National Cancer Institute Professional Judgment Budget Proposal Fiscal Year 2019

LEADING THE NATION'S PROGRESS AGAINST CANCER INTO THE FUTURE

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.

The National Cancer Institute (NCI) is the federal government's principal agency for cancer research and training. NCI leads, conducts, and supports cancer research across the nation to advance scientific knowledge and help all people live longer, healthier lives. As the largest funder of cancer research in the world, NCI supports investigators to advance a broad portfolio of research—from laboratory discoveries to clinical trials to population sciences. NCI encourages collaboration between scientists and organizations, conducts a rigorous and accountable funding process, and works with stakeholders to ensure that the nation's investment in cancer research has maximum impact.

There is strong national support for the work NCI funds. The Cancer Moonshot℠, which aims to accomplish a decade's worth of research in 5 years, is just one example of a targeted effort with specific resources for making dramatic advances against this disease.

NCI puts forward a professional judgment budget proposal that highlights the impact of the nation's investment in cancer research and directs attention to several areas for which additional support will enable more progress. Here we introduce the "NCI Professional Judgment Budget Proposal for Fiscal Year 2019."

RESEARCH OPPORTUNITIES

Building on the momentum made in the past few decades requires support for all areas of cancer research, from basic science to cancer survivorship. NCI's commitment to train the next generation of cancer researchers is unwavering and cuts across all research areas. The "Professional Judgment Budget Proposal for Fiscal Year 2019" includes funds for exceptional opportunities in the following research areas.

UNDERSTANDING THE MECHANISMS OF CANCER

Cancer is a complex disease that requires an in-depth understanding of how genetic, behavioral, and environmental factors contribute to its development. Discoveries in basic scientific research on the growth, survival, and spread (metastasis) of cancer cells in the body have been, and continue to be, essential for continued progress. Part of NCI's mission is to support the basic scientific research that will lead to new ways to prevent, detect, and treat cancer, thereby enabling people to live longer, healthier lives. Two areas of research opportunity are understanding and therapeutically targeting the molecular drivers of cancer and understanding and finding new ways to control cancer metastasis.

PREVENTING CANCER

Improved cancer prevention means fewer people will face a diagnosis of cancer and the physical, financial, social, and psychological harms of the disease and its treatment. NCI-supported research informs efforts to minimize human exposure to cancer-causing agents in the environment and improve screening to detect and treat precancerous growths before they develop into cancer. An emerging area of opportunity is the development of vaccines to prevent not only the cancers that are caused by viruses but also cancers that are not caused by viruses.

DETECTING & DIAGNOSING CANCER

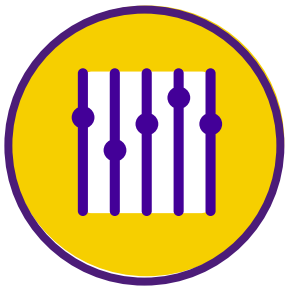
Early detection is a proven strategy for saving lives from cancer. NCI funds research to improve cancer detection in its early stages, when it may be most treatable, and to accurately assess how likely it is that a precancerous growth will progress to life-threatening disease. An area of opportunity includes developing new approaches, including liquid biopsies and other less-invasive methods, for the early detection of precancers and early cancers. These approaches have the potential to increase the number of cancers for which we have clinically effective screening programs as well as to improve the technologies currently used to screen for cancer.

TREATING CANCER

NCI's commitment to developing new treatments for cancer patients spans basic research to discover the mechanisms of cancer, preclinical research to investigate the anticancer effects of therapies that target these mechanisms, and clinical research to test new therapies in patients. Despite recent advances in targeted therapy and immunotherapy, more needs to be done to substantially improve the outlook for both adults and children with cancer. Three areas for further investment include developing combination therapies, biomarker-guided immunotherapies, and precision medicines that target specific abnormalities in a patient's cancer.

ADVANCING PUBLIC HEALTH IN CANCER

NCI supports research focused on improving the delivery of cancer care and designing interventions at the individual and population levels to improve cancer prevention, screening, treatment, and survivorship. Some areas of opportunity include understanding how body weight and physical activity influence cancer risk and outcomes; further reducing tobacco use; delivering high-quality cancer prevention, screening, and treatment to all regions of the country; and improving the quality of life of cancer survivors.



REDUCING CANCER DISPARITIES

Advances in cancer research do not benefit all people equally. Some cancer disparities can be attributed to differences in access to, utilization of, and quality of care, but biology and lifestyle factors are also important. The biology of cancer disparities requires more research and attention to improve the outcomes of patients and individuals at risk of cancer. Innovative ways to mitigate the effects of biology and lifestyle factors and to improve access to quality care are needed to ensure the best cancer outcomes for all Americans. This will require additional studies of cancer in underrepresented racial/ethnic populations and greater participation by members of these populations in clinical trials. Special attention to the cancer needs of rural populations is also essential.

Professional Judgment Budget Proposal Fiscal Year 2019

(Dollars in millions)

FISCAL YEAR 2017 NCI BASE APPROPRIATION	$5,389	
TOTAL BUDGET INCREASE Proposed Allocation	$591†	$301 Inflation Adjustment* $45 Understanding the Mechanisms of Cancer $70 Preventing Cancer $40 Detecting & Diagnosing Cancer $70 Treating Cancer $25 Advancing Public Health in Cancer $20 Reducing Cancer Disparities $20 Training & Infrastructure
FY 2019 BUDGET REQUEST	$5,980	
	$400	FY 2019 CANCER MOONSHOT℠ FUNDING
FY 2019 GRAND TOTAL	$6,380	

* Adjustment includes inflation for the 2 years between FY 2017 and FY 2019.

† In addition to the inflation adjustment, the increase of $591 million includes $290 million (5.4%) for additional cancer research in seven priority areas.