LEADING THE WAY

Led by Drs. Edus H. Warren and Thomas Uldrick, Global Oncology is a rising leader in the global cancer field. The program’s mission is to generate cancer research that has global impact and to support the development of research capacity and clinical care to reduce the cancer burden in LMICs. Global Oncology aims to contribute to Sustainable Development Goal target 3.4 — a reduction of death from noncommunicable diseases, including cancer. Many cancers in these countries are associated with infectious diseases, particularly viruses, such as HIV and human papillomavirus, of which some can be prevented or treated. In sub-Saharan Africa, approximately 33% of cancers are infection-related.

Fred Hutchinson Cancer Research Center, recognized as a pioneer in cancer and infectious disease research, is one of the largest independent biomedical research institutions in the U.S. Its mission is the elimination of cancer and related diseases as causes of human suffering and death. This mission has no borders and reaches around the globe to prevent cancer and improve its diagnosis and treatment. Global Oncology is one of Fred Hutch’s main international efforts to fight cancer.

CANCER IS ONE OF THE LARGEST GLOBAL HEALTH THREATS. In low- and middle-income countries, or LMICs, more people die from cancer than from HIV, tuberculosis and malaria combined. Already, more than 70% of cancer deaths occur in LMICs. Despite the global cancer toll, only 2% of global development assistance for health funding address all noncommunicable diseases, including cancer. Many cancers in these countries are associated with infectious diseases, particularly viruses, such as HIV and human papillomavirus, of which some can be prevented or treated. In sub-Saharan Africa, approximately 33% of cancers are infection-related.

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• Understand the pathogenesis of globally important cancers and how to prevent, treat and ultimately cure infection-related cancers worldwide;
• Better understand the heterogeneity in the genetics and biology of common cancers and the genomics of different populations;
• Develop new cancer diagnostics and therapies suited for low-resource settings, including new immunotherapies;
• Apply “reciprocal innovation” — i.e., discoveries made through studies in LMICs can be applied to advance care in all settings, including low-resource settings in the U.S. — and
• Train the next generation of global oncology leaders.

COLLABORATION BUILT ON RESEARCH AND TRAINING

The cornerstone of Global Oncology is its established collaboration with the Uganda Cancer Institute, a regional center of excellence in East Africa and home to landmark cancer discoveries. Directed by Dr. Jackson Orem, the UCI was the first comprehensive cancer facility in Uganda to provide clinical care, research and training and was among the first institutions to use combination chemotherapy to treat cancer. The UCI received funding from the African Development Bank in 2016 to be an implementing agency to establish a regional East African Centre of Excellence in Biomedical Sciences. The UCI-Fred Hutch Adult Hematology-Oncology Fellowship is a part of this center of excellence, in partnership with the University of Washington, Makerere University and Mulago National Referral Hospital.
Because of the high incidence of infection-associated cancers in Uganda, Fred Hutch faculty began working with UCI colleagues in 2004 to better understand the biology and treatment of these cancers, particularly HIV-associated malignancies. Since then, the UCI and Fred Hutch launched a formal collaboration in 2008 to advance cutting-edge research and training and to support clinical care improvements.

Fred Hutch has a history of driving forward innovative cancer and infectious disease research. The breakthroughs from this work should be available no matter where someone lives. Fred Hutch Global Oncology invites new collaborators and contributors to join the important movement to reduce the cancer burden in Uganda and worldwide.

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OVER TIME, FRED HUTCH AND UCI PARTNERS HAVE:

- Been conducting pioneering research on five cancers — Kaposi sarcoma, Burkitt lymphoma, cervical cancer, breast cancer and Hodgkin lymphoma — and five associated viruses: HIV, human herpesvirus-8, Epstein-Barr virus, human papilloma virus and hepatitis B virus;
- Opened the UCI-Fred Hutch Cancer Centre in 2015 — a $10 million, three-story facility for research, training and clinical care in Kampala that houses the UCI's pediatric and adult outpatient clinics, which can serve up to 16,000 patients annually;
- Opened and operate state-of-the-art laboratories including specimen processing, molecular diagnostics, histopathology, immunology and biosafety level 2 facilities;
- Enrolled over 1,800 study participants and built a local biorepository archiving more than 160,000 research specimens;
- Been leading novel capacity-building efforts, including extensively training 14 Ugandan physician-scientist fellows and co-directing the Adult Hematology-Oncology Fellowship (with funding through the African Development Bank);
- Extensively characterized the contribution of HIV infection to cancer development and survival in sub-Saharan Africa;
- Implemented a clinical quality improvement project for pediatric Burkitt lymphoma that enabled care and treatment for hundreds of pediatric patients from the region;
- Been leveraging support from key funders including the U.S. National Institutes of Health, the U.S. Agency for International Development, industry, foundations and individuals;
- Begun to conduct the program’s first pharmaceutical industry-sponsored clinical trial with an all-Ugandan clinical research team, with aspirations to launch new clinical trials;
- Continued to host regular tumor boards and case conferences between U.S. and Ugandan oncologists; and
- Been managing a Global Oncology pilot grants initiative to fund Fred Hutch researchers interested in improving cancer diagnostics or therapies in LMICs.