

Pre-Meeting Workshop on Science of Global Cancer Disparities

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Join your AORTIC colleagues in advancing health equity by attending a pre-conference workshop on November 18 from 14:30 to 17:30 in Fez 1. Advances in the use of genomics can accelerate progress in reducing the high mortality rates from cancer in Low to Middle Income Countries. The perfect storm of tumor biology, genomics and poor *health care delivery patterns collide to create a global survival disparity in ALL cancers*. Africa must leapfrog by adopting innovative technologies to deliver high quality cancer care at affordable costs.

Burkitt's Lymphoma in the 21st century(Sam Mbulaiteye) – Described 50 years ago, Burkitt's Lymphoma (BL) became a model for poly-microbial carcinogenesis and global oncology. Seminal discoveries, including of Epstein-Barr virus, the first human virus linked to a human cancer, linkage of Plasmodium falciparum malaria with the 100-fold higher BL incidence in Africa, chromosomal abnormalities as a central molecular abnormality, and the cure of BL by chemotherapy inspired combination chemotherapy. However, hibernation due to civil disturbance in Africa caused research to stop and with it the discoveries. The resurgent interest in BL at a time of rapidly expanding genomic and proteomic capabilities has opened exciting opportunities for discoveries; outstanding questions will be answered and next-generation safe, targeted curative treatment likely to be discovered. The talk will explore opportunities and directions for African research on BL.

Understanding Prostate Cancer in men of African Descent (Timothy Rebbeck) –

Prostate cancer incidence and mortality rates are highest among men of African descent around the world. African descent men also appear to have biologically aggressive disease. Studies of prostate cancer in Africa, where prostate cancer is observed to be highly aggressive, may inform our understanding of prostate cancer in men of African descent around the world.

Translational Genomics to accelerate progress in cancer research (Funmi Olopade) -

In LMIC, breast cancer is a disease of young women and there are no defined strategies for early detection nor access to lifesaving drugs. The delays, misuse, and underuse of treatment for women of African ancestry are of increased significance when these patients are presenting with the most aggressive forms of breast cancer. Findings from the Nigerian Breast Cancer Study and how similar innovative interventions can be applied to all cancers to accelerate progress in saving lives will be presented.

Emerging concepts in cancer immunotherapy (Adekunle Odunsi) –

There is compelling evidence that the immune system can recognize and destroy cancer. This presentation will focus on emerging strategies for harnessing the immune system for cancer therapy, and discuss emerging concepts on how to overcome resistance to such therapies.

Biomarkers in cervical cancer (Virna Leaner) - Cervical cancer is the fourth most common cancer worldwide for females, and the seventh most common overall. Africa has been classified as the region with the highest burden of cervical cancer. Early stage cervical cancer can usually be cured with surgery and radiotherapy, or both. Chemotherapy is often combined with radiotherapy to reduce the risk of recurrence. There are relatively few targeted approaches being explored in clinical trials for cervical cancer. This talk will discuss current research using genomic approaches aimed at identifying new cancer biomarkers and therapeutic targets.

Cervical Cancer Genomics (Akinyemi Ojesina) – Cervical cancer is etiologically linked to persistent infection with high risk human papilloma viruses (HPV), with subsequent viral integration into the human genome, and progression through various stages of precancerous squamous intraepithelial lesions to invasive cancer. Investigations into the synergy between HPV infection and somatic genomic alterations in the host may yield insights necessary for improving early detection, predicting the outcome of precancerous lesions, and potentially prevention of tumor progression.

Innovative Approaches to Clinical Trials (Laura Esserman) - Breast cancer is both genetically and clinically heterogeneous, making it challenging to identify optimal therapies. Therapeutic options that target tumor biology and can be delivered before metastases are clinically apparent can be developed using innovative clinical trial design. The neoadjuvant approach facilitates evaluating an individual patient's response to treatment. Lessons learned from the I SPY trial will be discussed.