

NCI's commitment to global health and global cancer control

Edward L. Trimble, MD, MPH

Center for Global Health

Global burden of cancer

Year	Number of cancer deaths	% in developing world
2002	6.2 million	55%
2008	7.6 million	64%
2030	13.2 million	69%

Potentially modifiable risk factors for cancer

- Tobacco (17% of cancers)
- Chronic infections (17% of cancers)
 - Liver cancer (Hepatitis B and C), cervical and head & neck cancer (human papillomavirus), stomach cancer (Helicobacter pylori), Kaposi's sarcoma, nasopharyngeal carcinoma, Burkitt's lymphoma, etc
- Obesity: diet and exercise
- Alcohol intake
- (Increasing age)

Some NCI Global Collaborations

- International Cancer Genome Consortium
 - The Cancer Genome Atlas Project
- International epidemiology consortia
- International Cancer Screening Network
- International Tobacco Control Policy Evaluation Consortium

Some DCEG international projects

- China: Biliary tract cancer (Shanghai), liver cancer (Jiangsu); nutritional supplements for cancer prevention (Henan), gastric cancer & treatment of H.pylori infections (Shandong), cervical cancer screening (Shanxi), lung cancer among tin miners (Yunnan), benzene exposure in factory workers
- Costa Rica: epidemiology of HPV infection, screening and management of preinvasive cervical neoplasia, phase III trials of prophylactic HPV vaccines

CCR: HPV biology and prophylactic HPV vaccines



Existing NCI International Offices

- Office of International Affairs
- Office of Latin American Cancer Program Development
- NCI Liaison Office-Brussels
- Office of China Cancer Program Development
- International Network for Cancer Treatment and Research

Office of International Affairs

- Middle East Cancer Consortium (since 1996)
 - Cyprus, Egypt, Israel, Jordan, Palestinian Authority, & Turkey
 - Major projects: cancer registries, palliative care
- All-Ireland National Cancer Institute Cancer Consortium (since 1999)
 - Republic of Ireland, Northern Ireland, US
 - Major projects: prevention, clinical trials, registries, epi, health economics, palliative care

Office of International Affairs

- International Union for Cancer Control
 - Travelling fellowships
- Breast Global Health Initiative
 - Founded by Fred Hutchinson and Susan Komen for the Cure to develop and implement guidelines for low- and middle-income countries
- African Organization for Research and Treatment of Cancer
 - Meetings and small grants program

Office of Latin American Cancer Program Development

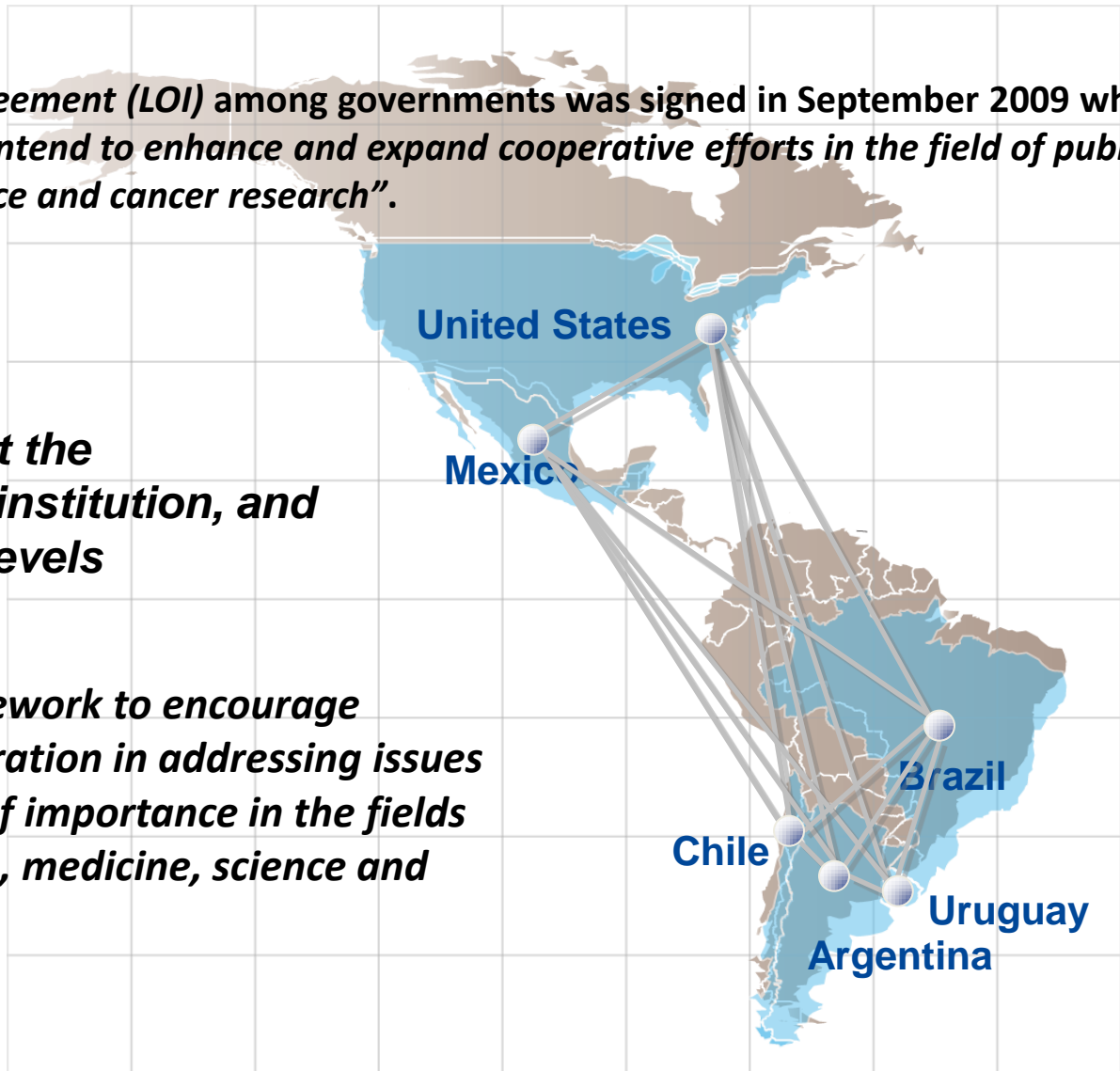
- **NCI-ASH| US-Mexico Cytogenetics Standardization Project**
- **NCI-ASCO| International Clinical Trials Training Workshop (Latin America)**
- **Trans-NCI Collaboration with Latin American Cancer Epidemiology (LACE)**
- **Trans-NCI Gallbladder Project Planning Meeting**
- **Trans-NCI Collaboration | Workshop for Cervical Cancer Prevention**
- **Susan G. Komen for the Cure®**

United States-Latin America Cancer Research Network (US-LA CRN):

A bi-lateral agreement (LOI) among governments was signed in September 2009 where all governments “intend to enhance and expand cooperative efforts in the field of public health, medicine, science and cancer research”.

Connecting at the government, institution, and investigator levels

Provide a framework to encourage bilateral cooperation in addressing issues and problems of importance in the fields of public health, medicine, science and cancer research



Pilot Study

Molecular Profiling of Stage II and III Breast Cancer in Latin American Women Receiving Standard of Care Treatment (MPBC)

Primary Objective

To characterize the distribution of invasive breast cancer stage II and III molecular profiles in Latin American women

Office of China Cancer Programs

- NIH-China National Natural Science Foundation Collaborative Biomedical Research Program
- Joint workshops:
 - Nanotechnology (2008, 2010), Bioinformatics (2010), Environmental pollution and cancer (2010), Biorepository standards (2011)
 - Biomarkers (2012), Building the evidence base for cancer prevention and screening (2012)

Some NCI-designated Cancer Centers active in Africa

- Fred Hutchinson Cancer Research Center: Uganda
- University of North Carolina: Malawi
- University of Maryland: Nigeria
- University of Michigan: Ghana
- Indiana University: Kenya

Groundbreaking for Uganda Cancer Institute/ FHCRC, Kampala



Roles for NCI Center for Global Health

- Coordination of global cancer research across NCI
- Partnership with other NCI divisions, centers, and offices in global cancer research
 - Development of new initiatives, facilitation of research
- Partnership with other NIH ICs in global health research
 - Fogarty, NIAID, NHBLI, NIDDK, etc

Current NCI-Fogarty partnerships

- International Tobacco and Health Research and Capacity Building Program
- HIV Research Training Program
- International Research Collaboration Award
- Global Research Initiative Program

Potential Fogarty Programs

- Chronic, NCDs and Disorders Across the Lifespan (D43)
- International Research Ethics Education and Curriculum Development
- Ecology and Evolution of Infectious Diseases
- Framework Innovations
- Medical Education Partnership Initiative
- Extramural Research Associates Development

Roles for NCI and NCI Center for Global Health

- Partnership with other DHHS and federal agencies
 - CDC, FDA, OHPR, PEPFAR, Red Ribbon/ Pink Ribbon, US AID, etc
- Partnership with WHO, International Agency for Research on Cancer, International Atomic Energy Agency, regional and country WHO offices

Roles for NCI and NCI Center for Global Health

- Partnerships with professional societies
 - ASCO, AACR, ASTRO, ACOS, Oncology Nursing Society, etc
- Partnership with NGOs
 - American Cancer Society, International Union for Cancer Control, Susan Komen for the Cure, Lance Armstrong Foundation, etc
- Partnership with pharma and biotechnology industries

Roles for NCI and NCI Center for Global Health

- Partnerships with other national governments (ministries of health, national cancer institutes, etc)
- Multilateral governmental partnerships
 - EC, Latin American Cancer Research Network, Organization for Economic Collaboration and Development, etc
- Partnerships with university global health programs and NCI-designated cancer centers

Scope of global cancer research

- Across cancer continuum
- Cancer biology, epidemiology, molecular genetics, genomics, proteomics, gene-environment interaction, pharmacogenomics, etc
- Cancer registration, prevention, screening, early diagnosis, imaging, treatment, symptom management, survivorship, palliative care, etc
- Cancer communications, behavior, health system organization, effectiveness, quality, implementation science, etc

Vision for NCI and NCI Center for Global Health

- Varmus HV & Trimble EL. Integrating cancer control into global health. Science Translational Medicine 2011;3:1-3
- For more information:
- <http://www.cancer.gov/aboutnci/globalhealth>
- Email: tt6m@nih.gov