

Institute for Global Health Center for Global Oncology

Did you know that cancer kills more people in low- and middle-income countries than HIV/AIDS, tuberculosis, and malaria combined? Worldwide, over 80 percent of cancer deaths occur in low- and middle-income countries, but only 5 percent of total global spending on cancer care benefits these regions.

The new Center for Global Oncology's goal is to answer this urgent global health disparity. The center is a joint partnership between the National Cancer Institute (NCI)-designated Robert H. Lurie Comprehensive Cancer Center of Northwestern University and the Institute for Global Health at Northwestern, and through this partnership, we can develop more targeted tools to fulfill our shared mission of controlling and stopping cancer.

We possess cutting-edge technologies in molecular and biological science that have advanced our understanding of the causes of cancer in this era of precision medicine. At the same time, the diverse genetic backgrounds, environmental pollutants, sociocultural practices, lifestyles, and infections from different viruses and bacteria represented by populations around the world require us to collect scientific data from larger and more diverse groups of people to answer more specific questions about what causes cancer and how.

Leading the fight against cancer

Global oncology research is gaining significant attention and priority at the national level, as demonstrated by the establishment of the Center for Global Health at the NCI in 2011. Northwestern's Center for Global Oncology is at the forefront of this movement by conducting cutting-edge research projects and training partnerships.

Center Director Lifang Hou, MD, PhD, leads this charge. Dr. Hou is an NCI Blue Ribbon Panel member, directly appointed by the NCI Director, to advise the White House's Cancer Moonshot Initiative, the Nation's Precision Medicine Program for cancer. She works in collaboration with the Blue Ribbon Panel of scientific experts, leaders, and patient advocates to set the scientific agenda and determine goals to advance cancer research to put cancer under control worldwide.



“Cancer is a common enemy to all of us! **The Center for Global Oncology** aims to detect cancers at their early stages, thus preventing and curing cancer not only in economically developed areas, but also in low- and middle-income countries. This is particularly important in vulnerable populations, such as those with chronic viral infections and those who are genetically susceptible to carcinogenic pollutants.”

Lifang Hou, MD, PhD

Director of the Center for Global Oncology, Institute for Global Health, and Director of the Global Health Initiative at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University

[Learn more about Center projects](#)

Epigenomic Biomarkers of HIV-Associated Cancers in Nigeria—NCI Northwestern U54 Consortium

The Center for Global Oncology was awarded an NCI U54 grant (\$778,603), led by Dr. Hou, director of the Center for Global Oncology, and Dr. Robert Murphy, executive director of the Institute for Global Health, to establish a consortium in partnership with two leading Nigerian institutions, the University of Jos and University of Lagos, to study a novel epigenetic mechanism of liver cancer and cervical cancer, the two most common cancers in HIV/AIDS infected individuals, a highly vulnerable population to cancer. This NCI-funded project consortium aims to find new tools for early diagnosis of these two cancers, which are also highly prevalent in the US and worldwide. This early diagnosis will help prevent and cure cancer.



Cervical cancer is currently the 4th most-common cancer among women worldwide, with an estimated 570,000 new diagnoses and 311,000 deaths in 2018, according to the World Health Organization. The chances of surviving for five years after an early-stage cervical cancer diagnosis are 93 percent, but for advanced cervical cancer the chances are only 15-16 percent.

Low- and middle-income countries generally have poorer healthcare infrastructure than the US; Human Papilloma Virus (HPV) and Hepatitis vaccination are much less common, while HPV/Hepatitis infection, HIV co-infection, and cervical and liver cancer are much more common. Thus, these countries provide an extraordinary opportunity to conduct research to find diagnostic tools for early-stage liver and cervical cancers. Studying these populations allows us to do research for cervical cancer diagnosis and care more cost-effectively and efficiently while serving populations that need it the most. Epigenetics, which means genetic “switches” that are modified by external environmental factors, are key molecular changes of cancers. These early stage molecular alterations can be used for early detection/diagnosis and targeted prevention and treatment. Identifying novel molecular markers in cervical and liver cancers by focusing on more vulnerable populations, such as HIV positive individuals, can greatly enhance our abilities and expand options for cancer screening in general populations.

Northwestern and Nigeria Research Training Program in HIV and Malignancies—NN-HAM

Program leaders Drs. Hou and Murphy are leading a multidisciplinary research training program in Nigeria to build infrastructure and increase capacity for cancer epidemiology, clinical trials, and translational and laboratory research on AIDS-defining malignancies. They are establishing a comprehensive and integrated repository of clinical and research data sources as well as a bio-specimen bank to facilitate research, clinical quality, healthcare operations, and medical education. Further, they are facilitating the conduct of initial studies of the epidemiology, risk factors, and outcomes of HIV-associated cancers using the “Big Data” obtained from these sources.

Please Join Us in Partnership

We invite interested friends to join us in embracing the tremendous potential of the Center for Global Oncology. Your support will enable the center’s breakthrough work led by our dedicated faculty physicians and scientists. We are actively seeking funding support to help expand our research to a larger scale. By making relatively modest investments in research and healthcare in these ongoing efforts, we can recruit and study more research participants, help expand research capacity and infrastructure, and train more scientists. The following funding opportunities are available to accelerate the center’s exciting trajectory.

Endowing and Naming the Center	\$10 million
Endowing and Naming Professorships	\$3 million
Creating Research Innovation Funds at the Center	\$500,000+
Supporting Pilot Research Awards and Other Initiatives through Endowed and Outright Gifts	\$10,000+