DCEG Role and Mission

• DCEG is the primary focus within NCI for population-based research on environmental and genetic determinants of cancer.

• DCEG’s mission is to conduct interdisciplinary collaborative studies on the distribution, causes, and natural history of cancer, and the means for its prevention.
DCEG Research Areas

• Conduct statistical surveillance and generate cancer maps to look for clues to identify high risk areas

• Conduct field studies to test hypotheses related to special areas of interest including:
  ▪ Genetic predisposition
  ▪ Lifestyle factors
  ▪ Environmental contaminants
  ▪ Occupational exposures
  ▪ Medications
  ▪ Radiation and infectious agents
DCEG Cancer Health Disparities Initiatives

- Bladder
- Breast
- Cervix
- Esophagus
- Kidney
- Multiple myeloma
- Pancreas
- Prostate
- Descriptive studies and Cancer Atlas
Kidney Cancer Incidence

- Rising incidence rates among whites and blacks
- Most rapidly increasing cancer among blacks
- Emerging excess among blacks
U.S. Kidney Cancer Study
Kidney Cancer Risk Factors

- **Well-established risk factors**
  - Smoking
  - Obesity
  - Hypertension

- **Potential risk factors**
  - Occupational exposures
  - Diet

- **Genetic predisposition**
The Atlas

Atlas of Cancer Mortality in the United States
1950-94

www3.cancer.gov/atlasplus/

The Web site

The Atlas On-Line

Customizable Maps
Cervical Cancer Mortality—White Women

- Rates elevated in parts of Appalachia
- Rates high along SW border (high proportion of Mexican Americans)
- High rates may reflect lower SES and limited access to effective screening and health care
Cervical Cancer Risk Factors

- **Necessary Cause**
  - Human papillomavirus (HPV 16 accounts for 50%)

- **Etiologic Co-factors**
  - Parity
  - Smoking
  - Long-term oral contraceptive use
  - Host immune response to HPV
  - Other sexually transmitted diseases/cervical inflammation
  - Diet

- **Socio-demographic factors**
  - Low SES
  - Rural residence
  - Ethnicity (non-white)
  - Family history
NCI/Costa Rican Human Papilloma Virus (HPV) Vaccine Efficacy Trial

- Infection with certain types of HPV, notably HPV16, elevate risk
- Trial enrolling 12,000-15,000 women ages 18-25 in Costa Rica to:
  - Evaluate the efficacy of vaccine
  - Evaluate issues of etiologic and immunological relevance
DCEG Training Opportunities

- Short visits
- Sabbaticals
- Fellowships
- Partnerships
Short Visits (weeks)

• Meet with NCI investigators in DCEG and other NCI Divisions to:
  ▪ Collect information on questionnaires and protocols for studies focusing on health disparities
  ▪ Study statistical data sources such as SEER and NCHS
  ▪ Survey approaches to health disparities
  ▪ Investigate laboratory approaches and analyses that complement epidemiologic data

• Attend weekly DCEG seminars, NCI lectures
Sabbaticals (months)

• Collaborate with DCEG to pursue a topic of mutual interest using NCI data, for example
  ▪ Collaborate on a part of the kidney cancer study
  ▪ Use databases to investigate cancer risk profile of Hispanics or Asian Americans

• Bring own material, data, or questions to work on with DCEG researchers

• Brainstorm with DCEG researchers to create new projects related to cancer health disparities

• Attend lectures, seminars at NIH and classes at nearby universities
Fellowships (3-5 years)

• Training under supervision of DCEG senior scientists
  ▪ Currently have 50 postdoctoral fellows and 10 pre-doctoral fellows
  ▪ Design, carry out, and analyze research related to the etiology of cancer in human populations
  ▪ Gain experience with interdisciplinary and/or multicenter collaborative research
  ▪ Special programs available in: Genetic, Radiation, and Molecular Epidemiology and Biostatistics and Informatics

• Attend lectures, seminars, classes, and scientific meetings
Partnerships

• Developing training partnerships with graduate programs, for example
  ▪ Working with Howard University to develop a program that will help train more researchers with an interest in cancer health disparities

• Potential for collaborative training programs with other NCI divisions (e.g., DCCPS and DCP)

• Attend lectures, seminars, classes, and scientific meetings
Inquiries and Information

- Office of Education
- Division of Cancer Epidemiology and Genetics
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