IA-01 Health disparity research: The new frontier of research Robert A. Winn. VCU Massey Cancer Center, Richmond, VA.

In 2020, the AACR's U.S. Cancer Disparities Progress Report showed that the there is still a significant gap in cancer incidence and mortality between white Americans and other racial and ethnic groups. That's not because the science hasn't progressed or because people of color are biologically predisposed to cancer. It's because the systems and structures put in place decades ago continue to harm the health of racial and ethnic minorities. Red-lining in the 1930s created segregated housing, and then the creation of the national highway system decimated majority-Black neighborhoods, leaving them treeless, polluted, and lacking healthy food and medical facilities. As a result, people living in these neighborhoods are more likely to get cancer and also more likely to die from it. So, when COVID-19 hit, many of us were not surprised that communities of color were disproportionately affected. And the current situation with COVID-19 vaccines is a great demonstration that while science is necessary for improving health, it's not sufficient. Those amazingly effective vaccines can't keep hospitals from being overwhelmed if a large chunk of the population won't get the shot, just as advances in cancer screening and treatment can't end disparities if they're predominantly going to wealthy white people. This realization has been one of our blind spots as scientists and physicians. Not only must work toward equitable access to care, but we must also work on building trust in medicine, which we do by demonstrating that we're trustworthy. There's a science to it, though we're going to have to allow for greater flexibility and messiness than we're accustomed to.

IA-02 **The state of possible** Loriana Hernandez-Aldama. ArmorUp for LIFE, Atlanta, GA.

Emmy award winning journalist, international speaker, 2x cancer survivor and author of "Becoming the Story: The Power of PREHAB" — Loriana Hernandez-Aldama kicks off the conference with an advocate keynote detailing her "State of Possible" as she breaks down how to make more patients of color possible with her 3P protocol —Prepare-Present-Prevail®. In a inspirational and transparent message, the former network medical reporter will share her own patient journey, the challenges she faced as a Latina, and the voids and discoveries she made when she found herself on the other side of healthcare— this time as a patient— after a diagnosis of AML Leukemia. Loriana says it took her world flipping upside down and nearly losing it all (including her DNA) for her to gain perspective and discover the biggest breaking stories of her career and the unmet needs of the minority communities. And at every turn, the lack of diversity in clinical trials impacted her chance of survival as Loriana struggled though leukemia, a bone marrow transplant, breast cancer and now survivorship. Today, Loriana is on a mission through her non-profit, ArmorUp for LIFE, to amplify the patient voice and improve patient outcomes through risk reduction (PREHAB) in our underserved communities so we can position communities of color to PREVAIL. Loriana says, "our genetic codes may set us up for failure… our zip codes should not."

IA-03 Making progress, together: An inclusive, broad-based approach to reducing excess burden of breast cancer among African American women in St Louis - with lessons for national implementation. Graham A. Colditz. Siteman Cancer Center and Washington University in St. Louis, Saint Louis, MO.

Breast cancer deaths in Missouri are among the highest in the Nation. In St Louis City and North County late-stage diagnosis and mortality have remained high. Cancer disparities can be driven by behavioral risk factors, by health systems, and by biology. Research on all these aspects must be rewarded in academic promotion and tenure review. Siteman created the Program for the Elimination of Cancer Disparities (PECaD) to build community partnerships and develop outreach and education; conduct quality improvement and research in breast health services; and train community members in public health research principles. We developed a breast cancer community partnership in 2007 and identified priorities for the community and the partnership. These included improve awareness of prevention and breast health services, build trust, develop strategies to help patients keep appointments, support adherence to routine screening. We partnered with the African American newspaper (The St Louis American), public library, and federally qualified health centers. In collaboration with FQHCs, we evaluated referral patterns and identified strategies to improve communication between providers. Using the collective impact model to sustain change, for over a decade PECaD supports the St Louis Regional Breast Navigator workgroup. Diagnoses of breast cancer among Black women were 32% stage III/IV in 2000. By 2019, Siteman had expanded services and partnerships to reduce late-stage diagnosis to 16.4% of incident cancers among Black women, still higher than 9.8% observed among white women. To ensure access to clinical trials we implemented system changes for monitoring trial protocols, defining eligibility targets by race, and monitored accruals by race, integrating the process into PRMC and Siteman leadership review. We reported breast cacner outcomes from SEER and Missouri cancer registries by race and engaged bench researchers to study pathways that may drive disparities. They now study pathways that may drive triple negative breast cancer in African American women and DNA repair pathways that may modify response to treatment. This includes research by Dr. Weber (breast program) on adenosine deaminase acting on RNA (ADAR1, encoded by ADAR) and by Dr. Shao on repair of double strand DNA breaks that may counteract therapy for TNBC. We have expanded community service aspects of promotion review traditionally framed as service to medical center, university, and community. We now specifically call out service to Siteman through our Research Programs or Community Outreach and Engagement activities. Thus, faculty can make explicit their contributions to diversity, equity, and inclusion, and their disparities focused research. By working at multiple levels, we have improved access to screening and breast health services, improving stage at diagnosis among African American women. We have engaged bench scientists to address excess risk of TNBC in African American women, and have used the promotion criteria to reward disparities and community engaged research.

IA-04 Leveraging the potential of artificial and machine learning technologies to address cancer health disparities Irene Dankwa-Mullan. IBM Watson Health, Bethesda, MD.

How can we realize the potential of artificial intelligence and machine learning for addressing cancer inequities and advancing cancer health disparities research? This presentation will discuss areas where bias can be introduced into the AI and machine learning design, development, implementation, use and standardization for cancer care. What are the factors that contribute to bias in the research continuum and how can we mitigate them? The presentation will provide some promising and actionable examples of how we can leverage the transformative potential of AI and machine learning to address cancer health disparities.

IA-07 Genetic ancestry and lung cancer somatic mutations in patients of Latin American descent: Etiology and treatment implications Jian Carrot-Zhang[1], Giovanny Soca-Chafre[2], Nick Patterson[3], Aaron Thorner[1], Anwesha Nag[1], Jacqueline Watson[1], Giulio Genovese[3], July Rodriguez[4], Maya Gelbard[1], Luis Corrales-Rodriguez[5], Yoichiro Mitsuishi[6], Gavin Ha[7], Joshua Campbell[8], Geoffrey Oxnard[1], Oscar Arrieta[2], Andres Cardona[4], Alexander Gusev[1], Matthew Meyerson[1]. [1]Dana-Farber Cancer Institute, Boston, MA, [2]Instituto Nacional de Cancerologia, Mexico City, Mexico, [3]Broad Institute, Cambridge, MA, [4]Foundation for Clinical and Applied Cancer Research – FICMAC, Bogota, Colombia, [5]Hospital San Juan de Dios, San Jose, Costa Rica, [6]Juntendo University, Tokyo, Japan, [7]Fred Hutchinson Cancer Research Institute, Seattle, WA, [8]Boston University School of Medicine, Boston, MA.

Inherited lung cancer risk, particularly in nonsmokers, is poorly understood. In particular, the frequency of somatic *EGFR* and *KRAS* mutations in lung cancer varies by ethnicity. Somatic *EGFR* mutation rates are higher in lung cancers from patients with East Asian ancestry and lower in patients with European or African ancestry. Somatic *KRAS* mutation rates show the opposite pattern. In patients from Latin America, somatic lung cancer *EGFR* mutation rates vary by country, highest in countries with more Native American ancestry. To ask whether the somatic genome in lung cancer is affected by ethnicity related germline risk, we studied genomes from 1,153 lung cancers from Mexico and Colombia. This study revealed striking associations between ancestry and somatic lung cancer alterations, including tumor mutational burden, and specific driver mutations in *EGFR, KRAS*, and *STK11*. A local ancestry score was more strongly correlated with *EGFR* mutation frequency compared with global ancestry correlation, suggesting that germline genetics (rather than environmental exposure) underlie these disparities. Our study suggests that the variation in *EGFR* and *KRAS* mutation frequency in lung cancer is associated with genetic ancestry in patients from Latin America, and suggests further studies to identify germline alleles that underpin this association. If we find a germline locus, this might help in improving lung cancer prevention and screening for populations of Latin American origin and others. Furthermore, multiple studies now highlight the special importance of *EGFR* mutation screening and EGFR-directed targeted therapy for lung cancer patients in Latin America and with origins in Latin America.

IA-09 Liver cancer and differences across Hispanic groups: Importance of disaggregation in understanding cancer disparities Paulo S. Pinheiro. University of Miami Sylvester Comprehensive Cancer Center, Miami, FL.

The incidence of hepatocellular carcinoma (HCC) has risen considerably in the US since 1980. The main causes include metabolic disorders (NAFLD, diabetes, obesity, metabolic syndrome), alcohol-related disease (ALD) and hepatitis C and B virus infections (HCV, HBV). Etiology-specific HCC incidence rates by detailed race-ethnicity are needed to improve HCC control and prevention efforts. All HCC cases diagnosed in Florida during 2005-2018 were linked to statewide hospital discharge data to determine etiology. Age-specific and age-adjusted rates were used to assess the intersection between etiology and detailed racial-ethnicities, including non-Hispanic White, non-Hispanic Black and Hispanic groups: Mexican, Cuban, Puerto Rican, Dominican, South, Central American. Of 19,956 HCC cases including 3,660 Hispanics, 87% matched with discharge data. For 2012-2018, HCV was the leading cause of HCC White, Black and Hispanic men (45.4%, 54.7% and 41.0% respectively) followed by NAFLD-related metabolic disorders and ALD . The leading cause of HCC among White and Black women was also HCV (38.3% and 50.2%) while for Hispanic women NAFLD-HCC (46.7%) was the most common form. Puerto Rican men had the highest HCV-HCC rates, 10.2 per 100 000. Metabolic-HCC rates were highest among populations above age 70 and among all Hispanics except Cubans. Mexican men had high rates of ALD-HCC. HCC etiology is associated with specific race/ethnicity. While HCV-related HCC rates are projected to decrease soon, HCC will continue to affect Hispanics disproportionately, based on higher rates of metabolic-HCC and ALD-HCC. Multifaceted approaches for HCC control and prevention are needed.

IA-11 Practical considerations in setting up a biobank Hanina Hibshoosh. Columbia University Irving Medical Center, New York, NY.

Biobanks are incredible natural treasures that in the age of personalized medicine and cost effective scaled multi-omic interrogation have become front and center in enabling the clinical and research enterprise. Despite this recognition, significant challenges exist in their operations. Traditional tissue banking Life cycle is summarized: Patient identification, consent, acquisition (generic/project specific), storage, processing, annotation, cohort identification for research and disbursal of tissues and related products and tracking/linkage to other resources containing data and material. Select topics in a banks practical operations will be briefly discussed including: 1. Not "normalizing" the description of these incredible treasures of nature, 2. Viewing them through the prism of their short and long term value, 3. Importance of scale and diversity, 4. Combined clinical and research utility, 5. Need to expand beyond operating room based collection to anywhere, anytime any analyte, 6. Distinguishing between and enabling population level collection and project and patient specific collection processes and its application to underrepresented populations , 7. Defining/identifying key skills required for its operating personnel, 8. Financial model beyond institutional and fee for service- need to nestle in an income generating facility and providing banking complimentary services , 9. Need for next generation platform to close gaps by reducing barriers to research, 10. Increase utilization and enable a collaboration platform, and 11. Procurement versus traditional banking function: supporting fresh tissue collection not for banking but PDX, organoids, single cell work, 12. Dedicated versus "Federated" system of operations. The above will enable successful implementation of biobanking operations and or their optimization.

IA-13 Using large, prospective cohort data to elucidate sexual orientation-related cancer disparities Brittany Charlton. Harvard Medical School, Boston, MA.

Nearly half of U.S. men and women will develop cancer in their lifetime, but certain groups, such as sexual minorities (e.g., lesbian, gay, bisexual [LGB] individuals), may be at greater risk. For almost 20 years, the Institute of Medicine has warned of a potential elevated cancer risk among sexual minorities because known risk factors—nulliparity, obesity, smoking, alcohol use—are more common than among heterosexuals. However, national cancer registries do not collect sexual orientation, so there is no way to quantify the magnitude of this burden. Without these data, sexual minorities may continue to be disproportionately burdened by cancers. Longitudinal cohort studies with substantial statistical power and high-quality assessments of sexual orientation and cancer endpoints are the best way to fill this gap. Such studies will provide the empirical evidence needed to develop public health interventions and offer data that are not feasible for cancer registries to collect, such as self-reported dietary intake. This grant's goal is to quantify cancer disparities with longitudinal cohort data and, using a life course framework, gain a nuanced understanding of factors across the lifespan, which may confer different risk in various sexual orientation groups. To address these gaps, we analyzed national data from four longitudinal cohorts: the Nurses' Health Study (NHS) 2 and 3 and the Growing Up Today Study (GUTS) 1 and 2. These cohorts include nearly 200,000 male and female participants, 8% (or nearly 15,000) of whom are sexual minorities, giving ample statistical power. The data span from the prenatal period through adulthood and include detailed sexual orientation measures and biospecimens as well as thousands of cancer cases, including hundreds in sexual minorities. With these data, we can provide more accurate estimates of cancer incidence across sexual orientation groups and a more nuanced understanding of mediating risk factors. The findings will highlight new avenues for health equity and interventions for all people, regardless of sexual orientation.

IA-14 Findings from Out: The National Cancer Survey Scout. National LGBT Cancer Network, Providence, RI.

For approximately six months in 2020-21 The National LGBT Cancer Network fielded Out: The National Cancer Survey. A total of 2,700 respondents were received. While only a small fraction of the estimated 100,000 LGBTQI people in the U.S. who are diagnosed with cancer every year, this represents the largest such survey of its kind, yielding new insights into the experiences of LGBTQI people with cancer. Top themes of responses included the following: while many reported welcoming care trans or BIPOC people reported less welcome; getting support for our families of choice was more complicated; few could access desired tailored resources; and there was a reported level of rudeness that may represent micro-aggressions. This presentation will give an overview of the major findings and further areas of inquiry emerging from these findings and present back reflections on what these data say about future areas of mainstream and LGBTQI cancer research.

IA-15 Serum testosterone and estradiol modify risk of anal HPV16/18 infections but only estradiol and Estrogen Receptor 1-alpha influences risk for histological high-grade squamous intraepithelial lesions (HSIL) Dorothy J. Wiley. UCLA School of Nursing, Los Angeles, CA.

Background: We reported higher serum free testosterone (FT) and anal-HPV16/18 infection prevalence in MSM. Associations between serum-FT and -estradiol, anal-HPV16/18 infections, and Estrogen Receptor 1α (ESR1) and histological HSIL (hHSIL) are unclear. **Methods**: Three serial cross-sectional analyses were performed using data for 489 HIV-infected/HIV-uninfected adult males enrolled in the Multicenter AIDS Cohort Study. For 340, anal cytology residuals were evaluated for 37 HPVs (PCR). For 214 men, 336 HRA/biopsies were evaluated for hHSIL; among them, <3 biopsy specimens for 47% (102) were assessed for ESR1 using immunohistochemistry. Serum specimen collection preceded HPV and HRA/biopsy visits by 24(+9) months. Each specimen was tested for Sex Hormone Binding Globulin (radioimmunoassay), and total testosterone and estradiol (TE2) (Liquid chromatography/mass spectrometry); serum-FT (pg/mL) was estimated. HPVs were classified: HPV16/18+, other Group-1 and -2 high-risk HPVs+ (hrHPVs); low-risk HPVs+ (lrHPVs), and none. Biopsies were evaluated as hHSIL vs. <hHSIL. Formalin-fixed paraffin-embedded anal biopsy (~4μm) were prepared and stained using a standard ESR1 immunohistochemistry protocol and were scored for immunofluorescence (0-3+) and percent affected (0-100%) by two pathologists. Multivariable-adjusted GEE logistic regression models assessed relationships between $\log_e$-transformed FT, TE2 and ESR1 (%), and HPV16/18+ and hHSIL separately. Self-reported sociodemographic/behavioral covariates were included. **Results**: Adjusted estimates showed higher FT increased odds of HPV16/18-infection (OR=1.87 (1.2-2.92)), but odds were inversely associated with TE2 (OR=0.68(0.49-0.94)). White race and other Group-1-hrHPVs+ increased odds for HPV16/18 infection (OR=2.61(1.16-5.87) and (OR=1.65(1.11-2.46)), but neither HIV-infection/CD4+count, receptive anal intercourse partnerships; exogenous-testosterone use, nor smoking increased HPV16/18-infection odds. Serum-TE2 and hHSIL were inversely associated (OR=0.51(0.3-0.89)) Serum-FT was not associated with odds of hHSIL (OR=1.09(0.78-1.74)), but. men testing HPV16/18+ showed higher odds of hHSIL than hrHPV-negative men (OR=4.27(1.71-10.66)). Median IHC ER1α-expression intensity was lower among hHSIL affected men: 10% (hHSIL) vs. 40% (<hHSIL). The percent of immunofluorescence intensity (%) was inversely associated with odds of hHSIL (OR=0.96(0.93-0.99). **Conclusions**: Higher serum-FT increased odds of anal HPV16/18-infection but not hHSIL. Higher serum-TE2 was inversely associated with the odds of both HPV16/18+ and hHSIL, and ESR1 expression in tissue is lower in hHSIL- than <hHSIL-affected epithelium. More research evaluating sex hormones and ERα expression in stroma and epithelial cells of HPV-associated HSIL/<HSIL-affected tissue is needed.

IA-17 Why study cancer health disparities globally: US and global perspectives Camille C.R. Ragin. Fox Chase Cancer Center, Philadelphia, PA.

Despite many advances in cancer research, cancer health disparities have persisted globally. Cancer incidence and mortality rates are declining in most high income countries while low and middle income (LMIC) countries continue to experience an increase in the burden of cancer incidence and death rates. Furthermore, cancer research in many LMIC populations has been underrepresented and understudied in general which further exacerbates cancer health disparities in populations within those countries. Global cancer research contributes valuable data towards understanding and addressing cancer prevention and control in the United States, in particular cancer disparities faced by diverse populations including immigrant populations. The study of cancer health disparities globally also provides numerous opportunities to address disparities observed in different geographic regions around the world. This presentation highlights the significance of global cancer health disparities research US and global perspectives.

IA-20 The opportunities and challenges of integrating population histories into genetic studies for diverse populations Charleston Chiang. University of Southern California, Los Angeles, CA.

Genetic factors, together with other environmental and/or social factors, contribute to the risk of diseases in any population. There is a well-recognized need to be more inclusive of diverse populations in genetic studies, but several obstacles continue to exist, including, but not limited to, the difficulty of recruiting individuals from diverse populations in large numbers and the lack of representation in available genomic references. These obstacles notwithstanding, studying diverse populations would provide informative and population-specific insights important for the healthcare management of a population. As an example of an understudied population, the Native Hawaiians have a unique genetic history that can be leveraged to enhance the design and interpretation of genetic studies. It has been shown that the predominant Polynesian genetic ancestry component in Native Hawaiians is associated with elevated risk of cardiometabolic diseases. This finding is consistent with, though not a proof of, the hypothesis that there exist population-enriched genetic variants underlying the risk of these diseases. At the same time, currently available genomic resources underserve the Native Hawaiians due to a lack of representation, such that genetic variants strongly associated with diseases could not be systematically discovered. Therefore, by developing key genomic resources, integrating evolutionary thinking into genetic epidemiology, and partnering with the community, we will have the opportunity to efficiently advance our knowledge of the genetic risk factors, ameliorate health disparity, and improve healthcare in this underserved population.

IA-21 Applying a data integrative and convergence epidemiology approach to study multilevel risk factors for cancer in distinct AANHPI populations MIndy C. DeRouen[1], Alison J. Canchola[1], Caroline A. Thompson[2], Anqi Jin[3], Sixiang Nie[4], Carmen Wong[4], Daphne Lichtensztajn[1], Laura Allen[1], Manali I. Patel[5], Yihe G. Daida[4], Harold S. Luft[3], Salma Shariff-Marco[1], Peggy Reynolds[1], Heather A. Wakelee[5], Su-Ying Liang[3], Beth E. Waitzfelder[6], Iona Cheng[1], Scarlett L. Gomez[1]. [1]University of California, San Francisco, San Francisco, CA, [2]University of North Caroline at Chapel Hill, Chapel Hill, NC, [3]Sutter Health Palo Alto Medical Foundation Research Institute, Palo Alto, CA, [4]Kaiser Permanente Hawai'i Center for Integrated Health Care Research, Honolulu, HI, [5]Stanford University School of Medicine, Stanford, CA, [6]Kaiser Permanente Hawai'i Center for Integrated Health Care Research, Honolulu, CA.

Background: For Asian American, Native Hawaiian and Pacific Islander (AANHPI) females, lung cancer is one of the most common cancers and the leading cause of cancer death. More than half of lung cancers among AANHPI females occur among never-smokers, but incidence rates of lung cancer according to smoking status have not been available. **Purpose**: With a large, integrated dataset of electronic health record data from two healthcare systems—Sutter Health in Northern California and Kaiser Permanente Hawai'i—linked to state cancer registry data on incident lung cancer diagnoses 2000-2013, we describe incidence of lung cancer according to smoking status among females across detailed race and ethnicity. **Methods**: We calculated age-adjusted incidence rates for lung cancer according to smoking status and detailed race and ethnicity among females, focusing on AANHPI ethnic groups, and assessed relative incidence across racial and ethnic groups. The study population included N=1,222,694 females (n=244,147 AANHPI), n=3,297 (n=535) of whom were diagnosed with lung cancer. We examined relative incidence across group defined by detailed race and ethnicity. We also provided incidence of lung cancer among AANHPI males who never smoked in a supplement. **Results**: Among AANHPI female groups, proportions of lung cancers among never-smokers ranged from 25% among Native Hawaiian to 80% among Chinese females. Incidence of lung cancer among never-smoking AANHPI females as an aggregate was 17.1 per 100,000 (95% CI: 14.9, 19.4), but rates varied widely across ethnic groups. Never-smoking Chinese females had the highest rate (22.8; 95% CI: 17.3, 29.1). Except for Japanese females, incidence among every never-smoking AANHPI female ethnic group was higher than that of all never-smoking females combined. Never-smoking AANHPI males also have higher incidence of lung cancer compared to other groups defined by race and ethnicity. **Conclusions**: The integrative data analysis approach offers great advantages over traditional cancer cohorts, but it does require substantial time and effort to assure data confidentiality, integrity, and transparency to provide robust results. However, with convergence epidemiology—in this case leveraging needed expertise in data science and analysis to answer an epidemiology question—it is also a valuable approach to study disparate cancer outcomes among small populations. Illustrating this, our study is the first to document high rates of lung cancer among never-smoking AANHPI ethnic groups, dispels the myth that AANHPI females are at overall reduced risk of lung cancer, and demonstrates the need to disaggregate this highly diverse population. Results should inform lung cancer prevention strategies among AANHPI populations.

IA-22 A multilevel framework for reducing cancer risk in diverse Asian American populations Carolyn Y. Fang. Fox Chase Cancer Center, Philadelphia, PA.

Asian Americans are the fastest-growing racial group in the United States (US). The Asian American population is also diverse and heterogeneous with respect to language, culture, country of origin, preventive-health orientation, and other characteristics. The practice of presenting aggregated data on cancer incidence and mortality in Asian Americans obscures important health differences as some Asian American subgroups experience higher rates of cancer -- such as liver, uterine cervix, and stomach cancers – than other racial/ethnic groups. Despite this elevated risk, many Asian American subgroups have lower cancer screening rates compared with other populations. Low screening rates have been attributed to a number of factors including psychosocial beliefs and barriers to healthcare access; and despite considerable effort over the past decades, screening rates remain well below national goals. In this presentation, we will illustrate the application of a multilevel framework to address individual-, interpersonal-, and community-level factors contributing to uptake of cancer screening and prevention behaviors in several US Asian subgroups. Examples from recent research will be presented to highlight how community-academic partnerships have successfully enhanced cancer screening and prevention behaviors. We will also review ongoing challenges and discuss new opportunities for promoting a greater focus across and within diverse Asian American populations. Engaging multiple stakeholders in the planning process can lead to effective and sustainable programs that result in increased participation among underserved and underrepresented individuals. Together, these strategies may help reduce inequities and improve outcomes across our diverse communities.

IA-24 Implicit bias in oncology: Towards a more inclusive workforce Jessica W Tsai. Dana-Farber Cancer Institute, Boston, MA.

Implicit bias includes those unconscious attitudes, biases, and stereotypes that shape our behaviors and interactions with others. While implicit biases are known to adversely affect the care of oncology patients, they are also deeply imbued in the culture of our workforce and permit a non-inclusive environment. The consequences of implicit bias are profound, including repeated microaggressions, detraction from academic work, the biased language of evaluation, the cumulative effects of such biases on promotions, and the lack of diversity in leadership positions. Dismantling such a system requires conscious effort rooted in organizational commitment. This session will begin to address these issues by applying a tangible approach to recruitment, highlighting the intentionality of overhauling a recruitment process. Such an approach can be replicated in other settings when grounded in a firm dedication to inclusion and an openness to self-education and self-reflection.

IA-36 Fragmentation of care among Black women who have breast cancer and multiple comorbidities Michelle Doose[1], Janeth I. Sanchez[1], Dana Verhoeven[1], Veronica Chollette[1], Joel C. Cantor[2], Jesse J Plascak[3], Michael Steinberg[4], Chi-Chen Hong[5], Kitaw Demissie[6], Elisa Bandera[7], Jennifer Tsui[8], Sallie J. Weaver[1]. [1]National Cancer Institute, Rockville, MD, [2]Rutgers Center for State Health Policy, New Brunswick, NJ, [3]The Ohio State University, Columbus, OH, [4]Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, [5]University at Buffalo, Buffalo, NY, [6]SUNY Downstate School of Public Health, Brooklyn, NY, [7]Rutgers Cancer Institute of New Jersey, New Brunswick, NJ, [8]Keck School of Medicine of USC, Los Angeles, CA.

Purpose: Black women newly diagnosed with breast cancer and who have multiple comorbidities at the time of cancer diagnosis require greater care coordination to simultaneously manage cancer care and other chronic conditions. Care coordination may be complicated when multiple clinicians from diverse disciplines are involved in managing care and are located in different health systems, defined as care fragmentation. Given that Black women are disproportionately burdened by comorbidities and breast cancer, we examined the degree of care fragmentation and care coordination experienced by this group from a health system and care team perspective using two population-based cohorts. **Methods:** We analyzed data from two separate cohorts of Black women diagnosed with breast cancer who had diabetes and/or cardiovascular disease. In the first study we used the Women's Circle of Health Follow-Up Study (n=228) to examine types of practice setting for first primary care visit and primary breast surgery, and, through medical chart abstraction, identified whether care visit was within or outside the same health system. In a separate study, we identified women from the SEER-Medicare database (n=3,420) diagnosed with breast cancer and used encounter claims to examine the complexity and composition of the clinical care team. **Results:** Care fragmentation was experienced by 79% of Black women in the Women's Circle of Health Follow-Up Study, and individual-level factors (age, health insurance, cancer stage, and comorbidity count) were not associated with care fragmentation ($p>.05$). In the SEER-Medicare cohort, the most common clinical care team composition was oncology with primary care (45%) followed by oncology, primary care, and medical subspecialty (26%). In the adjusted model, Black women were *more* likely to have a clinical care team of higher complexity if they had cardiopulmonary disease (OR: 1.74; 95% CI: 1.68, 1.81) or diabetes (OR: 1.69; 95% CI: 1.63,1.75) compared with hypertension only. Women were also *less* likely to have a complex care team if they were dual Medicaid-Medicare covered (OR: 0.56; 95% CI: 0.48, 0.65) compared with Medicare only, rural residents (OR: 0.54; 95% CI: 0.42, 0.65) compared with urban, or diagnosed with stage III cancer (OR: 0.59; 95% CI: 0.47, 0.75) compared with stage I. **Conclusion:** The majority of Black breast cancer survivors with comorbidities see multiple clinicians from diverse disciplines and in different health systems, illustrating high care coordination demands and care fragmentation. However, the impact of the health system and care team on care outcomes still need to be assessed, and this includes care transitions into survivorship. To address cancer care disparities experienced by Black women, future research should consider examining clinician's perspectives regarding roles and responsibilities for chronic disease management and cancer care, as well as address care fragmentation across diverse healthcare delivery settings.

IA-37 Addressing cancer health disparities among Indigenous communities Nadine R. Caron[1], Gail Garvey[2], Nina Scott[3], Warren Clarmont[4], Kevin Linn[5]. [1]The University of Northern British Columbia, Prince George, BC, Canada, [2]University of Queensland, Brisbane, QLD, Australia, [3]Waikato DHB, Hamilton, New Zealand, [4]BC Cancer, Victoria, BC, Canada, [5]Harvard University, Boston, MA.

Many Indigenous Peoples around the world continue to experience substantial inequities in health as a result of the enduring legacy of colonisation, marginalization and disempowerment. While there are many thousands of miles that separate our presenters by distance, we are united in our conviction to work collaboratively to improve the health and wellbeing of Indigenous peoples and to honor the cultural diversity and strengths within our communities with whom we are fortunate to work alongside. Providing global, national and regional perspectives from New Zealand, Australia and Canada, this presentation will capture both the common strengths and shared challenges faced by Indigenous Peoples within the realm of health, wellness, and cancer. Harnessing learnings and reflections from previous World Indigenous Cancer Conferences (WICCs), and the presenters research activities, they will discuss the challenges and solutions to improve cancer surveillance, strengthening our ability to develop and monitor cancer control plans with a focus on improving equity in cancer outcomes. This session directly responds to the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP) and Indigenous People's rights to self-determination.

IA-40 *CDKN2A* germline rare coding variants and risk of pancreatic cancer in minority populations Robert McWilliams. Mayo Clinic, Rochester, MN.

Performing genetic epidemiology studies in underrepresented populations is challenging, but is extremely important in order to understand how cancer impacts differing populations, This can then allow more tailored and nuanced management of persons at risk. Our group at Mayo Clinic encountered some interesting preliminary findings regarding CDKN2A, but given small numbers of subjects in our registry, we needed to partner with other collaborators to have enough statistical power to make sense of the findings and generate a publishable result. This talk will focus on the means of doing this, the importance of team-based science across centers, and future opportunities. Background: Pathogenic germline mutations in the CDKN2A tumor suppressor gene are rare and associated with highly penetrant familial melanoma and pancreatic cancer in non-Hispanic whites. WeTo date, the prevalence and impact of CDKN2A rare coding variants (RCV) in racial minority groups remain poorly characterized. We examined the role of CDKN2A RCVs on the risk of pancreatic cancer among minority subjects. Methods: We performed a case-control study of germline mutations in CDKN2A among patients with incident pancreatic cancer and controls, focused on underrepresented minority populations. We sequenced CDKN2A in 220 African American pancreatic cancer cases, 900 noncancer African American controls, and 183 Nigerian controls. RCV frequencies were determined for each group and compared with that of 1,537 Non-Hispanic White patients with pancreatic cancer. Odds ratios (OR) and 95% confidence intervals (CI) were calculated for both a case–case comparison of RCV frequencies in African Americans versus Non-Hispanic Whites, and case–control comparison between AA cases versus noncancer AA controls plus Nigerian controls. Smaller sets of Hispanic and Native American cases and controls also were sequenced. Race/ethnicity categorization was from self-report. Results: One novel missense RCV and one novel frameshift RCV were found among AA patients: 400G>A and 258_278del. RCV carrier status was associated with increased risk of pancreatic cancer among AA cases (11/220; OR, 3.3; 95% CI, 1.5–7.1; P ¼ 0.004) compared with African American and Nigerian controls (17/1,083). Further, African American cases had higher frequency of RCVs: 5.0% (OR, 13.4;95%CI, 4.9–36.7; P < 0.001) compared with Non-Hispanic White cases (0.4%). Conclusions: CDKN2A RCVs are more common in African Americans than in Non-Hispanic White patients with pancreatic cancer and associated with moderately increased pancreatic cancer risk among African Americans.

IA-43 Designing individual-level and structural interventions to reduce and eliminate racial disparities in liver cancer Patricia D. Jones. University of Miami Miller School of Medicine, Miami, FL.

Over the past two decades, the incidence of hepatocellular carcinoma (HCC) has increased dramatically, in the United States and worldwide. The tremendous racial diversity in the United States allows for evaluation of racial differences in HCC risk and outcomes. Blacks, Asians and Hispanics all have increased liver cancer risk compared to non-Hispanic Whites. The cause of this disparity is poorly understood but is thought to be multi-factorial. The prevalence and etiology of chronic liver disease differs amongst racial subgroups; nonalcoholic fatty liver disease is most prevalent in Hispanics, while Blacks and Asians are disproportionately affected by viral hepatitis. Moreover, there are substantial racial inequalities with regards to access to comprehensive health care. In addition to racial differences in HCC risk, there are significant racial disparities in cancer stage at HCC diagnosis and receipt of appropriate cancer treatment. Multiple retrospective studies have confirmed significant disparities in survival after HCC diagnosis; Blacks in the United States and worldwide have the lowest survival, compared to other races. There are many stages along the cancer continuum where clinicians and researchers can intervene to improve how individuals living with liver disease are diagnosed, which could subsequently reduce the risk of HCC and improve outcomes. Using hepatitis B as a case study, this lecture will discuss individual-level interventions as well as the necessary structural interventions targeting healthcare policy, organizations, institutions and vulnerable communities that will be required to achieve widespread reduction in HCC-related disparities.

IA-48 A brief overview of lung and colorectal cancer disparities in American Indian and Alaska Native populations Dorothy A. Rhoades. Stephenson Cancer Center, University of Oklahoma Health Sciences Center, Oklahoma City, OK.

Lung cancer and colorectal cancer (CRC) are leading causes of cancer morbidity and mortality among US American Indian and Alaska Native (AI/AN) men and women. For most AI/AN communities, disparities in these cancers occur compared to their non-Hispanic White (NHW) counterparts. This presentation provides a brief overview of the epidemiology of lung and colorectal cancers among AI/AN, and serves as background for talks regarding the impact of revised eligibility criteria for implementing screening programs among AI/AN. In recent years, lung cancer incidence rates among AI/AN persons were 12% higher than rates among NHW in counties with relatively high proportions of AI/AN residents. By region, rates were 17% to 3 times higher in AI/AN than NHW in Pacific Coast, Alaska, and Northern and Southern Plains, in contrast to the Southwest and Eastern US where AI/AN rates were 35% lower. While lung cancer incidence is decreasing overall in both populations, the rate of decrease is slower for AI/AN. Generally, lung cancer occurs at younger ages and at more advanced stages for AI/AN compared with NHW, and AI/AN persons with lung cancer have worse survival. Little is known about the experience of lung cancer screening (LCS) in health care systems that serve AI/AN communities. LCS has not been a mandatory reporting measure for the Indian Health Service. Models of expanded eligibility for LCS suggest that AI/AN will have a higher relative increase in eligible persons compared with NHW, but information on implementation is scarce. Disparities in CRC are also notable among AI/AN. In recent years, incidence rates among AI/AN were 41% higher than among NHW in counties with relatively high proportions of AI/AN residents. CRC incidence rates also vary regionally, but AI/AN in general had higher CRC incidence rates than did NHW. CRC incidence rates have been decreasing overall among both AI/AN and NHW populations, but at a slower pace for AI/AN. Notably, CRC incidence increased among AI/AN in the Southwest. CRC incidence rates have also increased among persons younger than 50 years for both AI/AN and NHW, but more than 1 in 7 CRC cases among AI/AN were diagnosed at ages younger than 50 years, compared with less than 1 in 10 among NHW. AI/AN were more likely to have late-stage diagnoses than were NHW , and AI/AN men had the worst survival than men in other racial groups. Factors encountered in implementing programs to improve lung and CRC screening among AI/AN health care systems will be discussed follow this presentation.

IA-49 Facilitators and barriers to implementing low-dose CT screening for lung cancer in a tribal health system Zsolt J. Nagykáldi. University of Oklahoma Health Sciences Center, Oklahoma City, OK.

Lung cancer is the leading cause of cancer mortality among American Indians and Alaska Natives (AI/AN), and many AI/AN communities have worse lung cancer incidence rates, survival, and death compared to the general population. Although lung cancer screening (LCS) with low-dose computed tomography is a grade-B USPSTF recommendation, uptake of LCS has been slow in most healthcare systems. LCS implementation among AI/AN has not been studied before in detail. To address this knowledge and implementation gap, a multi-phase, 5-year "Tribally Engaged Approaches to Lung Screening" (TEALS) study was launched in 2019 in partnership with the Choctaw Nation of Oklahoma. The overarching goal of this project is to co-design and test an LCS implementation program. This presentation will discuss what is being learned about potential facilitators and barriers to implementing LCS in a tribal health care setting. Findings may be pertinent to other health systems serving tribal, rural or underserved populations.

IA-51 If not now, then when? Tackling barriers to clinical trials to ensure inclusion of underrepresented minorities Vanessa B. Sheppard. School of Medicine and Massey Cancer Center, Virginia Commonwealth University, Richmond, VA.

The low representation of underrepresented minorities in clinical trials is well known. Unfortunately, there appears to be modest progress in the inclusion of these groups in the nearly 30 years since the NIH Revitalization Act of 1993. Racial and ethnic diversity in clinical trials is imperative for ensuring that novel cancer therapies, behavioral interventions and other types of scientific advances reach and are relevant to all population segments. It will be impossible to eliminate disparities and achieve health equity without diversity and inclusion in clinical research. Many barriers exist to clinical trials and some may be exacerbated among racial/ethnic minorities. This presentation will discuss multilevel barriers to participation in clinical research, share engagement principles related to partnerships with African American/Black and Latino/Latinx populations, and provide lessons learned from institutional and investigator led-initiatives. Data sources include chart reviews, patient interviews and surveys. Selected clinical studies will be discussed along with qualitative and quantitative data. The overall goal is to identify actionable steps towards a collective path of improving minority participation in clinical trials. Strategies that optimize opportunities for system change may have greater impact than strategies that focus solely on patient and/or community attitudes or behaviors. Given the COVID-19 pandemic, public awareness about clinical trials may be at a record high. Thus, community conversations about science and the clarion call for social justice may be the energy needed for cancer scientists to collaborate and change the narrative regarding participation of underrepresented minorities in research.

IA-52 Improving access to research among individuals from under-represented racial and ethnic minority communities: The Strengthening Research In Diverse Enrollment (STRIDE) Study Stephenie C. Lemon[1], Jeroan J. Allison[1], Maria I. Danila[2], Karin Valentine Goins[1], German Chiriboga[1], Melissa Fischer[1], Melissa Puliafico[1], Amy S. Mudano[2], Elizabeth J. Rahn[2], Jeanne Merchant[2], Colleen E. Lawrrence[3], Leah Dunkel[3], Tiffany Israel[3], Bruce Barton[1], Fred Jenoure[1], Tiffany Alexander[2], Danny Cruz[3], Marva Douglas[2], Jacqueline Sims[2], Al Richmond[4], Erik Roberson[5], Carol Chambless[5], Paul A. Harris[3], Kenneth G. Saag[2]. [1]University of Massachusetts Medical School, Worcester, MA, [2]University of Alabama at Birmingham School of Medicine, Birmingham, AL, [3]Vanderbilt University Medical Center, Nashville, TN, [4]Community Campus Partnerships for Health, Raleigh, NC, [5]University of Alabama at Birmingham, Birmingham, AL.

INTRODUCTION Under-representation in health-related research is one of a multitude of factors that contribute to cancer disparities experienced by African American and Latinx communities. Barriers to research participation stem from historical social injustices, are multi-faceted and include factors specific to the research process, research team members and community experiences and expectations about research participation. Informed consent is a longitudinal process and represents an opportunity to address these barriers and potentially improve access to research by individuals from underrepresented groups. The purpose of the Strengthening Translational Research in Diverse Enrollment (STRIDE) study was to develop and test an integrated, literacy- and culturally-sensitive, multi-component intervention that addresses barriers to research participation during the informed consent process. **METHODS** A multi-pronged community engaged approach was used to inform the development the three components of the STRIDE intervention. At each of the three study sites, Community Investigators, local community members of diverse racial/ethnic backgrounds, contribute to intervention development, pilot testing and dissemination activities. Community engagement studios provided a semi-structured opportunity to solicit feedback from community experts in a facilitated group regarding the relevance, usability and understandability of the STRIDE intervention components. Additionally, component-specific approaches to obtaining community input were utilized. **RESULTS** The three components were developed and refined with community input. The STRIDE intervention includes: (1) an electronic consent (eConsent) framework within the REDCap software platform that incorporates tools designed to facilitate material comprehension and relevance, (2) a storytelling intervention in which prior research participants from diverse backgrounds share their experiences, and (3) a simulation-based training program for research assistants that emphasizes cultural competency and communication skills for assisting in the informed consent process. **CONCLUSIONS** The STRIDE project had produced an integrated set of interventions that are available to support researchers across the CTSA hubs and beyond in efforts to enhance diversity in clinical research. Early dissemination of STRIDE intervention components include utilization in national COVID-19 trials and research networks.

IA-53 A multi-pronged approach to driving diversity in clinical trials: Bristol Myers Squibb & Bristol Myers Squibb Foundation efforts Patricia M. Doykos. Bristol Myers Squibb, Princeton, NJ.

Achieving diversity in clinical trials that reflects the epidemiology of the people and populations affected by diseases and conditions requires an integrated multi-pronged, multi-sector approach and one that is community-informed. This includes among other components community outreach and engagement, patient voice in study design, a culturally competent workforce of clinical trial investigators and team members who are committed to serving URM, and locating clinical trial sites in heavily diverse communities. Bristol Myers Squibb is taking steps and the Bristol Myers Squibb Foundation is making important philanthropic investments on these fronts to drive diversity in clinical trials. The presentation will provide an overview of these efforts, their specific interventions and lessons learned.