TAT) provider to National Comprehensive Cancer Control Program (NCCCP) grantees and their partners, the George Washington University Cancer Center (GWCC) sought to support cancer coalitions' work in addressing cancer health inequities by developing a tool to help coalitions understand, operate and implement activities to equitably engage different community perspectives in their efforts.

GWCC conducted a literature review of 32 articles, published between 2010 and 2021, focused on effective coalitions working to improve health-equity capacity and explored evidence-based strategies to incorporate representation and engagement principles into their operations. Cross-cutting themes were extracted from the literature and matched to validated engagement principles used to assess stakeholder engagement. Examples of themes include inter-sectoral collaboration, leadership diversity, recognition of power and privilege, sustainability and accountability.

Cross-cutting themes were translated into eleven equity-focused considerations paired with resources and questions to facilitate topical coalition conversations on representation and engagement. Additional frameworks and resources on priority populations were added to help coalitions further contextualize these considerations. Formatted into a tip sheet, titled "Considerations to Assess Representation and Engagement", this resource has been well received by users, sharing that the information is organized, approachable and timely for CCC coalitions as they implement their cancer control activities.

Effective CCC coalitions must strive to better represent and engage the communities they serve in order to dismantle power imbalances and address structural bias and racism. Tools such as this tip sheet packages health-equity principles into an accessible format for coalitions to use. As achieving health equity is a cyclical and evolving process, this tool can be adapted to each coalition's fluctuating priorities and needs. Future TAT activities to create an accompanying evaluation tool seeks to help coalitions easily apply these assessment considerations for coalition-wide improvements.

POSTER 13

ADDRESSING THE IMPORTANCE OF SEX AND GENDER DATA IN POPULATION-BASED CANCER REGISTRIES

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The lack of sexual orientation and gender identity (SOGI) data in population-based cancer registries limits efforts to produce unbiased estimates of cancer burden, monitor cancer trends and evaluate the impact of cancer control and prevention programs in populations whose sexual orientation, gender identity or expression, or reproductive development is characterized by non-binary or non-heteronormative constructs of sexual orientation, gender, and/or sex. In response to this critical data gap, the Sex/Gender Classification Workgroup under the North American Association of Central Cancer Registries (NAACCR) Uniform Data Standards committee was formed in November 2021 to review options for capturing Gender and Sex data in cancer registries. The goals of this presentation are to: 1) describe the Workgroup's process of reviewing and proposing an updated Sex data item and a Gender Identity data item to the NAACCR data dictionary, 2) discuss challenges and barriers to the adoption of national standards and approaches for data collection, 3) discuss strategies to encourage self-reporting of SOGI data in cancer centers, and 4) discuss potential limitations of using the new gender identity data item in cancer research and address research limitations resulting from not capturing sexual orientation data within cancer registries. The implementation of the Workgroup's proposed changes, currently under review, would necessitate strong, ongoing collaborations among national standard setters, cancer centers, and community stakeholders to facilitate future research on the burden of cancer in special populations with known risk factors and support equitable cancer care.

POSTER 14

“I WAS SCARED OF MONEY”: EARLY FINDINGS OF A QUALITATIVE STUDY ON THE EXPERIENCE OF FINANCIAL TOXICITY AMONG ARAB AMERICANS

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Purpose: Cancer-related financial toxicity, defined as the increased financial distress that patients and survivors experience, is understudied among Arab Americans. The purpose of this study was to use a community-based participatory research (CBPR) approach to gain a deeper understanding of Arab American cancer survivors' and caregivers' perspectives regarding the economic consequences of cancer.

Methods: Investigators conducted interviews in partnership with a well-established social service agency serving Arab Americans in Michigan and an affiliated Cancer Action Council (CAC). Eligible participants were 1) 21 or older, 2) identify as Arab American 3) reside in the metropolitan Detroit area 4) have received a cancer diagnosis within the past 5 years or be a cancer caregiver. We recruited ten individuals to participate in semi-structured interviews about their experiences with financial toxicity and cancer. Participants were recruited through referrals by the partner agency and CAC, advertisements in the local community, or through the Metropolitan Detroit Cancer Surveillance System (MDCSS). Interviews were conducted and recorded in both English and Arabic. Using qualitative rapid analysis strategies, we identified several themes describing the Arab American experience with financial hardships.

Results: Average length of time for the interviews were 30 minutes, with 80% in Arabic and 20% in English. Seven of the participants were survivors, with breast cancer being the most reported, and three were caregivers. Of the participants, eight were women and two were men. Around 80% of participants were on public insurance, while around 40% of participants reported feeling as if their insurance regardless of public or private did not offer extensive enough coverage. Commonly discussed themes were lifestyle changes due to changes in financial status (e.g., reducing expenses to bare minimum); out of pocket expenses; the importance of social support on both interpersonal and community levels to meet both personal and financial needs; stress and anxiety as it relates to treatment cost and the cancer itself; and the stigma of cancer in the Arab American community.

Conclusion: Our findings offer a starting point for understanding the impact of financial toxicity on Arab Americans, as participants discussed the financial burdens of a cancer diagnosis and the stress related to treatment and out of pocket costs, along with subsequent lifestyle changes. Future research and intervention development should consider tailoring financial interventions to the cultural and linguistic needs of the Arab community and incorporating them earlier in the cancer journey.

POSTER 15

EVALUATION OF DATA FROM THE FIRST 1.5 YEARS OF AN HPV VACCINATION VAN PROGRAM IN SOUTH CAROLINA, U.S.

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Human papillomavirus (HPV) infections are associated with at least six different types of cancer, which may be prevented by the HPV vaccine. The Medical University of South Carolina (MUSC) Hollings Cancer Center (HCC) and Department of Pediatrics leaders identified suboptimal rates of HPV vaccinations in rural and medically underserved communities in South Carolina (SC). To address this major public health problem in SC, they were granted funding from the HealthyMe/HealthySC (HMHSC) program and HCC to create a statewide community engagement-focused HPV Vaccination Van Program, which began in October of 2021. The Program provides HPV vaccinations and other childhood immunizations in school districts and HMHSC health clinics throughout SC, focusing on children aged 9–18 who are eligible for the U.S. Centers for Disease Control and Prevention’s Vaccines for Children Program. As of 8 February 2023, the Program administered vaccinations in 21 counties of SC to 596 participants, 258 of whom received HPV vaccinations. The HPV vaccine recipients were predominantly female (57.4%), aged 4–18 years (91.4%), and self-identified as White (38.3%), Black (37.1%), or Hispanic/Latino (15.1%). Most had Medicaid (49.8%) or no insurance coverage (27.5%). The Program is expected to expand as its relationships with SC’s school districts and other community partners grows. The Program provides a model for delivering mobile HPV vaccinations to rural children, thus reducing their cancer risk.

POSTER 16

IMPACT OF EMBEDDED NCI CANCER CENTER-FUNDED STAFF ON ACTIVITIES TO REDUCE DISPARITIES IN RURAL GEORGIA

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BACKGROUND. Embedding staff or services in healthcare/academic settings has previously been described, e.g., providing palliative care in emergency departments or continuous quality improvement. However, models of embedded staff focused on cancer disparities have been limited. This is the first report of an NCI-designated comprehensive cancer center (Winship) funding distant, rural, community-based organizations to hire and train staff who live and work in these same communities to implement evidence-based interventions (EBI) and navigate patients to screening and clinical trials. In Georgia overall, rural residents have less income, education, and insurance and experience higher rates of cancer incidence, mortality, obesity, and current smoking, with lower screening rates compared to the US and non-rural GA. Rurality has historically been an indicator/predictor of worse health outcomes, regardless of race, ethnicity, or access. AIMS. To address these continuing disparities, the Winship Cancer Institute initiated a pilot program in 2022 with two regional cancer coalitions that together serve 76 rural counties in Georgia, most of which are categorized as persistent poverty areas. Each region was funded with 2.0 FTE to deliver EBI and patient navigation. Aims were to investigate feasibility, acceptability, and implementation of embedded FTEs in rural regional cancer coalition settings.

RESULTS. Barriers to program success included: staff turnover in partner organizations (e.g., for screening), timely hiring of well-qualified individuals; and cancer center institutional administrative hesitancy to contract for services. Facilitators of positive outcomes included hiring dedicated staff; cancer center funding allowing expansion of reach throughout coalitions, ability to implement systems-based initiatives in workplaces/schools, and consistency of staffing to interface with partners (health departments, health systems). Combined results (July 2022-January 2023) of impact of embedded FTE for both rural regions were: PREVENTION UPTAKE: HPV vaccine-25; Smoking/vaping cessation-91; SCREENING UPTAKE: Breast-1178; Cervical-3613; Colorectal-1530; Prostate-349; Lung-69; Oral-156; Skin-40; HIV-41; NAVIGATION TO ACCESS TO CARE: cancer therapy-76; clinical trials-3; symptom management-31; survivorship care intervention-1488; survivorship nutrition intervention-262; CANCER EDUCATION AND OUTREACH: HPV education-22233; Smoking cessation education-19967; Vaping cessation education-19446; Smoking/vaping prevention education-26542; Obesity reduction-17403; Physical activity increase-23605; clinical trial education-1500; TRAINING: Community health workers, coalition members-96.

CONCLUSIONS. NCI Cancer Centers funding embedded FTEs with community partners in remote rural settings is feasible and acceptable. Embedded FTEs expand the reach of the cancer center through staff who have knowledge of the community, its resources, local partners, and community-specific solutions to address disparities. Evaluation of this pilot will potentially lead to expansion of embedded staff to include other rural regions.

POSTER 17

“HOW DID THAT MAKE YOU FEEL?” THE INFLUENCE OF EMOTIONS ELICITED BY A NARRATIVE VIDEO IN UPTAKE OF GENETIC COUNSELING

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Background: Latina women are less likely than their white counterparts to use genetic counseling (GC) for hereditary breast and ovarian cancer (HBOC), despite comparable risk. Narrative communication is a tool that can be leveraged to improve cancer prevention. This study examined the efficacy of a culturally-targeted narrative video on GC uptake and explored predictors for this behavior. Methods: Spanish-speaking Latina women at risk for HBOC were recruited through two community-based organizations (CBOs). All participants watched a culturally-targeted narrative video portraying the story of Rosa as she learns of her HBOC risk and attends GC session. Participants completed assessments immediately before and after watching the video and three-months later. All participants were navigated to free GC following the visit. We captured sociodemographic and clinical information, pre-post differences in psychosocial outcomes (e.g., knowledge), as well as emotions elicited by the video (e.g., *happiness, hope, calm, distress, sadness, and fear*), transportation, identification with the main character, and video acceptability. The primary outcome was uptake of GC at the three-month follow-up, which was characterized with descriptive statistics. A binary logistic regression was conducted to explore predictors of GC uptake. Results: Participants' (N=40) mean age was 47.35 years; all were born outside of the U.S. 27 (67.5%) participants attended a GC session. Participants who did not attend GC reported statistically significantly higher anguish after watching the video ($M=4.46, SD=3.73$) compared to those who did attend ($M=2.6, SD=2.34$) $F(1,38)=5.28, p=0.027$). The binary logistic regression model used three items ("*the video made me feel... anguish/content/sad*") and was statistically significant ($\chi^2=21.22; p=0.002$) and correctly identified 85% of cases. Participants who reported more anguish were less likely to attend GC. But, those who felt more content and sadder were more likely to attend GC. Participants who did not attend GC also reported higher emotional ambivalence. Those with high hope and high anguish were less likely to attend GC. However, if the predominant emotion was hope (vs. anguish), they were more likely to attend GC. There were no statistically significant differences between groups in increased knowledge.

Conclusions: Most participants attended GC after watching our culturally-targeted narrative video. Results were consistent with prior research supporting the importance of emotions as predictors of behavior. Findings highlight implications for health communication messaging. For instance, the need to promote positive emotions that supersede negative affect.

POSTER 18

Using Social Determinants of Health Data at Different Levels of Geographic Detail to Close the Gap in Health Disparities

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Introduction

Social and behavioral data is the key to closing the gap in cancer health disparities. It is, however, difficult to collect social and behavioral determinants of health (SBDOH) data. Gathering social and behavioral data is accomplished through (1) patient questionnaires, which are not standardized across institutions, or (2) appended aggregates at the community level. The value of appending SBDOH data is evident in many illnesses. We believe incorporating SBDOH data into medical records can also help address health disparities in cancer.

Method

To test this, we have appended the Area Deprivation Index (ADI) to 45k records of patients with cancer at the University of Arkansas for Medical Sciences (UAMS). The ADI is an aggregated measure built from census data, including income, education, employment, and housing quality, and can be freely downloaded. We also included rural-urban commuting area (RUCA) codes. We linked the data using the zip code of each individual.

Result

Our data indicate that a higher ADI is associated with a more significant prevalence of cancer in Arkansas among the UAMS patient population in rural and metropolitan areas. There were still low-risk areas where cancer patients were present, although in smaller numbers.

Discussion

This result demonstrates that we can identify areas of higher risk for cancer using ADI. However, studies show that a significant number of individuals in the regions that are considered low-risk are not free from health disparities. While community measures help identify at-risk groups or areas, what is needed is a way to identify specific individuals who are the most at risk in order to mitigate health disparities in cancer for everyone.

Conclusion

We can identify high-risk cancer areas using appended SBDOH data from external sources, but based on our results, adding more granular data elements could help to precisely identify at-risk individuals. We currently think of SBDOH data in very limited terms. There are a few broad concepts (i.e., income, education, employment), but there needs to be a more detailed and standardized set of elements at the individual and household levels. This work represents the first step in incorporating SBDOH data at multiple geographic levels into cancer patients' medical records. We have conducted preliminary work in developing a repeatable SBDOH enhancement process to generate interoperable, ontologically mapped social and behavioral determinants of health data at the individual and household levels to mitigate health disparities at an individual level.

POSTER 19

BARRIERS IN IMPLEMENTING THE FEDERAL SMOKE-FREE PUBLIC HOUSING RULE (HUD-SFPHR) AT CUNEY HOMES, HOUSTON'S LARGEST PUBLIC HOUSING SITE

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Background: Second-hand smoke exposure (SHSe) in non-smokers increases the chances of developing lung cancer by 20-30%. Since even brief smoke exposure is carcinogenic, there is no risk-free level of SHSe. To address the higher rates of SHSe in public housing communities, the U.S. Department of Housing and Urban Development (HUD) implemented the Smoke-Free Public Housing Rule (HUD-SFPHR) in 2018, which mandated that all public housing sites prohibit smoking inside residential and communal buildings, as well as within 25 feet of these properties. Previous research indicates that HUD-SFPHR has not been effective, so this study aims to identify barriers interfering with the implementation of HUD-SFPHR at Cuney Homes, Houston's largest public housing site with an 89.5% African American/Black residential population.

Method: Property observations at Cuney Homes were performed and the number of cigarette litter, HUD-SFPHR signage, and active smokers were recorded. Furthermore, in-depth interviews with the property's staff (n=2) were conducted to learn about the implementation of HUD-SFPHR at Cuney Homes.

Results: During the property observations, 2,311 pieces of cigarette litter, 15 active smokers, and 0 HUD-SFPHR signage were found. The in-depth interviews revealed that many residents are not aware of HUD-SFPHR due to a lack of education provided about the rule, and there are no resources given to residents about tobacco cessation because staff are hesitant to have these conversations. Furthermore, due to the COVID-19 pandemic there have been no property health inspections since 2019, which has led to a lack of violations being given out for breaking HUD-SFPHR. Many residents also fear retaliation from their neighbors so they do not complain about SHSe.

Conclusion: The property observations revealed that residents at Cuney Homes are not adhering to HUD-SFPHR. Based on the barriers identified from the interviews, staff need to be trained to educate residents about HUD-SFPHR, SHSe, & the risks of tobacco use during New Resident Orientation. There also needs to be a bigger emphasis on encouraging tobacco cessation. This can be done by promoting community-based cessation programs and offering culturally tailored resources which talk about menthol cigarette use and big tobacco marketing, both of which have disproportionately affected African American communities. Project Smoke-Free will be testing how implementing these recommendations will improve resident adherence of HUD-SFPHR. Overall, addressing the barriers in implementing HUD-SFPHR will reduce the disproportionate amount of lung cancer and other tobacco-related health conditions in low-income & African American/Black communities.

POSTER 20

BARRIERS, FACILITATORS, AND PRIORITY NEEDS RELATED TO CANCER PREVENTION, CONTROL AND RESEARCH AT PRIMARY CARE CLINICS SERVING RURAL PERSISTENT POVERTY AREAS

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Introduction: Despite advances in outcomes across the cancer control continuum, persistent poverty areas (poverty rates of >20% for 30 years) continue to face significant cancer health disparities, including among the highest cancer mortality rates.^{1,2} In 2022, there were 354 persistent poverty counties in the U.S., primarily concentrated in rural areas and the U.S. South, including 16 counties in Arkansas.³ Urgent action is needed to improve cancer prevention and control in persistent poverty areas, which have high concentrations of racial/ethnic minorities and face a constellation of structural inequalities.^{1,2} Increased uptake of evidence-based cancer control strategies could mitigate cancer health disparities in persistent poverty areas.² However, more research is needed on the contextual determinants that may influence the strategic implementation of such strategies. It is imperative to understand the barriers, facilitators, and priority needs related to cancer prevention, control, and research in persistent poverty areas.

Methods: In September 2022, we conducted three focus groups with providers and staff from seven primary care clinics serving persistent poverty areas across Arkansas. Seventeen racially diverse providers and staff participated, including nurses, patient navigators, administrators, quality improvement coordinators, and others.

Results: Regional clinic providers and staff identified *barriers, facilitators, and priority needs related to improving cancer prevention and control programs* at their clinics. Barriers included transportation, cost, limited provider/service availability, and patient fear/ discomfort with cancer-related topics/knowledge. Facilitators included cancer navigators and community health events. Priority needs included patient education, comprehensive workflows, improved communication, integration of navigators into healthcare team, and improved access to cancer care providers/services. Clinic providers and staff also identified *barriers and facilitators to conducting cancer-related research* at regional clinics. Barriers included lack of time, community uncertainty, patient health literacy, and provider skepticism/patient burden concerns. Facilitators included educating clinic providers/staff about current research studies and navigators as a bridge between researchers and patients.

Discussion: Recommendations to improve cancer prevention and control in persistent poverty areas include: 1) address key patient barriers such as transportation and healthcare costs, 2) invest in patient education, 3) increase local access to providers/services, 4) standardize patient navigation workflows, 5) better integrate navigators into healthcare team, and 6) recognize community health events as a key healthcare access point for populations living in persistent poverty areas. Recommendations to improve cancer-related research include: 1) provide dedicated staff time for research activities at regional clinics, 2) coordinate research and clinical activities to avoid patient burden, and 3) educate providers/staff about research studies.

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POSTER 21

DISPARITIES IN CANCER INCIDENCE BY SEXUAL ORIENTATION

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Background: Despite cancer risk factors being more common among sexual minority populations (e.g., lesbian, gay, bisexual) compared to their heterosexual peers, little is known about cancer incidence among different sexual orientation groups. National cancer registries do not include sexual orientation data, and existing studies are limited to small samples and methodological challenges (e.g., cross-sectional study designs).

Methods: We analyzed data from the Nurses' Health Study II, a longitudinal cohort with 116,429 women across the U.S. Using age-adjusted incidence rate ratios (aIRR), we compared the incidence of any cancer among different sexual orientation groups to the reference group of completely heterosexual women (e.g., no sexual minority identity, same-sex attractions, or behavior). Additionally, we conducted sub-analyses at twenty-one specific cancer sites (e.g., breast, colon/rectum).

Results: Lesbian women had elevated cancer rates overall [aIRR 1.24; confidence interval (CI) 1.03–1.50; n=113] compared to completely heterosexual women. Lesbian women also had elevated rates of thyroid cancer [aIRR 1.91; CI 1.05–3.48; n=11], basal cell carcinoma [aIRR 1.99; CI 1.09–3.63; n=11], non-Hodgkin's lymphoma [aIRR 2.47; CI 1.27–4.80; n=9], pancreatic cancer [aIRR 7.05; CI 1.63–30.46; n=2], and liver cancer [aIRR 31.44; CI 2.85–346.7; n=1] compared to the completely heterosexual reference group. Bisexual women had elevated cervical cancer rates [aIRR 9.51; CI 2.29–39.47; n=2] relative to their heterosexual peers. Heterosexual women with same-sex attractions, behavior, or who previously identified as a sexual minority woman had higher rates of hematologic cancer [aIRR 1.53; CI 1.02–2.27; n=27]. Additionally, incidence rates at multiple cancer sites trended higher for all sexual minority subgroups, though did not reach statistical significance.

Conclusions: Sexual minority women appear to be adversely burdened by cancer relative to their heterosexual peers. To address these disparities, sexual orientation data must be systematically collected in electronic medical records so both common and rare forms of cancer can be assessed within national cancer registries.

POSTER 22

ENROLLMENT OF OLDER ADULTS IN CLINICAL TRIALS AT THE NATIONAL CANCER INSTITUTE CLINICAL CENTER: A 15-YEAR EXPERIENCE

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Introduction: Older adults (OA) represent a significant portion of the United States cancer population and are expected to continue increasing in the following decades. However, OA have been under-represented in clinical trials, resulting in a lack of information on clinical outcomes and safety. The National Cancer Institute (NCI) conducts clinical research at the National Institute of Health Clinical Center (NIH CC) in Bethesda (Maryland), where participants are referred by their physician or self-referred, treated without charge, and receive aid for travel expenses. This study aims to describe the participation of OA enrolled in NCI clinical trials at the NIH CC.

Methods: We retrospectively retrieved the demographic data of the participants in NCI clinical trials at the NIH CC from 2006 to 2020 through the Biomedical Translational Research Information System (BTRIS), the clinical research data repository of the NIH. OA were defined as participants aged 65 or older at the time of enrollment in the clinical trial. In addition, they were stratified into four age subcategories: from 65 to 69, from 70 to 74, from 75 to 79, and older than 80 years of age. We evaluated the participation of OA in the entire 15-year period and the following three consecutive time intervals: from 2006 to 2010, from 2011 to 2015, and from 2016 to 2020. The results are presented with proportions.

Results: Between 2006 and 2020, 36,900 participants were enrolled in the NCI clinical trials at NIH CC. The number of OA was 8,095 (21.9%) and, specifically, 3,781 (10.2%) aged from 65 to 69, 2,435 (6.6%) from 70 to 74, 1,238 (3.4%) from 75 to 79, and 641 (1.7%) older than 80 years of age. Considering the different time intervals, from 2006 to 2010 the number of participants was 11,626, and the OA were 1,947 (16.7%). From 2011 to 2015, 13,217 participants were enrolled, and 3,034 (23%) were OA. Finally, from 2016 to 2020, a total of 12,057 participants were enrolled with a number of OA equal to 3,114 (25.8%).

Conclusions: Older adults were under-represented in the NCI clinical trials conducted at NIH CC from 2006 to 2020, especially those ≥ 75 years. However, we found a progressively increasing trend in enrolling OA in the three consecutive five-year intervals. Initiatives to further improve the OA accrual in clinical trials are needed.

POSTER 23

REGORAFENIB TOXICITIES AMONGST PATIENTS WITH METASTATIC COLORECTAL CANCER IN AN UNDERSERVED POPULATION IN THE BRONX

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Background:

Regorafenib is a multi-kinase inhibitor approved for use in metastatic colorectal cancer (mCRC). The limiting factor to the use of regorafenib is its significant adverse event (AE) profile. The most common AEs of regorafenib include hand-foot skin reaction (HFSR), hypertension (HTN) and weight loss. Despite these well documented AEs there have been no comparisons of these AEs between race or ethnicity. A retrospective analysis of patients who received regorafenib at Montefiore Einstein Cancer Center was performed to identify if the tolerability of regorafenib differed amongst race and ethnicity.

Methods:

Patients from Montefiore Einstein Cancer Center who received regorafenib for mCRC were included. Patient demographics, AEs, dose reductions/interruptions. Primary endpoints identified were weight loss >5%, hypertension, hand-foot skin reaction, and dose reduction/interruption. Univariate analysis comparing toxicity rates between Black versus White patients and non-Hispanic versus Hispanic patients was performed using Chi-squared test & Fisher's exact test.

Results:

35 patients were included in the study and 34 were included in the overall analysis of toxicities. The median age was 64 years (range 33-84). The race composition of the cohort was: 69% White, 29% Black, and 2.9% Asian. The ethnicity composition of the cohort was: 51% non-Hispanic and 49% Hispanic. Rates of AEs are compared between Whites/Blacks (table 1) and Hispanics/Non-Hispanics (table 2). Although not statistically significant, a trend towards increased rates of HFSR and dose reductions/interruptions were seen in black versus white patients.

Table 1: Comparison of Adverse Events between White and Black Patients

AE	Whites	Blacks	p-value
WL	42%	60%	.46
HTN	29%	30%	>.99
HFSR	29%	60%	.13
DR	29%	50%	.27
DI	25%	60%	.11

Table 2: Comparison of Adverse Events between Non-Hispanic and Hispanic Patients

AE	Hispanic	Non-Hispanic	p-value
WL	59%	35%	.17
HTN	29%	29%	>.99
HFSR	35%	41%	.72
DR	41%	29%	.72
DI	41%	29%	.47

Table 1 & 2 Legend: AE, adverse event; WL, weight loss; HTN, hypertension; HFSR, hand-foot skin reaction; DR, dose reduction; DI, dose interruption

Conclusions:

This single-institution retrospective study showed that weight loss, hypertension, hand-foot skin reaction, and dose reduction/interruption were not statistically significantly different amongst various races and ethnicities taking regorafenib for mCRC. A trend towards increased rates of HFSR and dose reductions/interruptions were seen in black patients. Hispanic and black patients are historically under-enrolled in oncology clinical trials. Future research should explore regorafenib toxicities amongst larger cohorts of historically marginalized patient populations.

POSTER 24

DISPARITIES IN THE AVAILABILITY OF NEURO-ONCOLOGY CLINICAL PROVIDERS AND INFRASTRUCTURE IN THE UNITED STATES

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Barriers to clinical trial access have significant implications for patient care and have been shown to disproportionately impact rural and socioeconomically disadvantaged populations in the United States (US). Expanding on our previous work identifying these barriers in the neuro-oncology context, we assessed whether the network of neuro-oncology providers and collaboratives such as the NCI's National Clinical Trials Network (NCTN) and NCI Community Oncology Research Program (NCORP) can effectively bridge these barriers. US Census population and geography data and the Neighborhood Atlas' Area Deprivation Index (ADI) were obtained. Location of UCNS-certified neuro-oncology subspecialists, Main Member institutions of NRG Oncology, Alliance, ECOG-ACRIN, and SWOG trial groups, and NCORP Community Affiliate sites were obtained and mapped to 5-digit zip code tabulation areas (ZCTAs) using Google Geocode. Linear and logistic regression and spatial analyses were conducted via R using *spdep* and *spatialreg* libraries, assessing the role of geography, socioeconomic disadvantage, and population on infrastructure accessibility. We identified 316 registered neuro-oncologists, 682 NCTN institutions (130 NRG, 116 Alliance, 56 ECOG-ACRIN, and 379 SWOG) and 962 NCORP sites, in 0.6%, 1.6%, and 2.2% of all ZCTAs in the US (N = 33120), respectively; 93.4% of US ZCTAs (n=30,946), inhabited by 81.1% of the US population, had no direct access to this infrastructure. Neuro-oncologists and NCTN institutions were more likely to exist in more populated (OR=1.86, p<0.00001; OR=2.35, p<0.00001), less-disadvantaged (OR=0.98, p<0.00001; OR=0.99, p<0.00001), and geographically adjacent regions (OR=320.59, p<0.00001; OR=20.52, p<0.00001), reflecting urban-rural and socioeconomic disparities. Urban-rural disparities persisted in NCORP site locations (population: OR=2.78, p<0.00001; geographical clustering: OR=8.23, p<0.00001), but these sites were more likely to exist in areas of greater disadvantage (OR=1.01, p=0.00102). Investigating potentially underutilized areas for expansion of future trial sites, only 2 neuro-oncologists, 8 NCTN Main Members, and 10 NCORP Affiliates were located more than 25 miles from an existing trial site, suggesting that disparities in trial availability are driven by disparities in infrastructure, rather than its underutilization. The identified disparities in availability of neuro-oncologists and institutions capable of hosting clinical trials may explain the previously reported disparities in trial sites and raise concerns of broader disparities in access to expert neuro-oncology care. NCORP sites reach more socioeconomically disadvantaged populations, but the overall sparsity of the network of providers and collaboratives indicates that the existing infrastructure cannot effectively bridge trial access barriers, and that adopting novel approaches that include telehealth and decentralized trial designs is necessary to make access more equitable.

POSTER 25

THE EFFECT OF EXPOSURE TO NEIGHBORHOOD VIOLENCE ON STRESS RESPONSE AND LUNG CANCER

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Despite the lower prevalence and frequency of smoking, lung cancer disparities persist among Black Americans. Chronic exposure to social stressors, such as high crime and violence, has downstream physiological stress responses, which may contribute to the risk of developing lung cancer. Thus, we explored the relationships between neighborhood violence, hair cortisol concentration, and lung cancer at the neighborhood and individual levels.

We utilized electronic medical records of patients who received a diagnostic test for lung cancer from an academic medical center in Chicago. Patient addresses were geocoded, and neighborhood measures were appended. We examined the unique contribution of individual and neighborhood-level variables on the risk of developing lung cancer. We then extrapolated lung cancer risks to the population of Chicago using a synthetic population.

We also recruited Black men above 45 years of age through 4 barbershops located in predominantly Black communities in Chicago. Participants completed survey questions concerning perceived stress, Post traumatic stress disorder, discrimination experiences, fear of crime, exposure to violence, social support, community quality, and collective efficacy. We also collected hair samples from corresponding patients and examined cortisol concentration as a measure of response to stress.

Of the 7,255 unique patient records included in the analysis, 9.8% were diagnosed with lung cancer. A higher proportion of Black patients were diagnosed with lung cancer than White and Hispanic patients. Patients who were 60 and older, who were smokers and were living in neighborhoods with high homicide rates, had the highest likelihood of being diagnosed with lung cancer. Living in neighborhood areas with high homicide rates increased the odds of developing lung cancer by 31%, controlling for race/ethnicity, sex, smoking history, and age.

Furthermore, of the 128 participants, the level of hair cortisol concentration was significantly higher among those who lived in neighborhoods with the top 25th percentile homicide rates compared with those who lived in neighborhoods with the lowest 25th percentile homicide rates, controlling for age, obesity, smoking status, education, marital status, and employment.

Exposure to neighborhood violence increased the risk of developing lung cancer in our study. Despite relatively lower smoking rates, a greater proportion of Black residents reside in high-crime neighborhoods, which may explain the increased risk of lung cancer in Black communities. In conclusion, neighborhood context is a significant factor that needs to be considered in lung cancer screening guidelines.

POSTER 26

NEIGHBORHOOD DISPARITIES ASSOCIATED WITH HIGH INCIDENCE OF TYPE 2 ENDOMETRIAL CANCER IN PERSISTENT POVERTY AREAS OF SOUTH FLORIDA

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Background: Despite being less common, Type 2 endometrial cancer (EC) is responsible for 75% of all EC-related deaths.¹ Non-Hispanic Black women disproportionately suffer a higher incidence of and lower survival for Type 2 EC.^{1,2,3} Although socio-environmental factors, such as obesity, have been implicated in contributing to Type 2 EC risk, these relationships are not well understood.^{4,5} This study aims to examine the impact of social determinants of health (SDOH) and behavioral factors on Type 2 EC incidence.

Methods: By combining Florida's statewide cancer registry with sociodemographic, behavioral risk factors, and environmental health data in a geographic information system, we identified the locations and characteristics of census tracts with persistent poverty (at least 20% population in poverty) in the catchment area of Sylvester Comprehensive Cancer Center in South Florida, a 4-county region (Palm Beach, Broward, Miami-Dade, and Monroe County) known as South Florida. We categorized the census tracts into three levels by poverty rates (0% to 10%, 10% to 20%, and 20% and higher) and used contingency tables to analyze the association between age-adjusted incidences of Type 2 EC (2010-2019) and SDOH, behavioral risk factors (lacking physical activity and obesity rates) as well as characteristics of built environment (food accessibility and walkability). We also performed spatial analysis by overlaying maps of local crime rates on neighborhoods of persistent poverty to assess the association between crime rates and physical inactivity/obesity rates.

Results: Neighborhoods of higher poverty rates are associated with higher age-adjusted incidences of Type 2 EC, more residents with no health insurance, and higher prevalence of obesity and obesity-associated risk factors (higher percent lacking physical activity and lower accessibility to healthy food options). Non-Hispanic Black women have the highest age-adjusted incidence of Type 2 EC with the majority residing in persistent poverty areas. No relationship was found between walkability and residents' physical activity and obesity levels, further highlighting that neighborhoods of higher poverty are in urban centers with well-connected stress. Spatial distribution of areas with high crime rates is found to consistently overlap areas of poverty with a high percent population lacking physical activity.

Conclusions: Census-tract based measures of socio-environmental and behavioral factors can be used to identify risk factors associated with increased age-adjusted incidences of Type 2 EC. Targeting individuals living in neighborhoods with increased poverty, lack of health insurance, and higher prevalence of obesity-associated risk factors may help reduce disparities of Type 2 EC among vulnerable populations.

POSTER 27

IDENTIFYING NEIGHBORHOOD HOT SPOTS OF CERVICAL CANCER FOR TARGETED INTERVENTION IN PERSISTENT POVERTY AREAS OF SOUTH FLORIDA

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Background: Cervical cancer is the third most common gynecological malignancy in the United States, with 90% of cases being attributable to human papillomavirus (HPV) infection. Disparities in cervical cancer screening and prevention in the US persist in disadvantaged population subgroups due to various barriers including cost, accessibility and transportation, and low health literacy. This study examines neighborhood clustering and the social risk factors driving disparities in cervical cancer prevalence in South Florida communities of persistent poverty to better target outreach efforts.

Methods: Using cancer registry and social determinants of health (SDOH) data, geospatial hot spot analyses were carried out to identify statistically significant neighborhood clusters with high numbers of cervical cancer cases within the catchment area of the Sylvester Comprehensive Cancer Center in South Florida, consisting of Palm Beach, Broward, Miami-Dade, and Monroe County. Within the boundary of these hot spots, locations of census tracts with persistent poverty (i.e., at least 20% of population in poverty) were identified. Demographic, SDOH, and the latest cervical screening data for these census tracts were analyzed and used by Sylvester's Office of Community Outreach and Engagement to deploy mobile screening units (MSU) for interventions in these neighborhoods, targeting specific races, ethnicities, and SDOH present in the communities.

Results: Neighborhood hot spots with high numbers of cervical cancer cases consistently overlap areas of persistent poverty in South Florida. These neighborhoods are associated with high percentages of Hispanic and non-Hispanic Black women with low socioeconomic resources, including renter housing, low education attainment, low access to health insurance, and low cervical screening rate. Neighborhoods with a high percentage of unscreened women are also associated with high percentages of uninsured and no vehicle available.

Conclusions: Prevalence of cervical cancer cases is high in areas of persistent poverty in South Florida with SDOH disparities observed in Hispanic and non-Hispanic Black women. At-risk women living in these neighborhoods often have low educational attainment and are more likely to be without financial means for guideline concordant cervical screening. MSUs that proactively bring prevention education and cervical screening to communities with more unscreened, at-risk women are an effective means for addressing disparities associated with cervical cancer control in poverty areas. Geospatial hot spot analysis integrating cancer registry, SDOH, and other available risk factor data can be an effective tool for addressing cancer health disparities by identifying communities and population segments experiencing heightened risk for different types of cancer.

POSTER 28

TELEHEALTH UTILIZATION BY RURAL OLDER CANCER SURVIVORS: A QUALITATIVE ASSESSMENT BY RURAL OLDER CANCER SURVIVORS, CAREGIVERS, AND HEALTHCARE PROFESSIONALS

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BACKGROUND: Rural telehealth utilization has increased, with some rural healthcare hospitals reporting a 1700% increase in telehealth volume compared to pre-pandemic utilization. Yet, in the wake of an aging rural America, rural older adults are slower to adopt telehealth, partly due to challenges accessing high-speed internet and technical knowledge barriers associated with telehealth navigation. Considering the rise of telehealth-delivered cancer care, it is imperative to understand the challenges rural older cancer survivors face when incorporating telehealth into complex cancer care. Guided by the Andersen Healthcare Utilization Model, we qualitatively examined barriers and facilitators of telehealth utilization for rural older cancer survivors.

METHODS: Ongoing interviews began March 2022. We purposively sampled rural older cancer survivors, caregivers of rural older cancer survivors, and healthcare professionals that served this population. All participants had to have used telehealth as- or with- a rural older cancer survivor. Rural was defined by either RUCC or RUCA. We recruited from rural and urban regional cancer centers, regional hospitals, and through snowball sampling. Interviews were conducted either in-person or by telephone. The interview guide probed participants regarding telehealth utilization for cancer and survivorship care. Two analysts conducted a thematic analysis deductively coded to the Andersen Model constructs.

RESULTS: Interviews are ongoing. Preliminary findings are based on (n = 6 rural older cancer survivors, caregivers, and healthcare professionals. Most participants were Non-Hispanic White, female, married, had at least some college, traveled greater than 31 minutes to an oncologist, used their cell phone or computer to access telehealth, and most telehealth appointments were conducted with an oncologist. We coded similar perceptions between survivors, caregivers, and healthcare providers. Themes related to telehealth utilization for rural older cancer survivors included (1) Telehealth provided critical and necessary services, (2) Existing technological literacy and infrastructure served as enabling factors for telehealth uptake, (3) Geographic isolation related to the rural environment impaired participant's ability to access telehealth-delivered care, and (4) Virtual face-to-face provider-patient communication at critical points in participants' care facilitated telehealth utilization. Subthemes further explained applications to Andersen Model constructs (e.g., environment, population characteristics, health behaviors).

CONCLUSION: Preliminary findings illuminate the experiences of telehealth utilization for rural older cancer survivors. Overall, participants reported that telehealth was useful for overcoming barriers common to rurality and often a suitable strategy to deliver cancer care. Considering persistent rural-urban cancer disparities, intermittent access to broadband internet, and the complexity of cancer care, tools to improve telehealth usability are warranted.

POSTER 29

COLORECTAL CANCER HEALTH EQUITY FQHC-COMMUNITY CENTER (RECTIFY): SYSTEMS APPROACHES TO CLAIM THE PROMISE OF NAVIGATION

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Background: Multi-faceted, contextual factors like persistent poverty drive racial disparities in colorectal cancer (CRC), especially in hyper-segregated regions like Chicago. In Chicago, 90% of residents living in persistently impoverished areas (PPAs) are Black. PPA residents suffer higher rates of CRC incidence (86.8 vs. 52.4 per 100,000) and mortality relative to the city (26.7 vs. 18.7 per 100,000). Federally qualified health centers (FQHC) represent a promising solution for delivering navigation to improve CRC outcomes in PPAs. However, systemic and multilevel barriers have diminished the impact of FQHC navigation, including (1) unreliable electronic health records (EHR); (2) limited systemic coordination across primary care, specialty care, and external stakeholders (e.g., community partners, government programs); and (3) unintegrated, intensive responsibilities for navigators; and (4) a lack of sustainable funding.

Purpose: The Colorectal Cancer Health Equity FQHC-Community (RECTIFY) Center is an emerging initiative that will test the synergistic impact of enhancing FQHC navigation with organizational and systems improvements.

Methods: The RECTIFY Center will enhance the navigation capacity of the Mile Square Health Center, one of the oldest and few FQHCs that is embedded within an academic medical center. The goal is to reduce CRC risk and enhance early CRC detection among > 500 AA patients in 4 FQHC sites in PPAs. Projects will enhance FQHC navigation through (1) EHR enhancements that facilitate coordination and reduce intensive responsibilities for navigators; and (2) team science interventions that streamline coordination and integrate responsibilities across projects. Project #1 will reduce FQHC patients' CRC risk through supplementing FQHC navigation with an EHR-based, self-paced dietary intervention and linkages to community / government food programs. Project #2 will improve early CRC detection among FQHC patients through EHR-enhanced coordination and documentation of navigation between FQHC and specialty services within the academic medical center. Project #3 will reduce CRC risk and improve early CRC detection through community referrals to the FQHC, because of enhanced inter-organizational linkages and workforce capacity of community partners within PPAs.

Emerging findings/conclusions: Pilot data suggest the feasibility of: (1) enhancing EHR to deliver self-paced interventions and refer patients to resources (Project 1); (2) leveraging EHR to document CRC navigation processes and communication across units (e.g., EPIC smart terms; Project 2); and (3) enhancing the capacity of community health workforce and referrals to FQHCs (Project 3). Our findings further have high potential for adoption and sustainability, given recently passed Illinois legislation on navigator/community health worker reimbursement.

POSTER 30

RACIAL DISPARITIES IN AGING-RELATED COMORBIDITY AMONG BREAST CANCER SURVIVORS

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Background

Cancer and treatment related biological disruptions may accelerate the aging process of survivors. Black breast cancer (BC) patients have a higher mortality rate than their white counterparts, potentially due to this aging effect. However, evidence of the long-term aging-related outcomes among BC survivors has been limited, especially among minority populations.

Methods

Our study includes 1885 BC patients and 1224 cancer free women (controls) recruited at Vanderbilt University Medical Center from 2004 to 2021. Patient demographics and aging-related outcomes were extracted from the tumor registry or electronic health records. Aging-related outcomes included 28 comorbidities and the Charlson Comorbidity Index (CCI) at baseline (biopsy) and follow-up (latest clinical visit). The associations of BC status with CCI and specific comorbidities were evaluated by linear and logistic regression models, respectively. The associations of race with aging-related outcomes were evaluated among cases. All analyses were adjusted for age, and follow-up outcomes were adjusted for baseline information.

Results

There were 1622 participants who identified as white, 159 as black, 21 as Hispanic, 25 as Asian, and 58 as Other. The median follow-up time was 10 years. BC patients had a higher mean CCI at baseline (1.32 vs 0.59, $p < 0.01$) and follow-up (beta=1.04, 95% CI=0.94-1.14) than controls. Results from individual comorbidities showed that BC survivors had a higher risk of developing cardiovascular disease, liver disease, hypertension, hyperlipidemia, gastroesophageal reflux disease (GERD), and depression. Among BC patients, Black women were diagnosed at a younger age (52.0 vs 55.8, $p < 0.01$), but had a higher baseline (beta=0.55, 95% CI=0.30-0.81) and follow-up (beta=0.77, 95% CI=0.37-1.16) CCI than Whites after adjustment for age, and additionally for baseline CCI for follow-up outcomes. Black BC survivors were more likely to develop peptic ulcer disease, diabetes, second malignancy, hypertension, and GERD than White BC survivors, even after adjustment for baseline comorbidities. Survivors of the other races had a lower baseline and follow-up CCI compared with White survivors.

Conclusions

BC survivors have a high prevalence of aging-related comorbidities, and Blacks are more affected than Whites. These results call for further study of causes for these racial disparities and emphasize the need for specialized patient care programs.

POSTER 31

AN ANALYSIS OF POST-RADIATION THERAPY AND CLINICAL DISEASE PREDICTORS IN THE DEVELOPMENT OF XEROSTOMIA AND DYSPHAGIA IN HEAD AND NECK CANCER PATIENTS

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Background

Head and neck cancers (HNC) are the sixth most common types of cancers in the world. Current studies suggest that head and neck cancers are highly treatable and preventable, since most HNCs are squamous cell carcinomas. The standard treatment of care involves surgery, chemotherapy, and/or radiation therapy (RT). While surgery alone has been proven effective in targeting and eliminating oropharyngeal carcinomas, surgery induces metabolic stressors, which heighten the incidence of recurrences. So, cancer management through radiotherapy is a core mechanism for minimizing tumorigenesis. A major concern with the use of RT is the unintended targeting of normal soft tissues. RT often produces toxicities, or side effects, which undermine the effectiveness of HNC treatments, and current research related to radiation-induced toxicities is mainly focused on patient experiences during radiation therapy. This study aims to analyze post-RT toxicity trends in working to identify social and clinical-based predictors of xerostomia and dysphagia development in HNC patient populations.

Methods

Forty-four head and neck cancer patients, who had undergone radiation therapy, were analyzed in this study. All study participants were over the age of eighteen and presented evidence of dysphagia and xerostomia at some point prior or during treatment. The patients were assessed for xerostomia and dysphagia at the following time points: pre-RT (baseline), mid-radiotherapy, end-radiotherapy, three months post-RT, six-months post-RT, and twelve-months post-RT. The patients' objective and subjective outcomes were scored at each time point to reveal predictors in toxicity development.

Results

Trends in dysphagia and xerostomia revealed that men over the age of fifty (50) were more likely to develop post-RT toxicities than other gender- or age-based demographics. For patients, who were current or former smokers, the incidence rate was greatly amplified due to the potential for disease recurrences. The study also revealed that HPV positive patients were less likely to develop long-term dysphagia and xerostomia, while therapeutic combinations involving surgery with chemotherapy and/or radiation therapy presented greater concerns overall.

Conclusion

The presentation of this study will serve as a model for understanding the progression of radiation-induced toxicities—dysphagia and xerostomia—in HNC patients. Through identifying and addressing these predictors, future studies can be directed towards creating more target-based mechanisms for enhancing cancer survivorship and maintaining a patient's overall quality of life. With more funding, research support, and patient participation, a greater number of toxicity trends can be evaluated in working to create a more robust secondary analysis on its impacts on more diverse communities.

POSTER 32

ENHANCING HEREDITARY BREAST AND OVARIAN SCREENING SERVICES FOR AT-RISK LATINAS THROUGH IMPLEMENTATION SCIENCE

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Background: National guidelines recommend using short, validated screening questionnaires to identify individuals at-risk of hereditary breast and ovarian cancer (HBOC) and refer them to genetic counseling and genetic testing (GCT), if appropriate. Unfortunately, guidelines have not been implemented equally. Latinas are less likely to be screened and referred to GCT. Community-based organizations (CBOs) may play a role in identifying at-risk Latinas and connecting them to GCT but research outside cancer-specialty settings is scarce. This qualitative study evaluated CBOs barriers and facilitators for implementing a short validated HBOC screening tool.

Methods: Two academic-institutions partnered with four CBOs, which primarily serve the Hispanic/Latinx community. CBOs selected and adapted a short validated HBOC screening tool (Family History Screen- FHS-7) to implement at their setting in a period ranging from 4-12 months. One focus group was conducted post-implementation at each site to evaluate implementation barriers and facilitators. Data analysis was guided by the Consolidated Framework for Implementation Research (CFIR) Framework and Health Equity domains.

Findings: Focus group participants (N=26) included patient navigators (32%), community outreach educators (28%), administrative staff (8%), and leadership (8%). After administering the adapted FHS-7, CBOs identified 96 of the ~807 Latinas to be at-risk for HBOC and were identified for further assessment. Major facilitators across all sites included the FHS-7's high degree of adaptability and low degree of complexity (e.g., yes/no questions), improving the ability of the CBO staff to capture critical clinical information. Major barriers included available resources (e.g., limited time to administer the screener, limited access to educational materials pertaining to GCT for both patients and staff members), and patients' needs and resources (e.g, low health literacy, limited knowledge of family's cancer history, and limited access to GCT and follow-up care due to insurance). Despite these challenges, CBO staff expressed overall positive attitudes about the implementation of the adapted FHS-7, as they saw it to be highly compatible with the mission and values of their organization.

Conclusions: This study suggests that implementing a short-validated HBOC screening tool at CBOs is a promising strategy to identify at-risk minoritized populations, a key first step to enhancing the reach of genetic services to underserved individuals. However, there is a need to develop multi-level implementation strategies to overcome important barriers including enhancing CBOs resources, conducting policy changes to grant equal access to GCT and follow-up care, and providing education and training about HBOC to CBOs and patients.

POSTER 33

ACCESS TO ONCOLOGY SERVICES IN RURAL AREAS: INFLUENCE OF THE 340B PROGRAM

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Background: The scarcity of oncology services in rural areas leads to challenges in accessing timely cancer treatment. Some rural hospitals cite the high costs of service operation and drug procurement as a barrier to providing oncology services. Policies and programs that improve rural hospitals' financial position can expand their offerings to include costly services, such as oncology. One such program, the Federal 340B drug discount program, provides financial relief to healthcare providers by reducing drug costs. Oncology services are highly impacted by this program, as cancer drug costs exceed most others. In this study, we evaluated the impact of the 340B program on oncology service availability in rural general acute care hospitals.

Methods. We used an event study design to evaluate the relationship between the 340B program and rural hospitals' oncology service offerings between 2011-2020 using the American Hospital Association Survey. We examined all rural general acute care hospitals located in the U.S. For our primary analyses, we restricted the sample to rural hospitals without oncology services in 2011 (around 63% of the sample hospitals). Using linear probability models, we compared the availability of oncology services at hospitals that participated in the 340B program from 2012-2018 to hospitals that never participated in the program during the study period. We then descriptively assessed whether hospitals were in communities with characteristics suggestive of poor health outcomes.

Results. Prior to 340B participation, the probability of oncology service offerings at participating hospitals was similar to control hospitals. Among participating hospitals, there was a clear and persistent increase in the probability of offering oncology services. Participating hospitals were 14.5 percentage points ($p < 0.01$) more likely to offer oncology services after six years of participation compared to hospitals that never participated in the program. New participating hospitals that added oncology services were in communities with higher median household incomes (\$52,100 versus \$49,600, $p < 0.01$), lower uninsured rates (10.4% compared to 12.6%, $p < 0.01$), and a greater proportion of residents who are non-Hispanic white (89.9% versus 85.5%) and higher educated (7.3% versus 6.2%) compared to control hospitals.

Conclusions. These findings suggest that the 340B drug discount program expands access to oncology services in rural communities. Improving access to oncology services in rural areas will likely confer positive benefits for rural populations. Regulators and policymakers should factor in the benefits of the 340B program for rural hospital cancer care when considering changes related to the program.

POSTER 34

INCREASING DIVERSITY IN RESEARCH STUDIES: LESSONS LEARNED FROM COMMUNITY-BASED FOCUS GROUPS OF BLACK WOMEN

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Word count: 323

While trends in cancer mortality rates have declined over the last 20 years as a result of advancements in prevention, early detection and treatments, the racial disparity has persisted. For example, the breast cancer mortality rate is 40% higher among Black women compared to White women. Inadequate representation in research, including prospective epidemiologic cohorts and clinical trials, has limited our understanding of drivers of disparate outcomes and our ability to identify successful, culturally appropriate strategies for intervention. To better understand the barriers to participation and opportunities to increase the engagement of Black women in research studies, we conducted 6 focus groups each with a convenience sample of 6–10 Black women aged 25 to 65 years. These women were recruited through various community venues across geographic regions (n=38 total). Focus groups were conducted using an in-depth, semi-structured discussion guide which included topics such as participant perceptions and experiences with the healthcare system, perspectives on why structural racism and cancer disparities exist, and barriers or opportunities in research participation. Focus groups were recorded, transcribed, and key themes were coded separately by two team members. The major themes reported by participants as factors that may build or diminish trust were: (1) that negative healthcare experiences of family members, not necessarily oneself, led to participants having a negative perception of the healthcare system, (2) motivators to participate in research included the notion that you were helping others, having a trusted messenger, the characteristics of the research team and the institution that sponsors the research, and (3) potential barriers to participation included concerns about participation costs, data security, and data end users. This study provides supportive evidence that Black women are willing and motivated to participate in research studies, particularly if the research helps others. Furthermore, investigators should consider a participant's personal and historical perspectives, as well as participant time and burden, transparency about data access and security, and engagement with trusted partners to maximize recruitment success.

POSTER 35

INCREASED MULTIPLE MYELOMA MORTALITY IN CARIBBEAN-BORN BLACK POPULATIONS IN THE US

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Background: In 2022, approximately 12,640 deaths were due to multiple myeloma (MM), the fourteenth leading cause of cancer death in the US. Incidence and deaths by MM are more common in men versus women, and among Black individuals. Aggregation of polyethnic US Black populations in MM mortality profiles may mask heterogeneity by nativity. We assessed sex-specific, age-adjusted MM mortality rates by racial groups and among US Black subgroups including US-born Blacks (UBB), West Indian-born Blacks (WIBB), and Haitian-born Blacks (HBB) using data from the state of Florida, which is home to the largest Caribbean community in the US, ahead of New York.

Methods: We analyzed all MM deaths (ICD-10 C88.X, C90.X) (n=3,754) from 2016 to 2020. Sex-specific and age-standardized cancer mortality rates were computed for Non-Hispanic Whites, Blacks and Asians, and for Hispanics (all races combined), as well as for UBB, WIBB and HBB using the general Florida mortality database and denominators from the American Community Survey. Direct comparisons were made using Fay and Feuer mortality rate ratios (MRR).

Results: MM mortality rates were highest among men (3.5[CI:3.4,3.7] per 100,000). When examining race, Non-Hispanic Blacks (7.3[CI:6.6,8.1] per 100,000), followed by Non-Hispanic Whites (3.3[CI:3.1,3.5] per 100,000), Hispanics of all races (3.0[CI:2.6,3.4] per 100,000), and Non-Hispanic Asians (2.0[CI: 1.3,3.0] per 100,000). Among women (2.3[CI:2.2,2.4] per 100,000). Non-Hispanic Blacks (4.9[CI:4.4,5.4] per 100,000), followed by Non-Hispanic Whites (2.00[CI:1.9,2.1] per 100,000), Hispanics (2.0[CI:1.7,2.2] per 100,000), and Non-Hispanic Asians (1.3[CI:0.8,2.0] per 100,000). When examining the Black subgroups, age-adjusted mortality rates among men were highest among WIBB (10.1[CI:7.8,14.0] per 100,000), followed by UBB (7.3[CI:6.4,8.3] per 100,000), and HBB (5.4[CI:3.9,7.5] per 100,000). Within women in Black subgroups, age-adjusted mortality rates were highest among WIBB (5.5[CI:4.2,7.8] per 100,000), followed by UBB (4.9[CI:4.3,5.6] per 100,000), and HBB (4.0[CI:2.8,5.8] per 100,000). When comparing Black groups only, we found WIBB males to have 40% higher death risk of death by MM than UBB (MRR:1.40[CI:1.03,3.40]). The ratio WIBB/UBB in women was (1.11[CI:0.83, 1.64]).

Conclusions: Understudied Black populations show specific and distinct cancer patterns that are missed when aggregated. There is considerable heterogeneity in rates with WIBB Blacks having the highest MM mortality rates when compared to HBB and UBB thus, suggesting factors related to nativity may play a role in MM mortality rates. Differences between these groups identify specific health needs for these growing populations and future research is needed to better understand the epidemiology of MM.

Keywords: myeloma, mortality, disparities, Black, African ancestry

POSTER 36

RACE, NEIGHBORHOOD DEPRIVATION, AND CANCER OUTCOMES

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Background: Cancer outcomes including tolerance to treatment and progression are influenced through demographics and social determinants of health. We hypothesized and explored the mechanistic pathway by which Black patients, and those from more highly deprived backgrounds, would render lifetime exposures of stress and discrimination into poor treatment tolerance, need for dose modifications and ultimately shorter time to cancer progression and death.

Methods: In a pilot, exploratory study within a large mid-Atlantic cancer care system, we phenotypically examined patients with newly diagnosed advanced stage (III/IV) lung cancer using standard, validated questionnaires for lifetime stress, physical symptoms including pain, exposure to lifetime and daily discrimination, social support, trust in healthcare and financial burden at baseline of cancer treatment. Race was self-reported by patients. National deprivation index (NDI) determined via full address and dichotomized at mean score for analysis. Descriptive, comparative, and correlational statistics were used. Qualitative patient interviews explored potential barriers to care.

Results: Preliminary: Twenty-three patients were recruited from 12/20 through 8/22 with full questionnaires for baseline analysis. There were 6 black (26%) and 17 (74%) white patients with advanced stage lung cancer. At baseline there were significantly higher symptom scores ($p < .05$) from patients from deprived neighborhoods for anxiety, fatigue, sleep, interruption of social roles and pain interference. Higher daily and lifetime discrimination was reported by Black patients than White. No differences in race or area deprivation were reported for trust in healthcare and financial burden. Racial and NDI comparison of baseline allostatic load incorporating BMI, Blood pressure, Hgb A1C, Cholesterol, C-Reactive Protein and Triglycerides revealed higher allostatic load for Black and more highly deprived patients, but without significance. Pending analysis of Immunologic/inflammatory stress markers including IL-6, IL-1, TNF and CRP. Lastly the outcomes of treatment symptom sores, need for dose alteration and progression by 6 months will be calculated according to race and area deprivation and correlated to baseline factors and biologic variables. Interviews will be analyzed in a standard qualitative format.

Discussion & Implications: This successful, exploratory study created the template and infrastructure for a larger, replication study beginning in January 2023 analyzing patients with early-stage breast, prostate, lung, pancreatic, and colorectal cancers in the same fashion. Telomere length to measure cellular aging will be added.

POSTER 37

RACIAL DIFFERENCES IN SYMPTOM BURDEN AND PHYSICAL FUNCTIONING AMONG WOMEN RECEIVING EARLY-STAGE BREAST CANCER CHEMOTHERAPY

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Background: Racial differences in symptom burden and physical functioning influencing the ability to tolerate chemotherapy and limiting the dose intensity of treatment is one factor postulated to influence racial disparities in breast cancer mortality. Fatigue and pain are the most commonly distressing symptoms experienced by patients receiving treatment during early-stage cancer treatment.

Methods: A longitudinal, repeated measures (in accordance with early-stage breast cancer chemotherapy schedule) comparative, mixed-methods design was employed. Timepoints of baseline, mid-point and end-point were adjusted as per patient chemotherapy schedule. PROMIS symptom (fatigue, pain) and physical function domains were utilized. PROMIS T-Scores were calculated with higher T-scores indicating worse fatigue, pain and better physical function. **Analyses:** Mixed model analyses of variance (ANOVA) with one within-subjects factor and one between-subjects factor were conducted to determine whether significant differences existed among PROMIS domains over three chemotherapy time points between Black and White patients.

Findings: There were 104 patients, 33% Black, 67% White with a mean age of 54 years; SD:12 years. Time between prechemotherapy and midpoint and between midpoint and endpoint varied according to chemotherapy schedule.

Pain - Mean pain scores deteriorated for Black and White patients over time, but changed differently based on race (interaction term: $F(2, 204) = 3.69, p = .030, \eta_p^2 = .035$). Main effect of race was significant ($F(1, 102) = 10.66, p = .001, \eta_p^2 = .095$) for pain with Black patients experiencing higher levels of pain. Black patients had significantly higher pain scores compared to White patients at midpoint (Mean Difference; MD=6.050, $p = .002$) and endpoint (MD=7.78, $p < .001$). Pain over time deteriorated significantly for Black patients (Within group changes): Black patients scores for pain had significantly deteriorated by endpoint (MD_{T1-T3}=7.438, $p = .001$). Among Whites, pain scores deteriorated from midpoint to endpoint (MD_{T2-T3}=2.596, $p = .021$)

Fatigue - Black patients - Scores for Fatigue significantly increased (deteriorated) at midpoint (MD_{T1-T2}=7.67; $p < .001$) and endpoint (MD_{T1-T3}= 9.27; $p < .001$). Among White patients, fatigue significantly increased at midpoint (MD_{T1-T2}= 6.22) and at endpoint (MD_{T1-T3}=10.89; MD_{T2-T3}=4.66, $ps < .001$).

Physical Activity - Physical activity decreased in Blacks at midpoint (MD_{T1-T2}=6.07) and endpoint (MD_{T1-T3}=7.96; $ps < .001$), and in Whites at midpoint (MD_{T1-T2}=3.58) and endpoint (MD_{T1-T3}=8.26, MD_{T2-T3}=4.68; $ps < .001$).

Results: Significant clinical changes in fatigue and physical activity have been noted in all patients over the course of chemotherapy. Racial differences were found in symptom burden among women receiving ESBC over the course of chemotherapy, particularly for pain.

POSTER 38

THE USABILITY AND ACCEPTABILITY OF A COVID-19 INFORMATIONAL WEBSITE AMONG A SAMPLE OF BLACK/AFRICAN AMERICAN AND LATINX BREAST CANCER SURVIVORS.

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The COVID-19 pandemic has disproportionately impacted minority populations, especially Black/African American and Latinx communities in the USA. Breast cancer survivors from racial and ethnic minority groups may be especially vulnerable to severe COVID-19 outcomes due to their compromised immune systems, ongoing cancer treatment, and the ubiquitous effects of systemic racism. The intersection of breast cancer and COVID-19 presents unique challenges for this population that may mutually exacerbate each of those two coexisting conditions, highlighting the need for more personalized, and targeted education and support. The purpose of this study was to refine an educational website developed for Black/African American and Latinx breast cancer survivors about COVID-19-related information using feedback about content, usability, and acceptability. An academic institution partnered with three community-based organizations (CBOs). The study design is a mixed method usability testing study. We recruited Black/African American and Latinx breast cancer survivors in the greater Washington, D.C. area through CBOs. Initially, participants were given the chance to privately review the website-in depth, following a set of instructions for content review. Then, participants completed a short survey (for sociodemographic information and website rating) and participated in an interview with a research assistant to receive feedback on the content and usability of the website. The study duration for individual participants was approximately 1 hour and 30 minutes and the sample size was 6 participants. Overall, participants expressed high website satisfaction ($M=4.8$, $SD= 0.4$; scale 1-5). Furthermore, participants showed website acceptability, indicating the website as a good resource. The website also demonstrated usability, with participants reporting untroubled navigation. Participants displayed content-specific comprehension, expressing that the website was understandable, and found credibility in the website information. In addition, the website demonstrated cultural sensitivity, with participants agreeing that their communities were appropriately represented on the website. Lastly, participants suggested strategies for targeted website dissemination, including more testimonies from Black/African American and Latinx women, enhancing cultural representation, adding more resources, and including website features to increase user interaction. Results from the study demonstrated preliminary acceptability and usability of the website, among the sample of Black/African American and Latinx breast cancer survivors, with only minor feedback for improvements and integrations. Overall,

this type of research contributes to the understanding of the various challenges that breast cancer survivors from under-resourced populations face. Additionally, this research also helps highlight the types of interventions that are most effective and culturally appropriate for increasing COVID-19 knowledge on under-resourced vulnerable populations.

POSTER 39

UNDERSTANDING NEW YORK CITY AFRICAN IMMIGRANT WOMEN'S BELIEFS ABOUT THE BENEFITS AND BARRIERS TO BREAST CANCER SCREENING

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Racial health inequities in breast cancer screening rates and outcomes in the U.S. are pervasive. Reports on inequities often fail to distinguish between distinct Black populations. Specifically, for African immigrant women, screening engagement as well as barriers and facilitators to screening are understudied but essential to understand in order to produce beneficial intervention. This study addresses this paucity of data by presenting the results of 42 surveys completed by English and/or French speaking African-born women in NYC over the age of 40. The survey collected sociodemographic and healthcare data and measured participants' perceptions of benefits and barriers to mammography. Participants lived in the U.S. for an average of 19.5 years, spoke nineteen African languages, and represented nativity from nine African countries. Our sample's mammography screening adherence rate according to American College of Radiology recommendations was 56.1%; according to American Cancer Society recommendations was 77.4%; and according to U.S. Preventative Services Task Force was 80.0%. In terms of healthcare access, 71.4% (N=30/42) of our sample had some form of health insurance, 85.7% (N=36/42) reported that they had a regular healthcare provider, and 97.5% (N=39/40) had visited a healthcare professional within the last year. Generally, participants agreed with benefits to mammography at a higher rate than barriers. The most endorsed benefits (all agreed with by over 90% of the sample) were that mammography could help find breast cancer early, can help find a breast lump before it is big enough to feel, and that if found early, breast cancer could be successfully treated. The most endorsed barriers, with which approximately 1/3 of participants agreed, were that mammogram is painful and that lack of insurance or being treated rudely at the mammogram center would keep them from having a mammogram. We propose that our population's general engagement with healthcare was a function of the fact that most participants: were involved with faith-based and community-based organizations targeting African-born populations in NYC; spoke English and/or were born in Ghana; and were established immigrants. Furthermore, results indicated that most women in our sample were aware of the importance and value of mammography screening. Still, many acknowledged the potential impact on screening completion of insurance status and treatment by healthcare providers. This demonstrates the importance of multi-level intervention affecting systems and providers of healthcare as well as patients, for whom initiatives should include acknowledgement of structural barriers to screening and resource sharing specific to the community.

POSTER 40

THEQUITALLIANCE: GENDER AFFIRMING CESSATION SUPPORT FOR LGBTQ+ TOBACCO USERS

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The LGBTQ+ community faces various stressors, including stigma, discrimination, and harassment, which are linked to their sexual orientation or gender identity. Additionally, they are targeted by tobacco companies through marketing, which increases tobacco use and other health problems. LGB adults use commercial tobacco products at a higher rate than the general population (25.1% versus 18.8%), and tobacco use is even higher among transgender adults according to the CDC. Without peer support, counseling, nicotine replacement therapy (NRT), and community resources to address barriers to quitting, tobacco users are less likely to succeed in quitting. Research has shown that gender-affirming tobacco cessation interventions can be highly effective in helping LGBTQ+ individuals quit tobacco; however, little is known about its effectiveness in Latinx communities and other groups with intersectional identities.

To improve access to culturally tailored and gender-affirming cessation resources that acknowledge the unique experiences and stressors faced by our community, Cedars-Sinai Cancer COE developed TheQuitAlliance, a LGBTQ+ focused tobacco cessation program funded by the LA County Tobacco Control Unit. This multi-level approach involved web-based resources, information and presentation to the community. A series of gender affirming support groups facilitated by trained Spanish speaking tobacco cessation specialists who are members of the LGBTQ+ community. was offered to tobacco users. The first steps involved improving their knowledge on how tobacco affects specific populations, such as transgender, non-binary, gender non-conforming individuals, people living with HIV, youth, and the types of nicotine replacement therapies available. The Wall Las Memorias and Latino Equality Alliance in Los Angeles County.

RESULTS: Our partners have implemented a screening tool using the *Ask, Advise, and Refer* model, expanded outreach efforts, and successfully identified N=242 LGBTQ+ tobacco users who were referred to our virtual gender affirming support group. Among current smokers who participated in a series of three support groups, 85% (17 of 20) indicated positive attitudes towards the importance of changing their smoking behaviors, readiness to change, and having control over their ability to make positive change right now, while 90% are committed to taking steps towards change right now (18 of 20) Our survey indicated that participating in a gender affirming cessation interventions can increase self efficacy to take steps towards quitting tobacco . Through safe spaces created by The Quit Alliance, we found that LGBTQ+ tobacco users are also able to make connections with others to be supported in their journey to becoming tobacco free.

POSTER 41

PERSISTENT EGFR/K-RAS/SIAH PATHWAY ACTIVATION DRIVES CANCER DISPARITY, THERAPY RESISTANCE, EARLY TUMOR RELAPSE, AND REDUCED SURVIVAL IN TRIPLE-NEGATIVE BREAST CANCER

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Triple-negative breast cancer (TNBC) is the most aggressive breast cancer subtype and disproportionately affects BRCA1 mutation carriers and young Black/African American (AA) women. Black/AA patients with TNBC have the highest mortality and the shortest survival of any racial/ethnic group in the United States. Black/AA women are more likely to develop chemo-resistant TNBC than their white counterparts. Neoadjuvant chemotherapy (NACT) is the standard-of-care (SOC) treatment for high-risk TNBC. With the approval of pembrolizumab, the addition of immune checkpoint blockade (ICB) to NACT has become the new standard for high-risk early-stage TNBC. This immuno-oncology (IO) regimens has significantly improved the pathologic complete response (pCR) rate and event-free survival in TNBC. pCR is a reliable prognostic marker that correlates with tumor remission and good prognosis, whereas pathologic incomplete response (pIR) with high-risk residual cancer burden (RCB) is associated with early tumor relapse, therapy-resistance, and reduced survival. However, clinical uncertainties remain, since many similarly-treated TNBC patients with identical TNM and RCB classifications often experience disparate outcomes. Current tools fall short in accurately detecting cancer disparity and forecasting tumor recurrence with certainty. No prognostic biomarkers are sufficiently predictive for ICB/IO/NACT efficacy in TNBC. Without a guide, pembrolizumab plus chemotherapy is often administered “blindly” in the neoadjuvant setting for TNBC, with potential for adverse side effects.

Supported by strong evidence in developmental, evolutionary, and cancer biology, we propose that persistent EGFR–K-RAS–SIAH pathway activation is a major driving force of TNBC malignancy. The most downstream and evolutionarily conserved signaling gatekeeper, SIAH, is a tumor-specific, therapy-responsive, prognostic biomarker for patient risk stratification and cancer disparity detection in TNBC. High SIAH expression in residual tumors reflects tumor-driving EGFR/K-RAS/SIAH pathway activation (ON) that may correlate with immuno-suppression and ICB resistance. Low SIAH expression in residual

tumors reflect effective treatment and EGFR/K-RAS/SIAH pathway inactivation (OFF) that may correlate with immune responsiveness and ICB sensitivity.

There is a major breast cancer disparity in Hampton Roads Virginia and Richmond City Virginia according to CDC, SEERS, and USCS databases, clearly shown in our large cohort of 1,000 TNBC patients with equal (1:1) black and white representations. We report that TNBC tumors from Black/AA patients have a higher SIAH expression than those from white patients on average. We are validating this finding at Sentara Cancer Network and VCU Massey Cancer Center. We aim to demonstrate the prognostic precision of SIAH expression that may contribute to racial disparity, early tumor relapse, and poor survival.

POSTER 42

EMERGENCY PRESENTATION AS A NOVEL INDICATOR OF U.S. CANCER DISPARITIES BY PATIENT RACE, ETHNICITY, AND INCOME LEVEL

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Data from other high-income countries suggest that 20-50% of cancers are diagnosed during, or soon after, a healthcare episode beginning in the emergency room, with those affected having poor outcomes, including shorter survival. Comparable evidence on these emergency presentations (EPs) for cancer diagnosis from United States (U.S.) populations is scant. While some EPs for cancer may be unavoidable (e.g., due to aggressive tumor biology or incidental diagnosis), the fraction of EPs that are truly unavoidable is not expected to vary substantially by patient race, ethnicity, or neighborhood socioeconomic status (nSES). Conversely, potentially avoidable EPs originating from issues of healthcare access or discrimination may be reflected in differences in EP prevalence across these groups. Using Surveillance Epidemiology and End Results Medicare linked data, we developed an algorithm to identify individuals with EPs for a first, primary diagnosis of 16 different cancer types. We compared EP prevalence across groups defined by patient race, ethnicity, and nSES, calculating standardized mean differences (SMDs). Among 961,143 Medicare beneficiaries, proportion of cancers diagnosed via EP varied substantially across cancer type, and within cancer type by patient race, ethnicity, and nSES. For example, EP is suspected for 2% (NHW) to 4% (NHB) of patients with prostate cancer, 15% (highest nSES) to 23% (Hispanic) of patients with lymphoma, 18% (highest nSES) to 29% (NHB) of patients with liver cancer, 29% (NHW) to 36% (NHB) of patients with colon cancer, and 25% (highest nSES) to 38% (NHB) of patients with pancreatic cancer. Compared to NHWs, SMDs were >15% for NHB patients with 11 cancer types: esophagus (+48%), ovary (+29%), leukemia (+27%), stomach (+25%), lung (+23%), pancreas (+23%), liver (+22%), uterus (+22%), myeloma (+18%), colon (+16%), and rectum (+16%); and SMDs were >15% for Hispanic patients with 4 cancer types: leukemia (+22%), esophagus (+21%), lymphoma (+19%), and pancreas (+18%). Further, compared to highest nSES, SMDs were >15% for lowest nSES patients with 8 of 16 cancer types. Observed differences were not fully explained by advanced stage at diagnosis: NHB and lowest nSES patients with bladder cancer had +24%, and +15% more EPs but only +16% and +9% more distant stage tumors, respectively. The substantially higher likelihood of EP seen in NHB, Hispanic, and lowest nSES individuals suggest that EP may be a valuable indicator of U.S. cancer disparities. Future research will evaluate EP disparities' impact on cancer mortality and cancer-related healthcare delivery.

POSTER 43

RELATIONSHIP BETWEEN SOCIAL INFLUENCES OF HEALTH AND LATE-STAGE LUNG CANCER DIAGNOSIS IN URBAN NEIGHBORHOODS

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There are well-known racial/ethnic, economic, and geographic inequities for late-stage lung cancer (LSLC) diagnosis which persist across the cancer continuum. Although cancers may have long latency periods, current neighborhood factors, including inability to access health care and inadequate transportation, can affect stage at diagnosis and increase biological risk.

We used the social vulnerability module index (SVI), published by the Center for Disease Control and Prevention in 2022, to evaluate relationship between social influences of health (e.g., %poverty, %insured, and %minority populations) and LSLC, among residents of Allegheny County, an urban county in Western Pennsylvania, with significant lung cancer (LC) disparities by race (Blacks vs. Whites: late-stage incidence, 57.0 vs. 41.5; mortality, 48.9 vs. 37.4, per 100,000 population, respectively), and socioeconomic status. Data on LC cases diagnosed between 2011-2015 were obtained from Pennsylvania State Cancer Registry; LSLC cases were identified using SEER 2000 summary staging manual. Cases were geocoded and summarized at census-tract level. The SVI, available at the tract level, and ranging between 0-1, was developed using 14 population-based indicators, representing persistent multiple social stressors that render communities more socially vulnerable. For analyses, SVI was categorized using quartile cutoffs, with highest quartile representing highest social vulnerability. Generalized estimating equation model (GEE) with Poisson distribution were used to adjust for spatial autocorrelation and compute relative risk (RR) for LSLC incident counts, adjusting for age, race, sex, and environmental burden index.

A total of 5486 individuals diagnosed with LC (index case with staging information), over 5-year period, were included in the analyses; 3942 (72%) were LSLC cases while 1186 (22%) were early-stage. The mean age for individuals with LSLC was 70 (± 11) years; 49% males; 87% Whites and 12% were Black. Results of multivariable GEE model found significant increase in relative risk (RR) for LSLC counts with increase in each quartile (Q) category [Q2: RR=1.15; 95%CI, 1.05-1.24; Q3: RR=1.23; 95%CI, 1.13-1.33; Q4: RR=1.51; 95%CI, 1.37-1.66] when compared to the 1st quartile (Q1), respectively.

Despite the presence of world-renowned cancer center and several tertiary-care hospitals in Allegheny County, our study found significant disparities in LC diagnosis at the neighborhood-level that may be linked with social inequities. Low-dose computed tomography screening in high-risk individuals can reduce LC mortality by 20%; but the uptake remains low (5-6%). Interventions addressing the social risk factors and tailored to marginalized populations are warranted to overcome barriers to LC screening and early detection and reduce disparities in LC mortality.

POSTER 44

THE HAIR TALES OF PREGNANT WOMEN OF COLOR IN NEW YORK CITY

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Exposure to endocrine disrupting chemicals (EDCs), such as phthalates, can have negative fetal and maternal health outcomes, including an increased risk of fetal growth disruption and breast cancer. Notably, women of color are the largest consumers of personal care products, which are a main source of EDC exposure. The Let's Reclaim Our Ancestral Roots (Let's R.O.A.R) Study proposed a behavioral intervention during pregnancy to promote reduced use of phthalate-containing hair care products (HCPs). Here, we conducted a qualitative study through educational sessions and semi-structured focus groups to evaluate the factors that influenced the hair journey and product choices of women of color at various stages of life, including their current pregnancy. Of the 47 individuals who were eligible, consented, and enrolled in the study, 31 participated in an English or Spanish educational session discussing the adverse implications of using phthalate-containing HCPs. In a brief post-session focus group, we gathered feedback on the sessions and learned more about their hair journey. We had the English and Spanish sessions transcribed and reviewed for accuracy. We imported all transcripts into NVivo 12 to manage and analyze the data through thematic analysis and coding. We framed questions to capture the participants' unique hair journeys from birth to current pregnancy and identified two main periods: before gaining agency over their hair care and product choices and after agency. We identified three dominant themes: (1) players of influence, which included individuals or entities that influenced their hair experiences, (2) products, which involved all conversations of hair products, and (3) culture, which discussed the influence of culture on their hair journeys. These three themes intersected with each other and impacted the participants' sense of self differently at each period of the hair journey. The data reveals the importance of intervening prior to participants gaining agency of their hair choices. This study provides context of psychosocial and sociodemographic narratives of identity and culture and will be integral to the successful translation of intervention results.

POSTER 45

DEMOGRAPHIC COMPARISON OF THE BURDEN OF ENDOSCOPICALLY SCREENABLE CANCERS IN THE UNITED STATES

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Introduction

Gastrointestinal cancer incidence varies by race and ethnicity. In the US, screening guidelines exist for esophageal cancer (EC) and colorectal cancer (CRC), but not for gastric cancer (GC) despite being amenable to endoscopic screening. This is despite a consistently higher observed incidence of GC compared to EC in the US—with a strikingly disproportionate burden of GC among US immigrants and other non-white racial and ethnic groups. Asian Americans are currently the fastest growing racial group. In order to capture shifting epidemiologic trends, we performed a comparative analysis of GC, CRC, and EC incidence across major racial and ethnic groups in the US, including the 8 most populous Asian origin groups, to inform interception strategies.

Methods

We used SEER*Stat to compare GC, CRC, and EC incidence rates across non-Hispanic white (NHW), non-Hispanic black (NHB), Hispanic, and the 8 largest Asian American populations using the Surveillance, Epidemiology, and End Results (SEER) 9 registries (2010-2014). SEER-9 was intentionally selected for this analysis since it contains the most recent complete data for cancer cases as well as race and disaggregated ethnic-specific population counts.

Results

Noncardia GC incidence was highest among Korean (18.7 cases [95% CI, 17.0-20.5] per 100,000) and lowest among NHW (1.4 cases [95% CI, 1.4-1.5] per 100,000) Americans. CRC incidence was highest among NHB, Southeast Asian, and Japanese (35.9 cases, 34.2 cases, and 33.8 cases per 100,000, respectively) Americans and lowest in South Asian Americans (18.9 cases per 100,000). EC incidence was greatest in NHW (4.7 cases [95% CI, 4.6-4.8] per 100,000) and lowest in Filipino (1.2 cases [95% CI, 1.0-1.5] per 100,000) Americans. Rectal cancer and noncardia GC incidence were similar in Chinese, Vietnamese, and Southeast Asian Americans. Among Korean Americans, the incidence of noncardia GC exceeded rectal cancer (11.4 cases [95% CI, 10.1-12.7] per 100,000) and in Korean American men, noncardia GC slightly exceeded colon cancer incidence (25.5 vs 22.4 cases per 100,000). GC surpassed EC incidence in all non-white groups.

Conclusions

Non-white racial and ethnic groups experience a disproportionate burden of GC for which systematic programs for cancer attenuation, similar to CRC and EC, are needed. Moreover, there is a major unmet opportunity to increase participation in current screening programs and other preventative efforts for CRC and EC. When considering that Asian Americans are expected to become the largest immigrant group by 2065, the unmet need for improved gastrointestinal cancer prevention and early detection efforts is clear.

POSTER 46

PREDIAGNOSIS SYMPTOMS REPORTED AMONG ENDOMETRIAL CANCER SURVIVORS

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Introduction: Incidence and mortality of endometrial cancer (EC) are increasing, with significant outcome disparities between Black and White patients. Postmenopausal bleeding is generally accepted as the most common symptom of EC. However, symptom experience may vary according to the presence of uterine fibroids or comorbid obesity, conditions which are more common among Black women. The aim of this study is to describe the distribution of pre-diagnosis symptoms and reporting by endometrial cancer (EC) survivors by race.

Methods: This study was a preliminary analysis of the Carolina Endometrial Cancer Study. We used baseline survey data to describe the distribution of 6 menstrual and 7 non-menstrual pre-diagnosis symptoms among Black and White participants. We also assessed differences in survivors' pre-diagnosis knowledge about postmenopausal bleeding and reporting of symptoms to healthcare providers. We calculated prevalence ratios (PR) and 95% confidence intervals (CI) with Poisson regression for the association between race and symptom experience.

Results: Among a total of 355 participants, 120 self-identified as Black or African American and 213 as White. The average age at EC diagnosis was 60.06 years. Most participants were overweight (16%) or obese (69%). After adjusting for age, Black women were 8% less likely to report experiencing any menstrual symptoms compared to White (PR=0.92; 95% CI 0.84-0.99). Heavy (63% Black, 59% White) or irregular (36% Black, 50% White) periods and postmenopausal bleeding (59% Black, 70% White) were the most commonly reported menstrual symptoms. Non-menstrual symptoms were reported by 69% of Black women and 78% of White women (age-adjusted PR=0.90; 0.79, 1.04). Fatigue (37%), abdominal bloating or early satiety (30%), or change in urinary frequency (28%) were the most commonly reported non-menstrual symptoms among Black women. The most common non-menstrual symptoms among White women were fatigue (49%), abnormal vaginal discharge (37%) or pelvic pressure (34%). Only 38 (21%) of participants reported knowing that EC can cause bleeding after menopause prior to their diagnosis. Despite this low rate of knowledge about this symptom, 93% of women reported discussing this symptom with a healthcare provider; discussion prevalence did not vary by race.

Discussion: Pre-diagnosis symptoms were generally similar by race. The overall low rate of knowledge pertaining to postmenopausal bleeding as a potential symptom for endometrial cancer suggests opportunity for improved patient education. Further study is needed to assess how pre-diagnosis experiences contribute to Black-White EC outcome disparities.

POSTER 47

PROTEOMIC ANALYSIS OF PDAC IN BLACK PATIENTS REVEALS A NEW SUBTYPE SPECIFICATION FACTOR

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Racial/ethnic health disparities compound the barriers to effective clinical management of pancreatic ductal adenocarcinoma (PDAC). Latino/Hispanic (L/H) patients have a significant survival advantage over Blacks (African, African American, or African Caribbean) and Whites with PDAC. Blacks experience the highest incidence rates and worse overall survival compared to Whites and L/H even when socioeconomic and tumor stages are controlled, suggesting ancestry and/or environment may contribute to these disparities that may be distinguished at the molecular level. Emerging clinical strategies aim to incorporate PDAC subtype classifications in treatment decisions as a first step toward precision therapy. Indeed, our group was first to demonstrate that proteomics can identify PDAC subtypes that are predictive of clinical response to chemotherapy. Unfortunately, existing subtype models are built from cohorts of predominantly White patients and subtypes are not predictive of survival in the underrepresented Black patients; a discrepancy with the potential to exacerbate PDAC health disparities as clinical applications using subtyping advance. The failure in predictive value of molecular subtyping in Black patients highlights the need to define the molecular signatures in PDAC using a racially/ethnically inclusive approach. To address this issue, we performed a quantitative proteomic analysis of PDACs arising from a diverse cohort of Black and White patients. A total of 183 proteins were found to be differentially regulated (75 downregulated; 108 upregulated) between the two racial cohorts. RNF2 was one of the significantly upregulated proteins in PDACs arising in Black patients. RNF2 is a core component of the epigenetic polycomb repressor complex 1 (PRC1), which promotes acinar cell dedifferentiation during PDAC carcinogenesis and is associated with poor survival outcomes in PDAC. However, the molecular mechanisms by which RNF2 contributes to the etiology of PDAC are poorly defined. CHIP-seq targeting RNF2 revealed that it represses transcript levels of *GATA6*, a master regulator of both PDAC subtype specification and lineage differentiation. Furthermore, knockdown of RNF2 in PDAC cell lines facilitates subtype transdifferentiation from the Basal to the Classical subtype and reduced expression of inflammation genes. These findings are consistent with our proteomic analysis that identified an increase in the Inflammatory subtype signature, an increase in Basal subtype markers, and a decrease in Classical subtype markers in PDACs from Black patients. Thus, the elevated expression of RNF2 in PDACs from Blacks and its negative regulation of *GATA6* represent a previously undefined molecular pathway that regulates subtype specification that may contribute to health disparities in pancreatic cancer.

POSTER 48

DIFFERENCES IN PRETREATMENT BLOOD COUNTS BUT NOT INCIDENCE OF HEMATOLOGIC TOXICITY IN BLACK AND NON-BLACK WOMEN RECEIVING CHEMOTHERAPY FOR BREAST CANCER

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Background: Black women have significantly higher breast cancer mortality rates compared to non-Black women. Reasons for this disparity are unclear, but differences in the relative dose intensity of chemotherapy received may be a contributing factor. Because hematologic toxicity is a common reason for treatment delays and discontinuation, the objective of this study was to compare pretreatment blood counts and incidence of hematologic toxicity between Black and non-Black women receiving chemotherapy for treatment of breast cancer.

Methods: Women with a diagnosis of lymph node positive, invasive breast cancer who received either neoadjuvant or adjuvant chemotherapy with anthracycline- and/or taxane-containing regimens between 2012-2019 and had a staging CT within 12 weeks of chemotherapy initiation were included in this retrospective study. Data on age, race, cancer staging at diagnosis, comorbidities, height and weight, chemotherapy regimen and dose, and use of supportive care medications, including hematopoietic colony stimulating factors (CSFs), were abstracted from the electronic health record. Complete blood counts and comprehensive metabolic laboratory panels were obtained from the most proximal blood draw preceding day 1 of each chemotherapy cycle through 30 days after the final cycle. Incidence of grade 3 or higher toxicity (yes/no) was determined using the Common Toxicity Criteria for Adverse Events (version 5.0). Linear regression analyses were used to test for differences in baseline blood counts between Black and non-Black women, and Fisher's Exact Test was used to test for differences in incidence of hematologic toxicity stratified by chemotherapy regimen.

Results: Black women in the study cohort (n=150) were older (mean: 53.1 vs 48.7 years) and had higher body mass index (BMI, mean: 31.7 vs. 26.4 kg/m²) at baseline compared to non-Black women (n=115). Pre-chemotherapy mean hemoglobin (12.3 vs. 13.0 g/dL, p<0.01), hematocrit (37.8 vs. 39.2%, p<0.01), white blood cell counts (6.8 vs. 7.4/uL, p=0.02) and neutrophil counts (4.1 vs 5.1/uL p<0.01) were statistically significantly lower in Black women compared to non-Black women after adjustment for BMI. There were no significant differences in baseline red blood cell or platelet counts. Most women (91%) received CSF at some point during chemotherapy. No statistically significant differences in incidence of grade 3 or higher hematologic toxicity were observed between Black and non-Black women.

Conclusions: Although baseline hemoglobin, hematocrit, white blood cell and neutrophil counts were lower among Black compared to non-Black women, no differences in the incidence of grade 3 or higher hematologic toxicity were observed during chemotherapy.

POSTER 49

GLUTAMATE METABOLIC ENZYMES GLUD1/2 AND GPX4 ARE ASSOCIATED WITH TUMOR SIZE IN BLACK WOMEN WITH INVASIVE LOBULAR BREAST CANCER

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Background and Objective: Invasive Lobular Carcinoma (ILC) is a special histologic type of breast cancer with unique genetic and biological features. ILC may be less dependent on glucose metabolism than Invasive Ductal Carcinoma (IDC), instead relying more on lipid and amino acid metabolism. Our lab has previously published that expression of metabotropic glutamate receptors is increased in more rapidly growing and therapy-resistant cell line models of ILC. We hypothesized that increased expression of glutamate transporters and regulatory enzymes is associated with poor prognostic features.

Methods and Analysis: We used multispectral immunohistochemical staining to measure the expression of four functionally related proteins: CD98, GLUD1/2, GPX4, and SLC7A11 in an ethnically diverse cohort of 72 women with ILC. The cohort was in a two-fold redundant tissue microarray (TMA) format comprised of primary tumors. SLC7A11 and CD98 form a heterodimer that exports glutamate from, and imports cystine to, the cell. GLUD1/2 are two isoenzymes that convert glutamate into α -ketoglutarate to replenish the TCA cycle, or they can recycle ammonia to support amino acid synthesis. GPX4 is an enzyme that protects cells from lipid peroxidation-induced death. We compared expression of these proteins with clinical, pathological, and demographic variables (overall survival, hormone receptor expression, tumor size, race, age) using t test/ANOVA, Kaplan-Meier survival analysis, and linear regression.

Results: The percentage of ILC tumor cells stained positive for GLUD1/2 and GPX4 was significantly higher than for CD98 or SLC7A11, so further analyses focused on these. Women with a combination of high (above median) GLUD1/2+ (>49%) and GPX4+ (>54%) expression had a trend toward decreased survival. GPX4, GLUD1/2, and estrogen receptor (ER) expression were associated with tumor size in the entire cohort, but this relationship was markedly stronger in Black women. In univariate analyses, GLUD1/2 and GPX4 expression were each associated with tumor size in Black women, but not in the entire cohort. GPX4 expression and tumor size were both significantly higher in Black women over 60 years of age, compared to those under 60.

Conclusion: Based on our preliminary data, GLUD1/2 and GPX4 expression may be prognostic in ILC, as our results show that tumor size increases with higher expression of these proteins (especially among Black women).

POSTER 50

GEOGRAPHICAL DISPARITIES IN LUNG CANCER IN CANADA: A REVIEW

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Compared to Canada's western provinces, the eastern provinces are disproportionately affected by lung cancer, both in terms of incidence and mortality rates. The main factors associated with this disparity remain unclear. Therefore, this paper examines the studies that have been conducted on the various factors associated with geographic disparities in lung cancer in Canada.