NATIONAL CANCER INSTITUTE
AN ANNUAL PLAN AND BUDGET
PROPOSAL FOR FISCAL YEAR **2016**
At-a-Glance

Building on Opportunities in Cancer Research

Each year, the National Cancer Institute highlights the current state of cancer research and promising opportunities ahead in presenting its professional judgment for federal funds needed to enhance the nation's investment in cancer research.

This is a time of remarkable opportunity in cancer research.

The Cancer Landscape Is Changing

THE OVERALL CANCER DEATH RATE IN THE UNITED STATES FELL BY
22%
FROM 1990 → 2011

MORE PEOPLE SURVIVE CANCER

WHERE WE WERE
7 million in 1992

HOW FAR WE'VE COME
14 million in 2012

WHERE WE WILL BE
18 million in 2022

Cancer death rates have dropped steadily

From 1990 through 2011, the overall cancer death rate in the United States fell by 22 percent.

More people are surviving cancer

It is estimated that cancer survivors will account for more than 5 percent of the U.S. population in 2022.

Cancer prevention, screening, and treatment are improving

Decades of research have allowed us to develop tailored preventive, screening, and treatment approaches for people at increased risk of developing cancer.

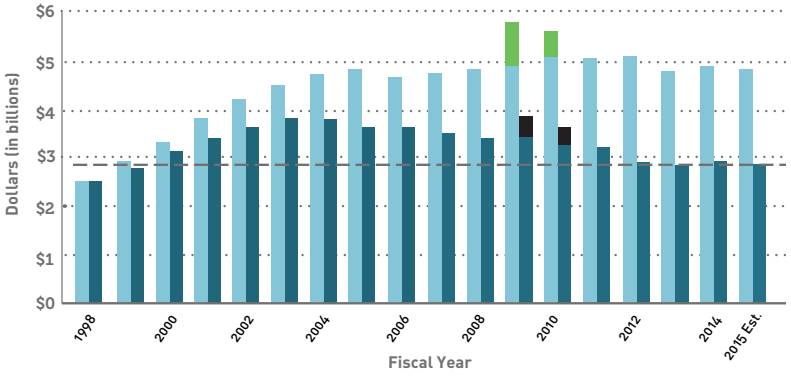
WORLDWIDE CANCER CASES WILL INCREASE BY
37%
FROM 14.1 million IN 2012
TO 19.3 million IN 2025

WORLDWIDE CANCER DEATHS WILL INCREASE BY
39%
FROM 8.2 million IN 2012
TO 11.4 million IN 2025

The global burden of cancer is expanding

An aging worldwide population is leading to an increase in many diseases, including cancer.

THE DECLINING PURCHASING POWER OF THE NCI BUDGET



At the same time, support for cancer research is eroding

Our ability to seize promising opportunities is being compromised by the declining purchasing power of the NCI budget.

- NCI Budget
- NCI Budget Adjusted for Inflation (FY 1998 dollars)
- The dashed line at $2.9 billion shows that the current NCI budget, adjusted for inflation, is essentially the same as the NCI budget in FY 1999.
- ARRA Funding (Public Law 111-5)
- ARRA in 1998 Dollars

U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
National Institutes of Health • National Cancer Institute

The NCI Is Building on the National Cancer Program

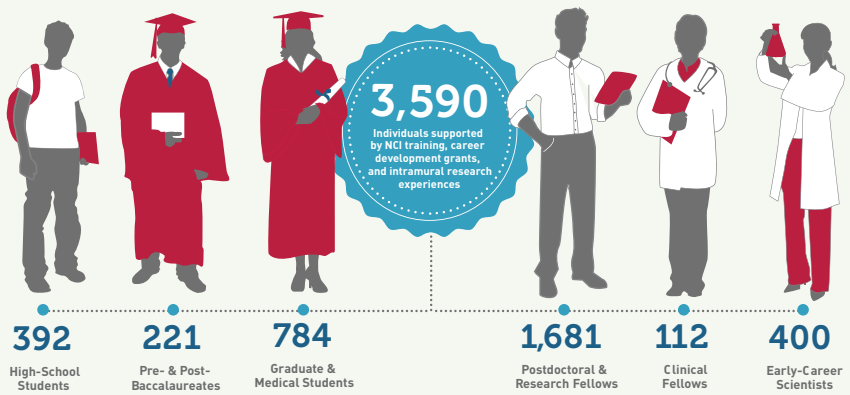
As the cancer landscape changes, the NCI is building on its core cancer research functions.

Supporting Scientists

Support for the best science underpins everything the NCI does; therefore, attracting the best minds to the field of cancer research is paramount.

NATIONAL CANCER INSTITUTE
Training the Workforce

In FY 2013, NCI supported 3,590 emerging cancer researchers through training and career development grants and intramural research experiences.*



* Numbers do not include students and postdoctoral fellows supported by NCI research project grants, cancer center grants, and other non-training mechanisms.

NCI-DESIGNATED CANCER CENTERS

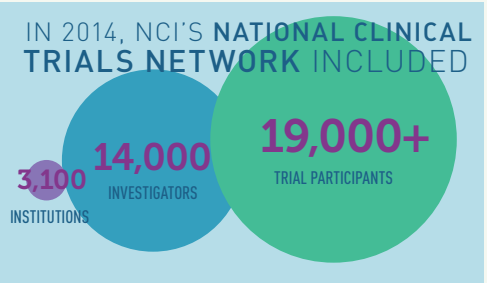
There are 20 cancer centers, 41 comprehensive cancer centers, and 7 research centers.

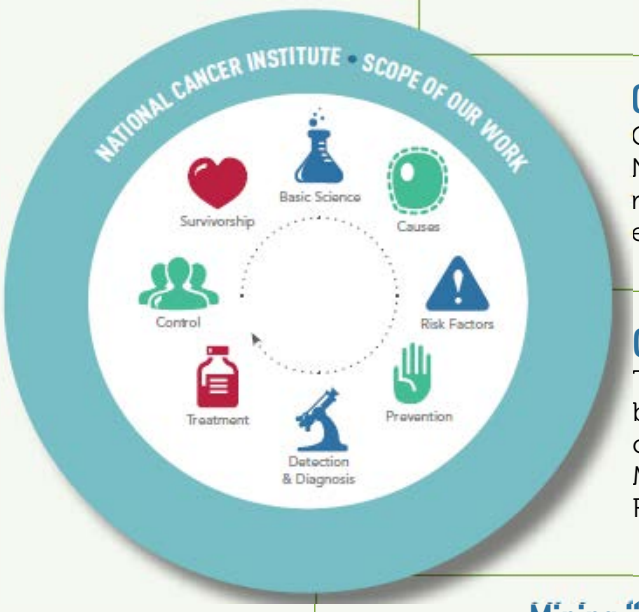
Providing Research-Based Cancer Care Across the United States

The NCI supports 68 NCI-Designated Cancer Centers, which conduct research and deliver high-quality cancer care to patients in diverse communities across the nation.

Testing New Approaches to Prevention and Treatment

People with cancer now live longer lives in part because of interventions that have come from the NCI's clinical trials network, involving thousands of institutions, researchers, and patients.





Overcoming Cancer Health Disparities

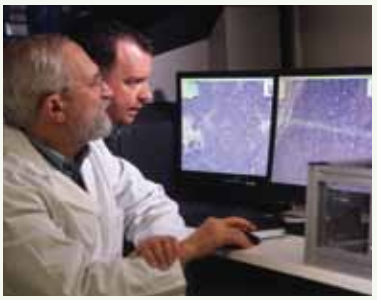
Cancer affects some racial and ethnic groups more than others. The NCI works to overcome the unequal burdens of cancer by supporting research into the biological differences of cancer and barriers to equitable health care.

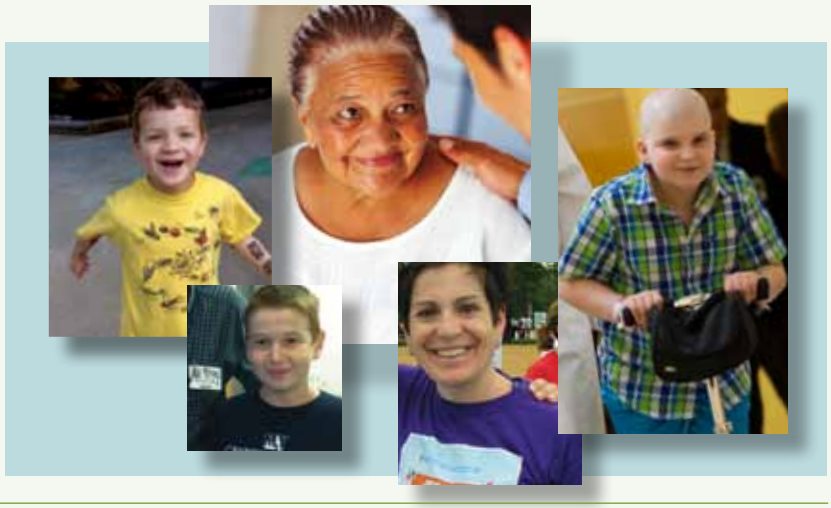
Conducting High-Risk, High-Impact Research

The NCI supports teams of intramural research scientists who conduct basic, clinical, and population-based research, including the study of rare cancers, at the National Institutes of Health Clinical Center in Bethesda, Maryland, and in offices and laboratories around the area, including the Frederick National Laboratory for Cancer Research in Frederick, Maryland.

Mining "Big Data" to Accelerate Research

Data coordination is especially important for cancer genomics, in which millions of data points are frequently collected on each patient. Keeping up with the pace of acquisition of new information requires continual bioinformatics infrastructure upgrades, which are critically important and costly.





Support for Research Saves Lives

Promising Opportunities in Cancer Research

The NCI is pursuing the following promising opportunities in cancer research:

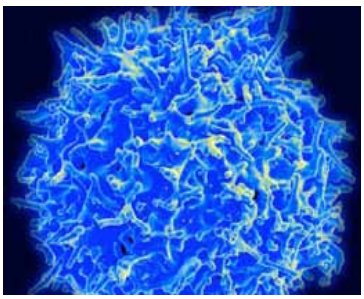
1. Building on Discoveries in Cancer Genomics

The NCI launched The Cancer Genome Atlas (TCGA) for adults and Therapeutically Applicable Research to Generate Effective Treatments (TARGET) for children to decipher the genomes of many cancers to understand their complexity and diversity. The programs have led to new approaches to cancer diagnosis and treatment and continue to deepen our understanding of the features common to several cancer types.

2. Advancing Precision Medicine Trials

The TCGA and TARGET initiatives and others are leading to clinical trials for patients whose tumors will be genomically tested and whose treatment will be based on the identified molecular abnormalities. Conducting a new generation of genomic clinical trials requires sophisticated and expensive technologies and clinical processes.

3. Harnessing the Promise of Immunotherapy



Engineering a patient's own immune system to seek and destroy cancer cells has shown the potential to lead to lasting remissions. The journal *Science* designated "immunotherapy of cancer" its Breakthrough of the Year in 2013, thanks to the recent progress made in patients.

4. Making Progress against Childhood Cancers

The NCI conducts extensive research into cancers in children, ranging from basic scientific investigations to the testing of new therapies, including immunotherapy and those abandoned by industry. The NCI oversees clinical trials available to children at more than 200 institutions throughout the United States and Canada.

5. Developing Therapies for RAS-Driven Cancers

Researchers have known for decades that about one-third of all cancers are driven by mutations in the *RAS* family of genes. To accelerate progress, the NCI recently launched the large-scale RAS Initiative, involving the NCI, academia, and industry to seek therapeutic strategies for patients with *RAS*-driven cancers.

6. Finding New Strategies to Prevent Cancer

Prevention has the potential to save more lives from cancer than treatment. Research on tobacco control, preventing cancers caused by viral infections, and chemoprevention are three areas that have the potential to substantially reduce cancer incidence in the future.

The Future of Cancer Research

As these examples illustrate, important scientific opportunities are before us. With sustained investments, the NCI can stimulate development of new cancer therapies, demonstrate sound public health leadership, and improve outcomes for patients with cancer across the globe.

To view the NCI Annual Plan and Budget Proposal for Fiscal Year 2016 visit: www.cancer.gov/NCIresearchfuture

Printed December 2014

NIH National Cancer Institute

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