DCCPS: NCI's bridge to public health research, practice, and policy

Bob Croyle

September 18, 2017

DCCPS New Grantee Workshop

NIH NATIONAL CANCER INSTITUTE

Outline

- Overview of DCCPS
- NCI Leadership
- Funding
- Cross-cutting Areas of Science
- Research Gaps
- New Initiatives
- Cancer Moonshot
- Resources
- Future Directions

OVERVIEW OF DCCPS

Statistical Research and Applications
Dr. Eric Feuer, BRANCH CHIEF

NCI LEADERSHIP

NCI Scientific Program Leaders Group (SPL)

- Rigorous stewardship of limited resources
- Complement peer review to select the best research and address gaps in science
- Minimize duplication and overlap (esp. vs. other recently approved grants)
- Ensure appropriate mechanism to achieve goals
- Facilitate coordination of research across NCI divisions
- Ensures there is scientifically informed funding decisions at all levels of program leadership

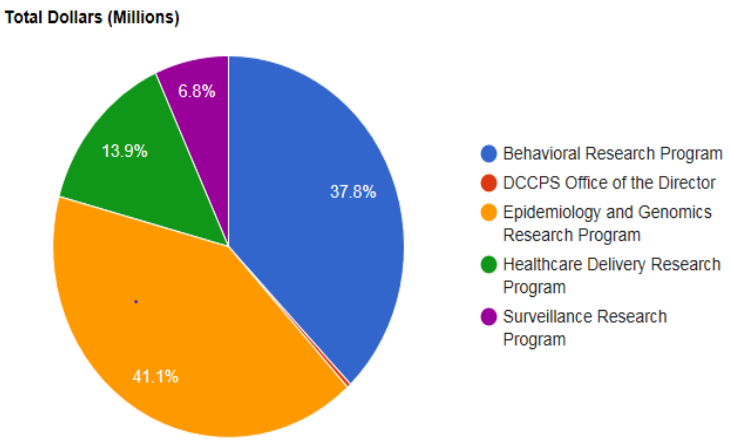
FUNDING

NCI's Grant Selection

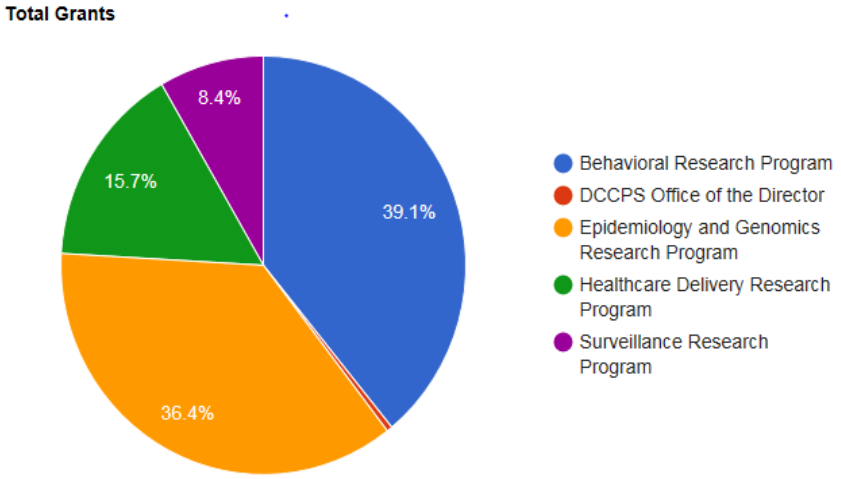
- In 2016, most R01 applications with scores up to the 10th percentile were funded.
- Applications with higher scores subject to branch, program, divisional and Scientific Program Leaders (SPL) review.
- Selection of grant applications for funding by exception
  - Not by an absolute payline - instead by individual consideration
- Over 6267 grants awarded in FY2016
- Over 4464 Research Project Grants (RPGs)
- Over 1,230 competing Research Project Grants (RPGs),
- Approximately 158 new Investigator awards in FY16

DCCPS Funding FY98 - FY16

DCCPS Grant Dollars FY16



DCCPS Grants FY16



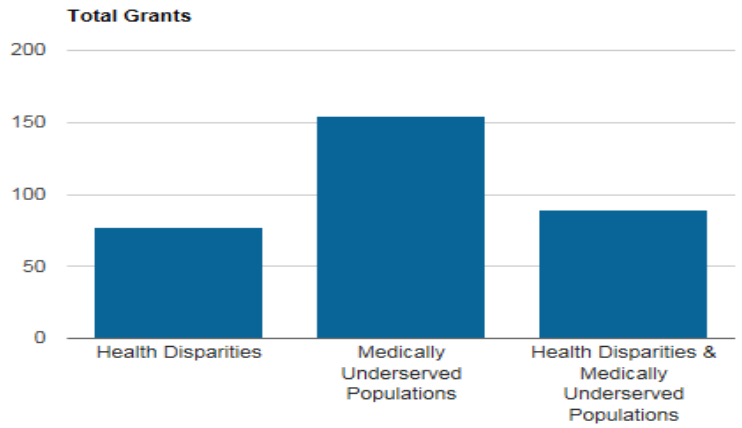
DCCPS FY16 Grants Summary

- 668 total grant awards in FY16
- $378M total funding for DCCPS grants portfolio
- Additional $128M total funding for operating budget, includes contracts, e.g., SEER Program, and collaborations (IAAs)

- Will have data for FY17 soon

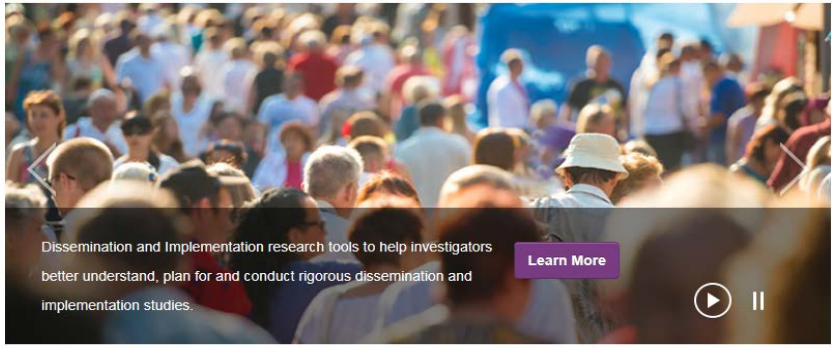
CROSS-CUTTING AREAS OF SCIENCE

Health Disparities Research Portfolio



Cancer Survivorship

Dissemination and Implementation Science



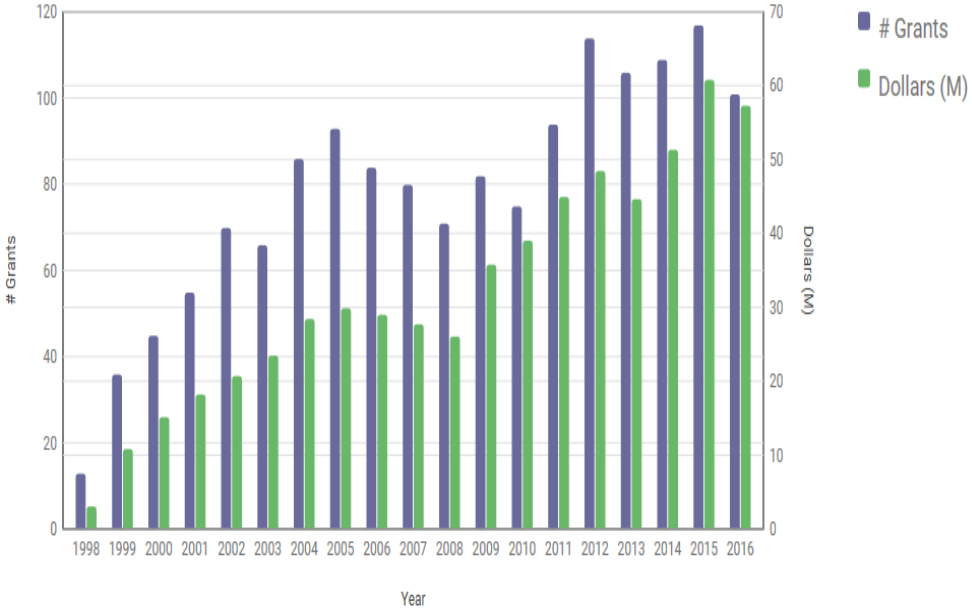
Dissemination and Implementation Research in Health

(R01/R03/R21)

Program Announcements With Special Receipt, Referral and/or Review (PARs)

https://grants.nih.gov/grants/guide/pa-files/PAR-16-238.html (R01)
https://grants.nih.gov/grants/guide/pa-files/PAR-16-237.html (R03)
https://grants.nih.gov/grants/guide/pa-files/PAR-16-236.html (R21)

Survivorship Research Portfolio



RESEARCH GAPS

Examples:

- Etiology and survivorship of rare cancers
- Environmental risk factors and gene-environment interactions
- Health disparities across diverse populations
- Methods/measurement
- Data sharing, reproducibility, and replication

NEW INITIATIVES

Recently Released PAs

Epidemiology and Genomics
Core Infrastructure and Methodological Research for Cancer Epidemiology Cohorts
Improving Outcomes in Cancer Treatment-Related Cardiotoxicity
Secondary Analysis and Integration of Existing Data to Elucidate the Genetic Architecture of Cancer Risk and Related Outcomes

Cancer Surveillance
New Informatics Tools and Methods to Enhance U.S. Cancer Surveillance and Research
Integration of Individual Residential Histories into Cancer Research
Leveraging Population-Based Cancer Registry Data to Study Health Disparities

Recently Released PAs

Behavioral Research
Predicting Behavioral Responses to Population-Level Cancer Control Strategies
Leveraging Cognitive Neuroscience Research to Improve Assessment of Cancer Treatment Related Cognitive Impairment
Stimulating Innovations in Behavioral Intervention Research for Cancer Prevention and Control
Innovative Approaches to Studying Cancer Communication in the New Media Environment
Cancer-Related Behavioral Research through Integrating Existing Data
Perception Research to Improve Cancer Image Interpretation
Innovative Tobacco Control Policies to Reduce Disparities in Tobacco Use

Recently Released PAs

Implementation Science
Dissemination and Implementation Research in Health

Healthcare Delivery
Reducing Overscreening for Breast, Cervical and Colorectal Cancers Among Older Adults
Linking the Provider Recommendation to Adolescent HPV Vaccine Uptake
Intervening with Cancer Caregivers to Improve Patient Health Outcomes and Optimize Health Care Utilization
Oral Anticancer Agents: Utilization, Adherence, and Health Care Delivery

AI/AN
Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers

CANCER MOONSHOT UPDATES

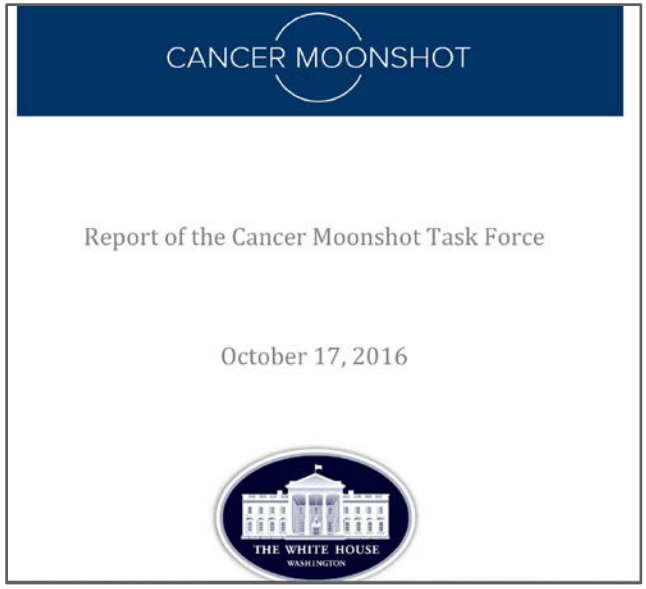
CANCER MOONSHOT

Task Force

Internal, federal inter-agency group. Report released October 17, 2016. Task Force was focused on making the most of federal investments, targeted incentives, private sector efforts from industry and philanthropy, patient engagement initiatives, and other mechanisms to support cancer research and enable progress in treatment and care.

Blue Ribbon Panel Report

External advisory group. Report Released on September 7, 2016 at the National Cancer Advisory Board meeting. Report outlines 10 recommendations to accelerate progress against cancer.



Blue Ribbon Panel Recommendations

A. Establish a network for direct patient involvement

Engage patients to contribute their comprehensive tumor profile data to expand knowledge about what therapies work, in whom, and in which types of cancer.

B. Create a clinical trials network devoted exclusively to immunotherapy

Establish a cancer immunotherapy clinical trials network devoted exclusively to discovering and evaluating immunotherapy approaches.

C. Develop ways to overcome cancer's resistance to therapy

Identify therapeutic targets to overcome drug resistance through studies that determine the mechanisms that lead cancer cells to become resistant to previously effective treatments.

D. Build a national cancer data ecosystem

Create a national ecosystem for sharing and analyzing cancer data so that researchers, clinicians and patients will be able to contribute data, which will facilitate efficient data analysis.

E. Intensify research on the major drivers of childhood cancers

Improve our understanding of fusion oncoproteins in pediatric cancer and use new preclinical models to develop inhibitors that target them.

F. Minimize cancer treatment's debilitating side effects

Accelerate the development of guidelines for routine monitoring and management of patient-reported symptoms to minimize debilitating side effects of cancer and its treatment.

G. Expand use of proven cancer prevention and early detection strategies

Reduce cancer risk and cancer health disparities through approaches in development, testing and broad adoption of proven prevention strategies.

H. Mine past patient data to predict future patient outcomes

Predict response to standard treatments through retrospective analysis of patient specimens.

I. Develop a 3-D cancer atlas

Create dynamic 3-D maps of human tumor evolution to document the genetic lesions and cellular interactions of each tumor as it evolves from a precancerous lesion to advanced cancer.

J. Develop new cancer technologies

Develop new enabling cancer technologies to characterize tumors and test therapies.

DCCPS Implementation of Blue Ribbon Panel Recommendations

- Tobacco Cessation
- Lynch Syndrome / Hereditary Cancers
- Health Disparities
- Symptom Management
- Colorectal Cancer Screening
- Cancer Data Ecosystem

- Implementation groups currently underway

Pre-Application Webinar on Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes (RFA-CA-17-041)

- **When: October 4, 2017 from 1:30 – 2:30 p.m. ET**
- **Where: via WebEx**

  (*Register at https://healthcaredelivery.cancer.gov/media/*)
- **Speakers:**

Erica S. Breslau, Ph.D., M.P.H.
Program Director
Health Systems and Interventions Research Branch
Healthcare Delivery Research Program
Division of Cancer Control and Population Sciences

Nonniekaye Shelburne, C.R.N.P., M.S., A.O.C.N.
Program Director
Clinical and Translational Epidemiology Branch
Epidemiology and Genomics Research Program
Division of Cancer Control and Population Sciences

Approaches to Identify and Care for Individuals with Inherited Cancer Syndromes (RFA-CA-17-041)

About the FOA:

- Associated with the Beau Biden Cancer Moonshot Initiative that is intended to accelerate cancer research
- Purpose is to increase case ascertainment and optimize delivery of evidence-based health care for individuals at high risk of cancer due to an inherited genetic susceptibility.
- Invites U01 applications for projects aimed at identifying best practices to improve case ascertainment of hereditary cancers, with the goal of improving prevention and detection

Application Due Date: January 9, 2018

RESOURCES

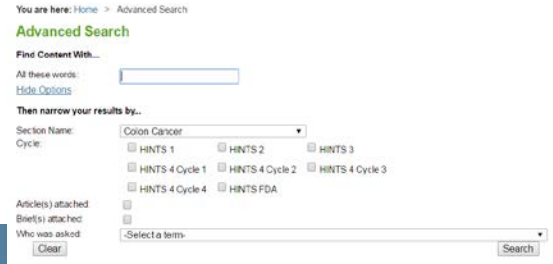
Cancer Control P·L·A·N·E·T

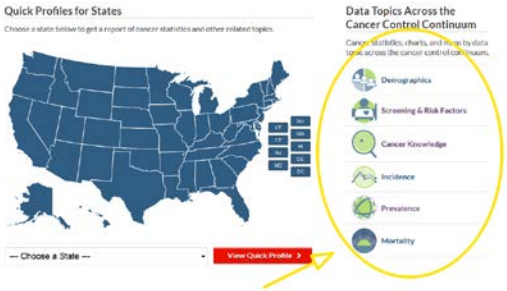
Plan, Link, Act, Network with Evidence-based Tools

- DATA
- COLLABORATION
- RESEARCH SYNTHESIS
- PROGRAMS
- EVALUATION
- PLAN
- RESOURCES

What is HINTS?

HINTS collects data about the use of cancer-related information by the American public. These data provide opportunities to understand and improve health communication. Read More >

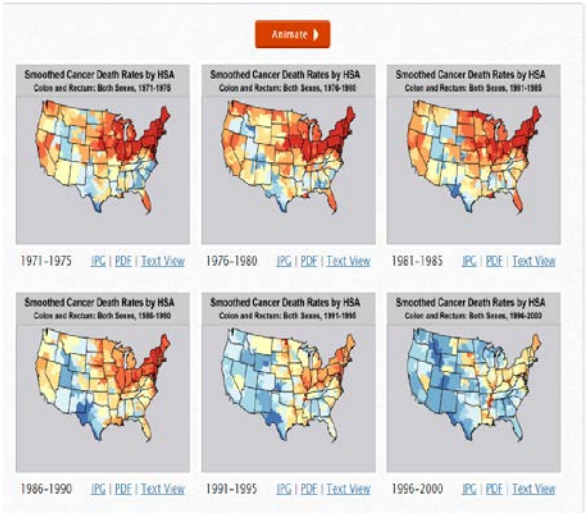


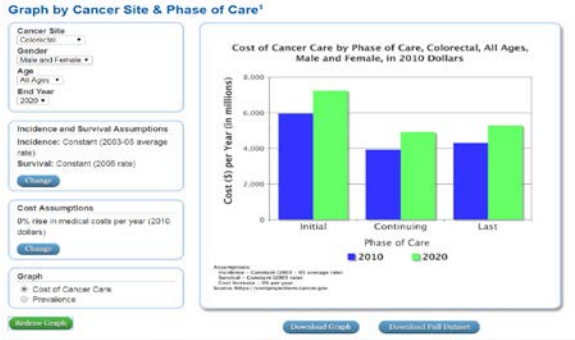


Cancer Prevalence and Cost of Care Projections

SEER Did You Know? Video Series

Animated Historical Cancer Atlas





FUTURE DIRECTIONS

Improving Cancer-Related Outcomes with

CONNECTED HEALTH

A Report to the President of the United States from the President's Cancer Panel

THE PRESIDENT'S CANCER PANEL

Chairperson

Barbara K. Rimer, DrPH

Dean
Gillings School of Global Public Health
Alumni Distinguished Professor of Health Behavior and Health Education
The University of North Carolina at Chapel Hill
Chapel Hill, NC

Members

Hill Harper, JD

Cancer Survivor
Four-Time New York Times Best-Selling Author, Actor, and Philanthropist
Hollywood, CA

Owen N. Witte, MD

University Professor
Director
Eli and Edythe Broad Center of Regenerative Medicine and Stem Cell Research
University of California, Los Angeles
Los Angeles, CA

Connected Health: Improving Patients' Engagement and Activation for Cancer-Related Health Outcomes

President's Cancer Panel 2014-2015 Series

The power and utility of connected health technologies are growing. Many forces are catalyzing a national U.S. effort to engage and activate individuals to be more proactive about their health and healthcare and to translate this engagement to enhanced activation among patients. These forces have important implications for the prevention and treatment of cancer and for optimal survivorship. They include but are not limited to:

- **"Meaningful Use"** incentives to healthcare providers focus on requirements to demonstrate "patient engagement" through health information technology (Phases 2 & 3).
- **The "Quantified Self"** movement is creating new tools to encourage and reinforce a variety of healthy behaviors relevant to cancer control.
- **The Internet** has made vast amounts of health information available, and social media platforms have

A patient with a complex chronic condition receives a prescription for an app that is downloaded to a mobile device. Using information the patient enters, the app delivers automated clinical coaching and sends reports to the physician, recommending evidence-based protocols for adjusting the patient's treatment regimen, if needed. Equipped with a tool that offers personal, relevant

National Academy of Medicine

- NAM report co-funded by ACS, CDC, and NCI
- Focus: A National Strategy for Cancer Control in the United States
- $1.3M total costs
- Beginning FY17

Also in 2018:

- Workshop to focus on small/underrepresented populations
- Partnership with – RWJF, NIMHD, OBSSR

Annual Plan & Budget Proposal PDF

Professional Judgment Budget PDF

Investing in the Future of Cancer Research

Highlights of the *NCI Annual Plan & Budget Proposal for Fiscal Year 2019*

Every day, scientists and physicians dedicated to cancer research work to make discoveries that will advance new treatments and tools into the clinic. Patients participate in clinical trials with the hope of finding new options for themselves and producing better outcomes for future patients who will face the same disease. Their combined efforts—enabled by research funding—have led to new ways to prevent, detect, and treat cancer and a 25% decline in the rate of death from cancer over the past two decades.

Despite this progress, more work remains. Nearly 40% of Americans will be diagnosed with cancer in their lifetimes. In 2017, cancer is expected to take the lives of about 600,000 adults and 2,000 children in the United States. Many of us have had a family member, friend, or neighbor with cancer or have been affected by cancer ourselves. Continued progress requires strong and sustained federal investment in cancer research.

1990 ····· 2014

THE OVERALL CANCER DEATH RATE IN THE UNITED STATES

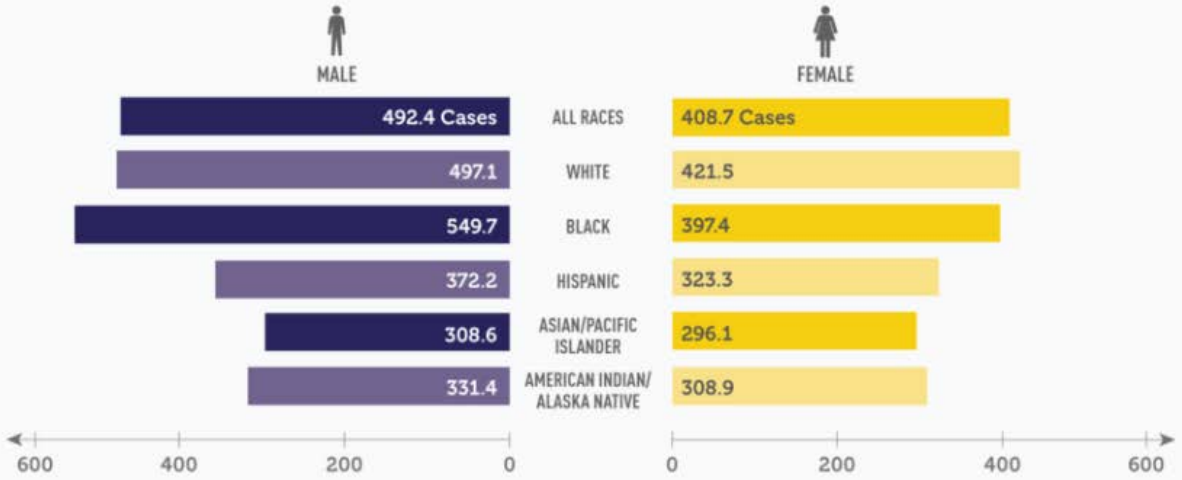
FELL BY

25%

Source: SEER Cancer Statistics Review (CSR) 1975-2014
cancer.gov

Number of New Cancer Cases Each Year

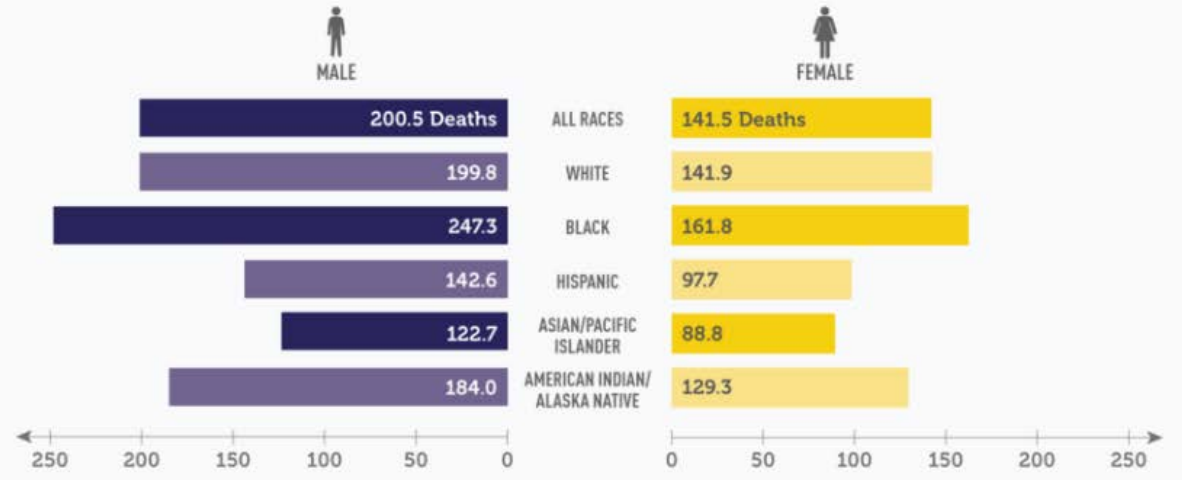
Per 100,000 Persons by Gender and Race/Ethnicity: All Cancers



Source: SEER 18, 2010-2014
cancer.gov

Number of Deaths Each Year

Per 100,000 Persons by Gender and Race/Ethnicity: All Cancers



Source: SEER 18, 2010-2014
cancer.gov

Providing Resources to Advance Research

NCI develops and maintains resources to help researchers prevent, diagnose, and treat cancer, including databases and specimen repositories, cancer-related tools, and other materials that are available to scientists and the public via NCI's website. The following represent just two of these kinds of resources.

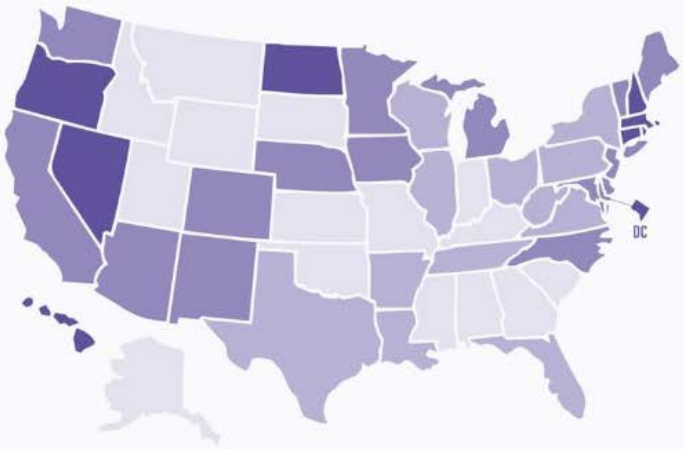
- The Surveillance, Epidemiology, and End Results (SEER) Program facilitates the collection and analysis of cancer statistics at the population level. SEER serves as the authoritative source of information on cancer incidence and survival in the United States. The program oversees the only population-based cancer registries in the country that include a broad set of clinical elements, with the registries located at or associated with NCI-Designated Cancer Centers. NCI manages the program and collaborates with other organizations, including the American Cancer Society and the Centers for Disease Control and Prevention, to make SEER a success. Furthermore, SEER data are used extensively to support research beyond NCI, with 4,000 downloads of its public-use files annually. For example, researchers use SEER to track trends in cancer at the national, state, and local levels; understand factors that influence these trends; and describe cancer disparities among different populations.

Improving HPV Vaccination Rates Will Help Save Lives

NATIONWIDE
6 OUT OF 10
GIRLS HAVE STARTED THE HPV VACCINE SERIES

National coverage is 63%
Coverage by state:
- 59% or less
- 60–64%
- 65–69%
- 70% or greater

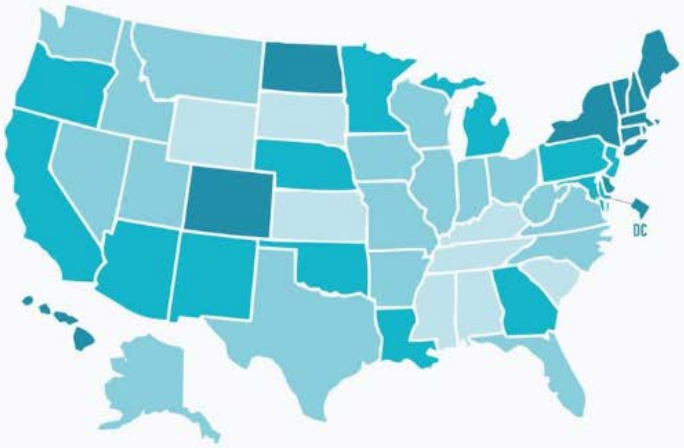
Percentage of Adolescent Girls Who Have Received One or More Doses of HPV Vaccine*



NATIONWIDE
5 OUT OF 10
BOYS HAVE STARTED THE HPV VACCINE SERIES

National coverage is 50%
Coverage by state:
- 39% or less
- 40–49%
- 50–59%
- 60% or greater

Percentage of Adolescent Boys Who Have Received One or More Doses of HPV Vaccine*



HPV VACCINATION IS THE BEST WAY TO PREVENT SEVERAL TYPES OF CANCER. YET MANY ADOLESCENTS HAVE NOT STARTED THE HPV VACCINE SERIES.

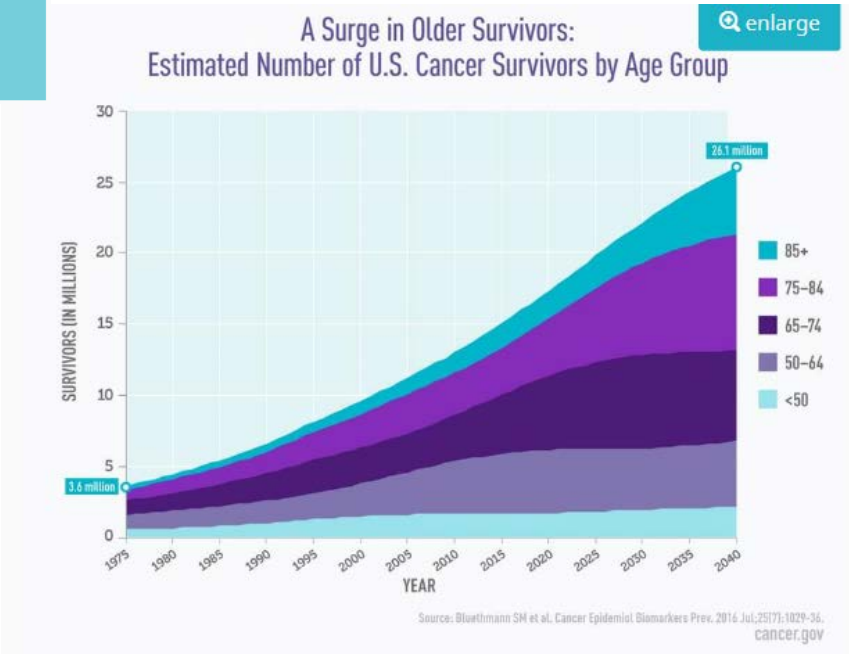
*Estimated coverage with ≥1 dose of human papillomavirus (HPV) vaccine among adolescents age 13-17 years (Source: National Immunization Survey—Teen, United States, 2015)

Source: *MMWR* August 26, 2016
cancer.gov

Adapted from cdc.gov/hpv

CHALLENGES THAT CANCER SURVIVORS FACE

- Risk of recurrence
- Increased risk of second primary cancer
- Reduced quality of life
- Economic burden (financial toxicity)
- Treatment side effects (cardiotoxicity, cognitive challenges)
- Emotional distress (depression, anxiety/uncertainty, altered body image, survivor's guilt)
- Denial of health and/or life insurance
- Physical problems
- Loss of fertility and/or diminished reproductive health
- Difficulty maintaining or finding employment
- Barriers to health care (high insurance and out-of-pocket costs for health care, lack of coordination of health care, and limited access to specialty care)



Reducing Tobacco Use Before and After a Cancer Diagnosis

Michael Fiore, M.D., M.P.H., M.B.A.

Hilldale Professor of Medicine, University of Wisconsin School of Medicine and Public Health

Founder and Director, University of Wisconsin Center for Tobacco Research and Intervention

Working to Reduce the Cancer Burden Caused by Tobacco

Understanding the Influence of Body Weight and Physical Activity on Cancer Risk and Outcomes

Delivering High-Quality Cancer Care to All Americans

Electra Paskett, Ph.D.

Director and Marion N. Rowley Professor of Cancer Research, Division of Cancer Prevention and Control, The Ohio State University College of Medicine

Addressing Cancer Disparities in Appalachia

NATIONAL CANCER INSTITUTE

www.cancer.gov **www.cancer.gov/espanol**