NIH NATIONAL CANCER INSTITUTE

Leading Progress Against Cancer

NCI Fiscal Year 2027

Annual Plan & Professional Judgment Budget

Professional Judgment Budgets are estimates and are not budget requests.

U.S. Department of Health & Human Services | National Institutes of Health

Thanks to advances in prevention, screening, and treatment, U.S. cancer mortality rates have progressively decreased for more than 30 years, and childhood cancer mortality rates have decreased even faster. This has resulted in a more than one-third decrease in age-adjusted cancer mortality rates. Since 2000, there have been notable improvements in patient outcomes for several common cancers that traditionally had poor prognoses. These include ovarian cancer, which now has a 5-year survival rate that is more than 50%,[1] and lung cancer, whose incidence decreased by more than 30% while its 5-year survival rate almost doubled.[2] These advances also mean that the number of cancer survivors is increasing. There are over 18 million cancer survivors today, which is more than 5% of the US population; this number is projected to reach 26 million by 2040.[3]

Because of these advances, approximately 300,000 Americans who would have died from cancer at 1990 mortality rates will not die from cancer this year.[4] However, about 600,000 people will succumb to cancer this year, which indicates the magnitude, urgency, and need to make further progress against this terrible disease.[5] Furthermore, the advances have not been uniform for all populations. For example, mortality rates for urban populations have decreased faster than for rural populations, creating a new cancer disparity, while Black men and women continue to have higher incidence and mortality rates for several cancer types. Supporting research to narrow these gaps is an important goal for NCI.

The Fiscal Year 2027 (FY27) Professional Judgment Budget presents NCI's assessment of the optimal funding to support the National Cancer Program and help all people live longer, healthier lives. FY27 presents an opportunity for Congress to sustain robust cancer research for the United States, including new funding to modernize and expand cancer clinical trials, increase investments in cancer research grants, ensure a robust future workforce, and develop new ways to prevent cancer and detect it earlier.

There are many opportunities for continued progress. For example, though most anti-cancer drugs are first approved by the FDA as single agents, drug combinations can produce even better outcomes. Evaluations of such regimens have led to recent approvals for new combinations to treat several cancer types, including multiple myeloma, follicular lymphoma, and urothelial carcinoma.

NCI drives progress across the cancer continuum with a long-standing commitment to invest in a broad portfolio of promising, strategic, and rigorous cancer research to prevent and improve cancer care and outcomes for all Americans.

The estimated FY27 budget from NCI supports a balanced cancer research portfolio that saves lives today while building toward tomorrow's innovations. NIH is shifting to fully funding research grants up front, improving flexibility and long-term planning for investigators. To maintain the same number of awards and ensure stability during this shift, NCI anticipates needing an increased budget in FY27.

NCI remains committed to supporting basic science research that unlocks insights into the causes of cancer, cancer biology, and novel targets for intervention, as well as sustained investments in data infrastructure crucial for further accelerating discoveries from basic research to clinical science that directly benefit patients. NCI invests in the ideas, workforce, and infrastructure that sustain cancer research across the country using rigorous, transparent, and trustworthy science. As responsible stewards of federal funding, NCI balances its research portfolio and provides strong oversight to ensure that research directly benefits the American public. Meaningful progress against cancer requires sustained funding growth so NCI can act upon existing and emerging scientific opportunities and build on discoveries made from previous investments.

Cancer does not wait, so neither can we: the opportunities and pressing challenges in cancer research must be supported in FY27 to increase our understanding of how cancer develops and where we can intervene to discover better ways to prevent, detect, diagnose, and treat this disease.

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1. seer.cancer.gov/statfacts/html/ovary.html
2. seer.cancer.gov/statfacts/html/lungb.html
3. Tonorezos E, Devasia T, Mariotto AB, et al. Prevalence of cancer survivors in the United States. *J Natl Cancer Inst.* 2024;116(11):1784-1790. PubMed PMID: 39002121.
4. Extrapolated from Siegel RL, Giaquinto AN, Jemal A. Cancer statistics, 2024. *CA Cancer J Clin*. 2024;**74**(1):12-49. PMID: 38230766.
5. seer.cancer.gov/statfacts/html/common.html

SCIENTIFIC OPPORTUNITIES IN CANCER RESEARCH

DELIVERING CLINICAL TRIALS TO ALL AMERICANS

NCI supports the cancer clinical trials infrastructure that serves as the nation's backbone for testing innovative cancer therapies and accelerating the delivery of promising treatments and prevention strategies. NCI programs expand clinical trial opportunities beyond major academic cancer centers, ensuring patients can enroll in a clinical trial wherever they live. Through a system of complementary clinical trial networks, individuals in all 50 states, the District of Columbia, Puerto Rico, and Guam can participate in cutting-edge research and access cancer care. Additionally, NCI holds a unique role in supporting clinical trials that the private sector does not, such as for patients with pediatric cancers or rare adult cancers, who may otherwise not have options for potential new therapies.

Today's clinical trials lead to tomorrow's improved standard of care for cancer prevention and treatment. Since 2000, the FDA has approved over 600 indications for cancer, all tested through clinical trials. This includes approvals of over 200 new treatments, with many products receiving approval for multiple treatment indications, such as for specific cancer types or patient age ranges.[6] Virtually all these advances rely, at least in part, on basic research conducted by NCI-supported scientists.

NCI is modernizing and streamlining clinical trial design by reducing complexity, broadening access, simplifying patient participation, and speeding up collection of results through innovative approaches, such as pragmatic trials, AI, and revised eligibility criteria. NCI is also working toward adopting standard data collection practices for specific late-stage clinical trials to address the increasing complexity and costs of cancer trials.[7] The NCI Virtual Clinical Trials Office pilot is developing best practices for accelerating testing of new approaches to prevention, diagnostics, treatment, and survivorship.

The estimated FY27 NCI budget would enable NCI to further modernize clinical studies and expand clinical research networks into local community oncology practices where most people receive their care. This can improve access to NCI-sponsored clinical studies and high-quality cancer care for all Americans.

6. Scott EC, Baines AC, Gong Y, et al. Trends in the approval of cancer therapies by the FDA in the twenty-first century. *Rev Drug Discov.* 2023;22(8):625-640. PubMed PMID: 37344568.
7. Prindiville SA, Mandrekar SJ, Meropol NJ, et al. Streamlining the conduct of cancer clinical trials: new standard data collection practices for National Cancer Institute late-phase clinical studies. *J Natl Cancer Inst.* 2025;117(3):396-401. PubMed PMID: 39325869.

SCIENTIFIC OPPORTUNITIES IN CANCER RESEARCH

INVESTMENTS IN FOUNDATIONAL RESEARCH GRANTS AND TRAINING

As the largest funder of cancer research in the world, NCI supports a broad portfolio of research—from cancer laboratory discoveries to clinical trials to population sciences. Investigator-initiated research is central to NCI's mission. NCI-funded, investigator-initiated basic research has produced transformative cancer research; examples include the field of immunotherapy[8] and the association of the *BRCA1 and BRCA2* genes with hereditary breast cancer.[9] Importantly, foundational cancer research supported by NCI does not benefit just people with cancer – insights learned often foster medical advances for other diseases, meaning the investments benefit even more Americans.

NCI invests in pioneering research with the potential for major breakthroughs, pursuing bold ideas in cancer prevention, diagnosis, and treatment that may not receive private-sector funding because it is viewed as too risky. This approach has yielded transformative results for more than 80 years, as some of the most significant advances in cancer research have come from foundational research that carries a high degree of uncertainty, but has produced major breakthroughs for the American public.

NCI backs high-risk basic research, which industry usually avoids. To continue progress, the NCI FY27 budget estimate allows NCI to offer sustained support for research in an environment that promotes open review and scientific integrity. Today's investments in basic cancer research establish the foundational understanding of cancer development and progression that is necessary for tomorrow's breakthroughs.

Importantly, NCI has a long-standing commitment to train, develop, and support a strong workforce of researchers spanning the career continuum, who are prepared to take full advantage of the opportunities of today and tomorrow. This includes ensuring continued education and improving the skills of the current workforce, thinking holistically about career pathways, and developing approaches to maintain an innovative workforce over time. Sustained and consistent support of the next generation of cancer scientists is imperative – these are the people who will make the paradigm-shifting discoveries of the future and will help the U.S. maintain its position as a world leader in cancer research.

8. ccr.cancer.gov/news/landmarks/article/development-of-cancer-immunotherapy
9. cancer.gov/research/progress/discovery/brca

SCIENTIFIC OPPORTUNITIES IN CANCER RESEARCH

CANCER PREVENTION

Cancer prevention can save more lives over time than treatment alone and is a critical part of NCI's effort to reduce the burden of cancer in the United States and globally. Researchers estimate that behavior changes like tobacco use reduction, vaccination, and other proactive measures could prevent nearly half of all cancer deaths.[10] Effective prevention reduces cancer incidence and morbidity, so fewer people face the physical, financial, social, and psychological harms of cancer diagnosis and treatment.

NCI supports research that examines how internal factors like genetics and external factors like environmental carcinogens contribute to cancer risk. This includes studies that target modifiable risk factors such as nutrition, physical activity, and tobacco use, which are critical to decreasing cancer incidence rates and improving the health of all Americans.

Because there are economic and scientific barriers to prevention research, it is rarely conducted in the private sector. This makes NCI's role essential. In addition to basic and translational prevention research, NCI supports cancer prevention clinical trials through programs such as the NCI Community Oncology Research Program. The return on NCI's investments in cancer prevention can be seen in the declining incidence and mortality of several types of cancer, most notably lung, colorectal, and cervical cancers,[11] the latter of which has a highly effective preventative vaccine that was developed with foundational research from NCI scientists.[12]

By advancing proven and novel prevention strategies, NCI seeks to further reduce the number of Americans who face a cancer diagnosis and the associated personal and societal costs. The budget estimate would allow NCI to develop new cancer prevention methods and expand the use and accessibility of proven strategies.

10. Islami F, Marlow EC, Thomson B, et al. Proportion and number of cancer cases and deaths attributable to potentially modifiable risk factors in the United States, 2019. *Cancer J Clin*. 2024;74(5):405-432. PubMed PMID: 38990124.
11. seer.cancer.gov/report_to_nation/stats.html
12. ccr.cancer.gov/news/landmarks/article/hpv-vaccine

SCIENTIFIC OPPORTUNITIES IN CANCER RESEARCH

EARLY DETECTION AND SCREENING

A recent study estimated that more than 15,000 lives could be saved if only 10 percent more of the eligible U.S. population underwent lung, colorectal, breast, and cervical cancer screening tests as recommended.[13] For many cancers, early detection offers the best chance for successful treatment and positive patient outcomes. NCI supports research on biomarkers, imaging technologies, and screening tools to identify cancers at their most treatable stage. This research, supported by the estimated budget, will bring new early detection and screening technologies into clinical care, broadening access and reducing the time between discovery and patient benefit.

NCI research also directly improves the standard of care, including improvements in cancer screening. For example, an NCI-supported longitudinal screening trial[14] focused on prostate, lung, colorectal, and ovarian cancers influenced multiple clinical practice guidelines. This included whether patients should undergo periodic prostate specific antigen screening for prostate cancer.[15] Trends in SEER cancer registry data and NCI-supported modeling informed recent colon[16] and breast[17] cancer screening guidelines that recommend an earlier age for screening, which helps detect the disease sooner and allows for better treatment options and outcomes.

Advancements in screening, prevention, and treatments have allowed people to live longer, healthier lives after a cancer diagnosis and treatment. However, there is still more to be done, especially since there are no effective screening tools for many cancers. Multi-cancer detection (MCD) tests, like those being investigated in the NCI-supported Vanguard Study, have the potential to change how we screen for cancer and potentially improve outcomes by detecting cancer at its earliest stages, including cancer types without existing screening methods. More research is needed to determine whether MCDs reduce deaths and ensure that benefits outweigh harms.

13. Knudsen AB, Trentham-Dietz A, Kim JJ, et al. Estimated US Cancer Deaths Prevented With Increased Use of Lung, Colorectal, Breast, and Cervical Cancer Screening. *JAMA Netw Open*. 2023;6(11):e2344698. PubMed PMID: 37991759.
14. Prostate, Lung, Colorectal, and Ovarian Cancer Screening Trial (PLCO)
15. Zhu CS, Pinsky PF, Kramer BS, et al. The prostate, lung, colorectal, and ovarian cancer screening trial and its associated research resource. *J Natl Cancer Inst*. 2013;105(22):1684-1693. PubMed PMID: 24115361.
16. US Preventive Services Task Force, Davidson KW, Barry MJ, et al. Screening for Colorectal Cancer: US Preventive Services Task Force Recommendation Statement. *JAMA*. 2021;325(19):1965-1977. PubMed PMID: 34003218.
17. Trentham-Dietz A, Chapman CH, Jayasekera J, et al. Collaborative Modeling to Compare Different Breast Cancer Screening Strategies: A Decision Analysis for the US Preventive Services Task Force. *JAMA*. 2024;331(22):1947-1960. PubMed PMID: 38687505.

NCI FISCAL YEAR 2027
PROFESSIONAL JUDGMENT BUDGET
(DOLLARS IN MILLIONS)

FY25 NCI Appropriation	$7,224	
Estimated Increase over FY25 NCI Appropriation* (Allocation by category)	**$4,313**	**$1,000** Cancer Biology Research **$575** Cancer Prevention & Control Research **$846** Cancer Detection & Diagnosis Research **$1,718** Cancer Treatment Research **$174** Training & Infrastructure
FY27 TOTAL	**$11,537**	

**This increase includes funding to maintain the same number of awards as FY24 and ensure stability during the NIH's transition to fully funding research grants up front.*