National Cancer Institute

Division of Cancer Control and Population Sciences

2011 Overview and Highlights

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

National Institutes of Health

Division of Cancer Control
and Population Sciences

2011 Overview and Highlights

About DCCPS

As NCI's bridge to public health research, practice, and policy, the Division of Cancer Control and Population Sciences (DCCPS) plays a unique role in reducing the burden of cancer in America. DCCPS, an extramural division, has the lead responsibility at NCI for supporting research in surveillance, epidemiology, health services, behavioral science, and cancer survivorship. The division also plays a central role within the federal government as a source of expertise and evidence on issues such as the quality of cancer care, the economic burden of cancer, geographic information systems, statistical methods, communication science, comparative effectiveness research, obesity and tobacco control, and the translation of research into practice. As a result, DCCPS is what many have referred to as a "hybrid" division —one that funds a large portfolio of grants and contracts, but also conducts original research to inform public health policy.

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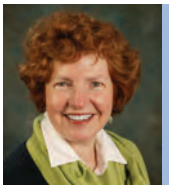
The diverse science funded and conducted by DCCPS is characterized by the varied and complex expertise and backgrounds of the division's scientific staff. Given the focus on cancer control, it comes as no surprise that the disciplines of epidemiology and biostatistics are well represented. In addition, DCCPS has made a special effort to recruit experts in disciplines such as communication, anthropology, outcomes research, psychometrics, medical genetics, health psychology, economics, social work, policy analysis, geography, and family medicine—all disciplines that have been historically underrepresented at NCI. This reflects an overarching philosophy of science that guides the division's planning and priority setting: the belief that scientific progress in the 21st century will depend on the transdisciplinary integration of research methods, models, and levels of analysis.

To learn more about the division, funding opportunities, and how to collaborate with us, visit ***http://cancercontrol.cancer.gov***.

Leadership at a Glance

The DCCPS senior leadership team is often described as dedicated and innovative. We pride ourselves not only in our dedication to cancer control, but also in our willingness to utilize unconventional ideas and approaches to accelerate progress in cancer research.

Office of the Director
Dr. Robert T. Croyle, Director



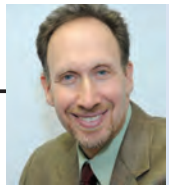
Office of Cancer Survivorship
Dr. Julia H. Rowland

Epidemiology & Genetics Research Program
Dr. Muin J. Khoury

Methods and Technologies
Dr. Mukesh Verma

Modifiable Risk Factors
Dr. Britt Reid

Host Susceptibility
Dr. Elizabeth Gillanders

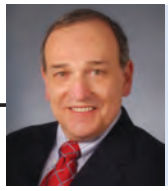


Clinical and Translational Epidemiology
Dr. Andrew Freedman

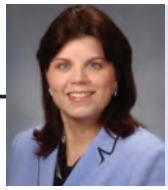
Behavioral Research Program
Dr. William M. Klein

Process of Care Research
Dr. Stephen Taplin

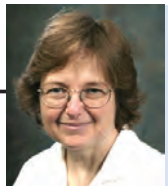
Basic Biobehavioral and Psychological Sciences
Dr. Paige Green McDonald



Health Communication and Informatics Research
Dr. Bradford Hesse



Health Behaviors Research
Dr. Linda Nebeling

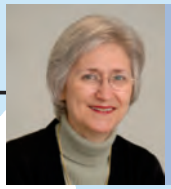


Tobacco Control Research
Dr. Michele Bloch (Acting)

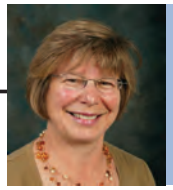
Science of Research & Technology Branch
Dr. William Klein (Acting)

Deputy Director
Dr. Deborah Winn

Deputy Director for Implementation Science
Dr. Russell E. Glasgow



Senior Advisor for Cancer Surveillance
Dr. Brenda Edwards



Applied Research Program
Dr. Rachel Ballard-Barbash

Health Services and Economics
Dr. Martin Brown

Outcomes Research
Dr. Steven Clauser

Risk Factor Monitoring & Methods
Dr. Susan Krebs-Smith

Surveillance Research Program
Dr. Robert T. Croyle (Acting)

Surveillance Systems
Dr. Zaria Tatalovich (Acting)

Data Analysis and Interpretation
Dr. Kathleen Cronin

Data Modeling
Dr. Angela Mariotto (Acting)

Statistical Methodology and Applications
Dr. Eric Feuer

In addition to the nearly 1,000 valued investigators whose research DCCPS funds, we extend our thanks to our many collaborators and partners.

Agency for Healthcare Research and Quality (AHRQ)

American Association for Cancer Research (AACR)

American Cancer Society (ACS)

American College of Epidemiology (ACE)

American College of Obstetricians and Gynecologists (ACOG)

American College of Radiology (ACR)

American College of Surgeons (ACoS)

American Joint Committee on Cancer (AJCC)

American Legacy Foundation

American Medical Association (AMA)

American Society of Clinical Oncology (ASCO)

C-Change

Cancer*Care*

Centers for Disease Control and Prevention (CDC)

Centers for Medicare & Medicaid Services (CMS)

Commission on Cancer (CoC)

Department of Veterans Affairs (VA)

Fogarty International Center

Food and Drug Administration (FDA)

Health Research and Services Administration (HRSA)

Indian Health Service (IHS)

LIVESTRONG

National Cancer Registrars Association (NCRA)

National Heart, Lung, and Blood Institute (NHLBI)

National Human Genome Research Institute (NHGRI)

National Institute on Aging (NIA)

National Institute on Alcohol Abuse and Alcoholism (NIAAA)

National Institute of Child Health and Human Development (NICHD)

National Institute of Environmental Health Sciences (NIEHS)

National Institute on Drug Abuse (NIDA)

National Institute of General Medical Sciences (NIGMS)

National Library of Medicine (NLM)

National Institute of Mental Health (NIMH)

National Quality Forum (NQF)

North American Association of Central Cancer Registries (NAACCR)

Office of Behavioral and Social Sciences Research (OBSSR)

President's Cancer Panel (PCP)

Produce for Better Health Foundation (PBH)

Psychoneuroimmunology Research Society (PNIRS)

Robert Wood Johnson Foundation (RWJF)

Society of Behavioral Medicine (SBM)

Society of Gynecologic Oncologists (SGO)

Substance Abuse and Mental Health Services Administration (SAMHSA)

U.S. Census Bureau

U.S. Department of Agriculture (USDA)

World Health Organization (WHO)

CANCER CONTROL FRAMEWORK AND SYNTHESIS RATIONALE

In 1997, the Division of Cancer Control and Population Sciences was established to enhance NCI's ability to alleviate the burden of cancer through research in epidemiology, behavioral sciences, health services, surveillance, and cancer survivorship. Cancer control research aims to generate basic knowledge about how to monitor and change individual and collective behavior, and to ensure that knowledge is translated into practice and policy rapidly, effectively, and efficiently.

Cancer Control Research Activities

The dynamic and interdisciplinary nature of the division's activities is illustrated in the cancer control framework. This framework illustrates three categories into which all cancer control activities can be assigned, and the central role of knowledge synthesis. All research areas act through application and program delivery to reduce the cancer burden, with a strong commitment to dissemination and diffusion and collaborations that facilitate the application and program delivery of evidence-based approaches to cancer control.

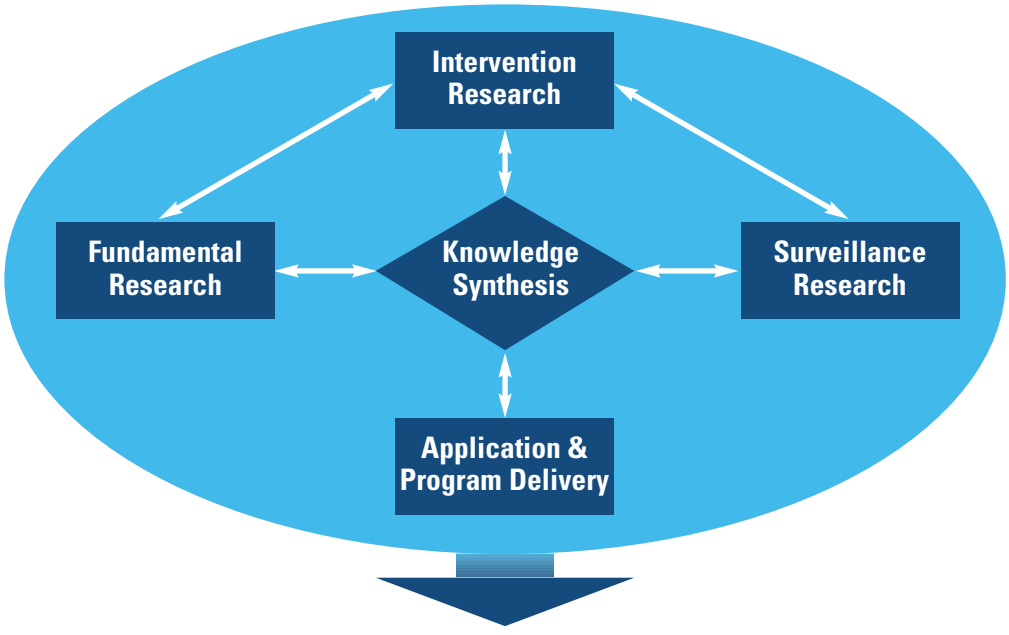
Definition

Cancer control science is the conduct of basic and applied research in the behavioral, social, and population sciences to create or enhance interventions that, independently or in combination with biomedical approaches, reduce cancer risk, incidence, morbidity and mortality, and improve quality of life (Cancer Control Program Review Group, 1998—modified).

Mission

DCCPS aims to reduce risk, incidence, and deaths from cancer, as well as enhance the quality of life for cancer survivors. The division conducts and supports an integrated program of the highest quality genetic, epidemiological, behavioral, social, applied, and surveillance cancer research. DCCPS-funded research aims to understand the causes and distribution of cancer in populations, support the development and delivery of effective interventions, and monitor and explain cancer trends in all segments of the population. Central to these activities is the process of synthesis and decision making that aids in evaluating what has been learned, identifying new priorities and strategies, and effectively applying research discoveries to reduce the cancer burden.

Cancer Control Research Activities



Adapted from the 1994 Advisory Committee on Cancer Control, National Cancer Institute of Canada

ACKNOWLEDGING OUR RESEARCH COMMUNITY

Researchers funded by DCCPS have advanced the science to improve public health for more than a decade, and we celebrate their accomplishments. The division currently funds almost 900 grants valued at approximately $400 million. Major programmatic areas include epidemiology and genetics research, behavioral research, applied research, surveillance research, and survivorship research.

American Recovery and Reinvestment Act

http://maps.cancer.gov/overview/arra/

Fiscal years 2009 and 2010 saw an infusion of American Recovery and Reinvestment Act (ARRA) funding that has enabled NCI to expand and enhance cancer research, helping to move exciting advances forward at an accelerated rate. In addition to the current portfolio, DCCPS manages more than $187 million in ARRA funds to accelerate research and advance cancer control initiatives.

ARRA Grants for Cancer Epidemiology Research

The scientific studies made possible by the Recovery Act funding are increasing the nation's research capacity by amassing some of the largest study populations ever assembled for cancer research and obtaining new biospecimens and clinical data. Without the Recovery Act, the size and scale of these cancer epidemiology research projects would have taken many years to get underway.

The Recovery Act has been a catalyst for 65 studies of cancer susceptibility in human populations in seven NCI priority areas relevant to the fields of epidemiology and genetics:

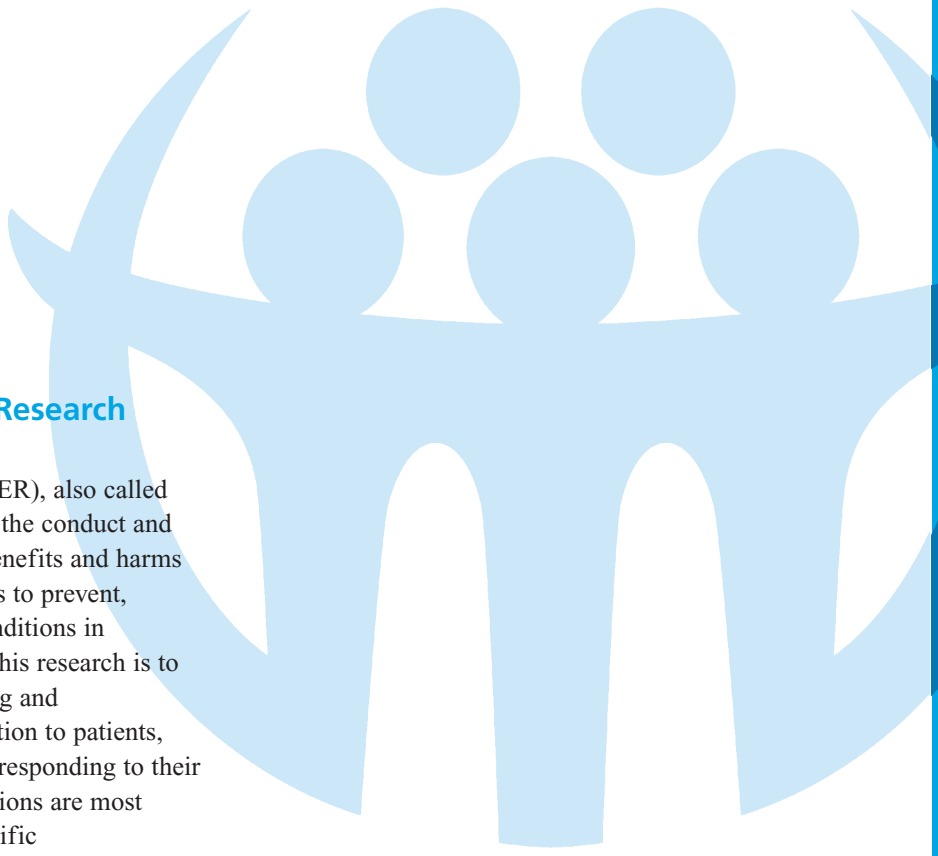
- Biomarker-based validation of diet and physical activity assessment tools in existing cohorts
- Development of a high-quality biospecimen sharing infrastructure
- Enhancement of consortia biospecimen resources
- Extension of genome-wide association studies (GWAS) to new phenotypes, analyses, technologies, and populations
- Methylation profiling of previously collected DNA samples from existing human population studies
- Study of reasons for racial and ethnic disparities in cancer susceptibility
- Collection and integration of treatment and clinical records for cancer patients in case-control, cohort, and familial studies for etiology studies of cancer

One Recovery Act project is investigating prostate cancer incidence and mortality among African-American men, a population with particularly high rates. This genome-wide association study (GWAS) is analyzing DNA from 5,130 African-American men with prostate cancer and 5,228 African-American men who do not have the cancer (controls) to identify common genetic risk factors for the disease. Nearly every investigator in the United States who has established case-control studies of prostate cancer among African Americans is collaborating on this project by providing data and DNA specimens for the men in their studies. By combining the cases from multiple prostate cancer investigations, the study has the potential to uncover new regions of the genome where associations with prostate cancer have not previously been discovered and to improve understanding of why some populations experience disproportionately high rates of prostate and certain other cancers.

Challenge Grants

As part of the Recovery Act, NIH designated $200 million for a new initiative called the NIH Challenge Grants in Health and Science Research. This program supported research that focused on specific knowledge gaps, scientific opportunities, new technologies, data generation, or research methods that would benefit from an influx of funds to quickly advance the area in significant ways. The division supported 26 Challenge Grants that have the potential for high impact in public health. Examples of Challenge Grants include the following:

- Genome-wide Determinants of Prognosis and Treatment of Early-onset Breast Cancer
- Natural Language Processing for Cancer Research Network Surveillance Studies
- Rare Cancer Genetics Registry
- Evaluating Economic Subsidies to Improve Dietary Intake Among Low-income Families
- Augmenting GWAS with Retrotransposon Polymorphisms
- Improving the Population-wide Effectiveness of U.S. Tobacco Cessation Quitlines



Comparative Effectiveness Research

http://cancercontrol.cancer.gov/cer/

Comparative effectiveness research (CER), also called patient-centered outcomes research, is the conduct and synthesis of research comparing the benefits and harms of different interventions and strategies to prevent, diagnose, treat, and monitor health conditions in "real-world" settings. The purpose of this research is to improve health outcomes by developing and disseminating evidence-based information to patients, clinicians, and other decision-makers, responding to their expressed needs about which interventions are most effective for which patients under specific circumstances. The Recovery Act appropriated $1.1 billion ($400 million allocated to NIH) to conduct and support CER activities. The division was responsible for more than $79 million in ARRA funds to support CER projects. These projects covered a number of CER topics, including the following:

- Cancer prevention, screening, and treatment
- Genomic and personalized medicine
- Methodology development
- Workforce development

Research Portfolio and Science Advances

We applaud the work of our research community, which continues to advance the science to improve public health. The division provides the public with several Web tools that highlight our investigators and their research:

- DCCPS Current Research provides many ways to view the current DCCPS research portfolio **http://cancercontrol.cancer.gov/current_research.html**
- CC Publications is a searchable database of DCCPS-funded publications demonstrating the depth and breadth of research in cancer control and population sciences at NCI **http://publications.cancer.gov/**
- Cancer Control P.L.A.N.E.T. provides access to data and resources that can help planners, program staff, and researchers to design, implement, and evaluate evidence-based cancer control programs **http://cancercontrolplanet.cancer.gov/**

EXAMPLES OF SIGNATURE INITIATIVES

Below are some selected examples of signature initiatives currently funded by the division. For a complete listing of DCCPS major initiatives, please visit **http://initiatives.cancer.gov/archive/**. Thank you to our partners on these initiatives, whom we include in the full listing of collaborators and partners on page 4.

INTEGRATED NATIONAL SURVEILLANCE SYSTEM

SEER

SEER-MEDICARE LINKAGES

SEER-PATTERNS OF CARE STUDIES

LINKAGE TO NATIONAL LONGITUDINAL MORTALITY STUDY

CONSUMER ASSESSMENT OF HEALTH CARE PROVIDERS & SYSTEMS

EPIDEMIOLOGY CONSORTIA, REGISTRIES, AND LARGE-SCALE GENETIC STUDIES

Breast Cancer & the Environment Research Centers

CFR (Breast and Colon Cancer Family Registries)

COHORTS AND CONSORTIA

GENOME-WIDE ASSOCIATION STUDIES (GWAS) AND POST-GWAS

SCREENING, QUALITY OF CARE, AND OUTCOMES RESEARCH

CISNET
(Cancer Intervention and Surveillance Modeling Network)

BCSC
(Breast Cancer Surveillance Consortium)

CanCORS
Cancer Care Outcomes Research and Surveillance Consortium

The HMO CRN
(HMO Cancer Research Network)

PRO-CTCAE
(Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events)

PROSPR
(Population-Based Research Optimizing Screening through Personalized Regimens)

TRANSDISCIPLINARY SCIENCE CENTERS TO ADDRESS PUBLIC HEALTH CHALLENGES

Centers of Excellence in Cancer Communication Research (CECCR) Initiative

CENTERS FOR POPULATION HEALTH AND HEALTH DISPARITIES
CPHHD

tturc
(Transdisciplinary Tobacco Use Research Centers)

TREC
Transdisciplinary Research on Energetics and Cancer Centers

TOBACCO CONTROL

IMPROVING EFFECTIVENESS OF SMOKING CESSATION INTERVENTIONS AND PROGRAMS IN LOW-INCOME ADULT POPULATIONS

MEDIA AND POLICY RESEARCH

RESEARCH TO INFORM FDA REGULATION OF TOBACCO PRODUCTS

MEASURES AND DETERMINANTS OF SMOKELESS TOBACCO USE, PREVENTION, AND CESSATION

NATIONAL® CANCER INSTITUTE

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