

National Cancer Institute

CONGRESSIONAL JUSTIFICATION
FY 2025

Department of Health and Human Services
National Institutes of Health

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DEPARTMENT OF HEALTH AND HUMAN SERVICES

NATIONAL INSTITUTES OF HEALTH

National Cancer Institute (NCI)

FY 2025 Budget Table of Contents

Director’s Overview.....	3
IC Fact Sheet.....	7
Major Changes	9
Budget Mechanism Table	11
Appropriations Language.....	13
Summary of Changes	14
Budget Graphs	15
Organization Chart.....	16
Budget Authority by Activity Table	17
Justification of Budget Request	18
Appropriations History	31
Authorizing Legislation	32
Amounts Available for Obligation.....	33
Budget Authority by Object Class	34
Salaries and Expenses	35
Detail of Full-Time Equivalent Employment (FTE)	36
Detail of Positions.....	37

General Notes

1. FY 2024 funding levels cited in this document are based on the Continuing Resolution in effect at the time of budget preparation (Public Law 118-35) and do not include HIV/AIDS transfers.
2. Detail in this document may not sum to the subtotals and totals due to rounding.

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Director's Overview

Decades of strong and sustained investment in cancer research guided by the National Cancer Institute (NCI) have driven scientific discovery that has helped to turn many cancers into preventable or treatable diseases. NCI support spans the cancer research continuum, everything from understanding the causes of cancer and how it evolves, preventing cancer, detecting and diagnosing cancer, and treating cancer and improving survivorship, to controlling cancer at the population level. Without this science, we would not have seen annual cancer death rates in the United States drop more than 30 percent since their peak in 1991 or record numbers of U.S. Food and Drug Administration (FDA) approvals in recent years for cancer treatments. We also would not have so many exciting new opportunities to prevent, diagnose, and treat cancer, and improve the well-being of cancer survivors. Today, there are more than 18 million cancer survivors in the United States. People with cancer have previously unimagined potential for long-term survival, which can mean many more years with their loved ones, and more people at risk of this disease can stop it before it even starts.



Dr. W. Kimryn Rathmell,
MD, PhD, NCI
Director.

Unfortunately, despite this remarkable progress, cancer remains the number two killer in the United States and nearly two million new cancer cases are diagnosed each year. For so many who are undergoing treatment for cancer, available therapies can be as toxic as the disease. Many others have limited treatment options, if any at all, or face significant societal barriers to care that can lead to disparities and worse outcomes for some populations. All of this is complicated by cancer's complexity – it is not one, but many diseases that can vary greatly even within the same organ site. There is still much we need to understand about what causes many cancers and how to treat or prevent them, and we must ensure advances reach all people.

President Biden emphasized the importance of understanding and addressing these gaps through a new phase of the Biden Cancer MoonshotSM. This is building on the success of the first phase that began in 2016 with authorization of the 21st Century Cures Act, which ended in FY 2023. The Biden Cancer Moonshot's new phase has three main goals: decreasing overall cancer mortality rates by at least 50 percent by 2047, improving access to cancer care and control for everyone, and “ending cancer as we know it.” According to an NCI analysis, to attain that 50 percent reduction, we need to make faster progress against the most common cancers. Ending cancer as we know it requires progress against cancers that have proven the most difficult to treat, such as pancreatic cancer and glioblastoma, as well as the rarest of cancers, including certain pediatric tumors. Further, we must eliminate disparities that play a significant role in cancer incidence rates and patient outcomes for specific populations.

Cancer is a disease that affects everyone in some way, no matter who you are or where you come from. To turn cancer into a preventable or at least a livable disease for all people, action must come from federal agencies, industry, academia, advocacy and professional groups, caregivers, patients, family members, and others. The President's approach to mobilize an “all-of-government” effort against cancer reflects the complexities and level of commitment it will take, and offers unprecedented opportunity for progress against cancer. By coordinating the creation of a new National Cancer Plan in partnership with organizations across the cancer community,

NCI has provided a framework to focus efforts and achieve the new Biden Cancer Moonshot goals.

As the leader of the National Cancer Program, NCI is the largest funder of cancer research in the world and the engine that drives progress against cancer. Institutions across the cancer research community—such as the 72 NCI-Designated Cancer Centers, 2,200 National Clinical Trials Network sites, and 46 NCI Community Oncology Research Program network sites with more than 1,000 practices nationwide—depend on NCI’s support to unlock basic biological understanding of cancer, turn that knowledge into potential new approaches against cancer, and test whether these approaches work for all populations. Through major investments in data infrastructure, NCI enables researchers across the country to generate, share, and access critical data and technology needed to find answers. NCI training programs, in turn, produce a pipeline of researchers that contributes diverse talent to institutions nationwide, allowing us to meet the promise of the opportunities and discover lifesaving advances.

FY 2023 was the last year of 21st Century Cures Act funding for the Cancer Moonshot, which laid a solid foundation for progress from which we can further accelerate research to bring real solutions to millions of people. This funding enabled NCI to support more than 70 programs and consortia, and over 300 research projects that generated new knowledge, spurred powerful new data resources, and led to unprecedented collaboration, which have transformed what is possible in cancer research today and led to significant advances that benefit patients. One of its many contributions to infrastructure is the Cancer Research Data Commons, a key component of a national Cancer Research Data Ecosystem that NCI is building to bring all cancer data together and maximize data utility so people across the global cancer research and care continuum can easily share, access, and analyze these data. Among the Cancer Moonshot’s advances are improvements in immunotherapy, progress in childhood cancer research, and expanded use of proven strategies for cancer prevention and early detection to reduce cancer risk and disparities. Many original Cancer Moonshot projects have been foundational for new programs.

The NCI budget request for FY 2025 addresses important challenges needed to answer pivotal questions to understand this complex disease and enable quality care for all who have cancer or are at risk of this disease. This budget request details how the funding will allow us to seize scientific opportunities and sustain critical programs to develop new approaches that prevent, diagnose, and treat cancer, and improve the wellbeing of cancer survivors.

The following highlights how the FY 2025 request supports research to achieve important progress. Key programmatic area include:

Understanding How Cancer Develops. Decades of basic scientific research discoveries on the growth, survival, and spread (metastasis) of cancer cells in the body have been, and continue to be, essential for making progress against this complex disease. A more comprehensive biological understanding will pave the way for the development of newer and safer ways to address cancer, including the numerous cancers that still cut short the lives of many children and adults.

Examples of key research questions we will study:

- Will novel drug designs produce effective targeted treatments for pediatric cancers driven by fusion oncoproteins (a rearrangement of different genes that drive cancer)?
- Which patient-derived and computational models will reveal opportunities for more effective personalized treatment?
- How do tumors evolve over time, including in response to treatment?

Understanding the Causes of Cancer. To end cancer as we know it, there are still many cancers for which we need to better understand how normal cells are transformed into cancer cells and how genetic, environmental, and behavioral factors contribute. Basic and population sciences are critical to this understanding, so we can identify new ways that could prevent, diagnose, and treat this disease.

Examples of key research questions we will study:

- What is the influence of diet on tumor growth and progression?
- Which interventions reduce adolescent use of e-cigarettes and other tobacco products?
- How can we raise public awareness of alcohol-related cancer risk?

Detecting and Diagnosing Cancer. Early detection can help save lives from some cancers. Unfortunately, we do not have effective screening for many other cancers. Further, an imprecise approach can lead to overdiagnosis, overtreatment, and other negative consequences for patients.

Examples of key research questions we will study:

- How can we improve cancer screening approaches, and increase cancer screening uptake, particularly among people in rural areas?
- Do multi-cancer detection tests help reduce cancer-related deaths?

Treating Cancer and Improving Survivorship. Advances in precision medicine are making it increasingly possible to tailor treatment to a specific cancer's unique traits. However, many cancers remain for which there aren't effective treatments that extend life. Even when promising treatments are found, it is difficult to test their effectiveness for all populations when clinical research is unable to enroll people from underrepresented groups. For many treatments we do have, people with cancer experience severe side effects from these treatments. These side effects can have long-term consequences, including an increased risk of a second cancer.

Examples of key research questions we will study:

- Which drug combinations that target specific tumor alterations in adults and children could offer effective treatments for further study?
- How can we remove barriers that prevent people from enrolling in clinical trials?
- What are the benefits and harms of cannabis and cannabinoid use among adult cancer patients to manage their symptoms during active treatment?

Improving Cancer Prevention and Control. We could prevent 30 to 50 percent of cancers in the years to come through behavior modification, preventive treatments, and policies that limit exposures to carcinogens. Systemic barriers faced by some communities complicate improving cancer control across the U.S. population. For example, those who live in rural communities often struggle to access care and participate in clinical research. Further, areas that experience persistent poverty have a higher cancer burden due to the intersection of multiple factors

including structural racism, environmental exposure, and food insecurity—factors that may shape cancer outcomes differently, depending on whether one lives in a rural or urban area.

Examples of key research questions we will study:

- What molecular changes associated with cancer initiation and progression can become the basis for new interventions to target these mechanisms?
- Which natural products are safe and efficacious for primary cancer prevention or interception?
- Which interventions could reduce cancer risk, morbidity, and mortality in both rural and urban areas with persistent poverty?

NCI supported more than 8,000 grants from investigator-initiated to specialized centers (e.g., NCI-designated Cancer Centers) and research and clinical trials networks in FY 2023. Of these, almost 6,000 were Research Project Grants. These investments support the cost of the research itself and the many people who conduct it, from graduate students and postdoctoral fellows to collaborators and technical staff, across this country and beyond. NCI also supports critical research infrastructure necessary to conduct clinical trials, including at the NIH Clinical Center, and to make cancer data and biospecimens broadly available. NCI will continue to invest in key areas the cancer research community depends on to deliver progress against cancer. They include, but are not limited to:

Investigator-initiated research. Funding investigator-initiated research is one of the most important ways NCI supports the extramural cancer research community. NCI-funded investigator-initiated basic research has produced some of the most transformative work in cancer research. NCI plans to increase its investment in this area to support even more meritorious ideas from researchers, including funding more Early-Stage Investigators.

Clinical research. Only a small percentage of people with cancer or at risk for developing cancer participate in clinical trials today, which greatly limits our capacity to evaluate new interventions. NCI will make investments to expand and modernize clinical trials to increase the number of people participating, and work toward eliminating barriers to participation that underrepresented populations often experience. NCI will leverage its clinical trials networks that span the country to reach into all communities and continue to make trials available in every state.

Training and workforce development. NCI aims to support a cancer research workforce that is diverse and ready for the future through formal training, individual fellowships, career development awards, and more. Additionally, the new Cancer Moonshot Scholars program supported its first cohort in FY 2023 to bring greater diversity to the pool of researchers and approaches that NCI funds.

Mission

The National Cancer Institute (NCI) leads, conducts, and supports cancer research across the nation to advance scientific knowledge and help all people live longer, healthier lives.

History

NCI is the federal government's principal agency for cancer research, training, and education. Established under the National Cancer Act of 1937, NCI's scope and responsibilities were expanded with the National Cancer Act of 1971, which directed NCI to lead the National Cancer Program. This included expansion of the Cancer Centers program and creation of a data bank for the collection, storage, analysis, and dissemination of cancer data to support research.



Dr. W. Kimryn Rathmell, MD, PhD, was sworn in as the 17th NCI Director in December 2023.

Funding History

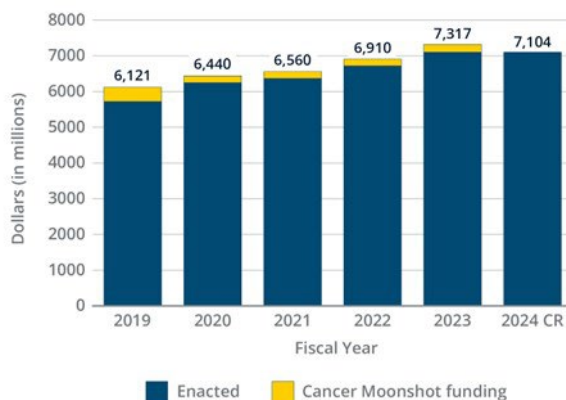


Figure 1. NCI Funding History for FY 2019 – 2024. FY 2025 President's Budget: \$7,839 million*
*Does not include mandatory Biden Cancer Moonshot funding

Research Highlights

- Overall cancer death rates continued to decline for all age groups in every major racial and ethnic group in the U.S. from 2015 to 2019, according to the NCI co-issued 2022 Annual Report to the Nation on the Status of Cancer; individual cancer rate trends vary.
- Recent research showed we must accelerate progress, particularly for rare and difficult-to-treat cancers, to achieve the Biden Cancer Moonshot goal of a 50 percent reduction in age-adjusted cancer death rates by 2047.
- With \$1.8 billion from the 21st Century Cures Act, NCI has supported over 70 programs and over 300 research projects to achieve the goals of the Cancer Moonshot. This includes addressing cancer disparities, identifying evidence-based strategies for health care delivery, and developing new approaches to prevent, screen, diagnose, and treat cancer.
- NCI has launched several programs to help improve cancer outcomes in rural areas where populations experience higher average death rates for all cancer sites combined, compared with populations in urban counties. These include a new Persistent Poverty Initiative to improve cancer screening rates and improve the quality of cancer care in rural communities.

Facts & Figures

In FY 2023 NCI supported:

- 8,008 Extramural Principal Investigators (PIs) and 318 Intramural Investigators
- 131 new Early-Stage Investigator (ESI) awards
- 1,100 Fellowship/Career Development awards
- 72 NCI-Designated Cancer Centers across the United States

NCI Awards History

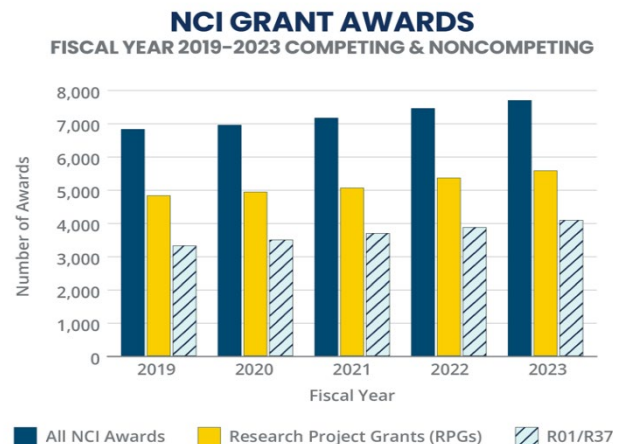


Figure 2. Overview of NCI's grant awards for FY 2019 – 2023. All NCI awards include Research Project Grants (RPGs), fellowship and career development awards, center grants (e.g., Cancer Centers Support Grants), and Small Business Innovation Research/Small Business Technology Transfer (SBIR/STTR) awards. RPGs are over 70 percent of total NCI grant awards and include R01/R37 awards, multicomponent research grants, cooperative agreements, and more. R01/R37s are over 50 percent of RPGs.

and developing new approaches to prevent, screen, diagnose,



NCI SUPPORT FOR THE CANCER RESEARCH ENTERPRISE

NCI FUNDING

NCI funds programs, platforms, and people to power the cancer research enterprise. These investment areas depend on each other and interact dynamically in a complex system to produce improved health outcomes.

Cancer Researchers

R01s and other grants provide funds for investigator-initiated research projects; those researchers also need other resources to power their work.

Clinical Trials Networks

NCI's clinical trials networks are essential for testing new approaches and expanding options for people with cancer.



Specialized Technologies

Through the Frederick National Laboratory for Cancer Research, NCI provides researchers access to specialized technologies and platforms, such as databases and repositories.

Infrastructure

Researchers at NCI-Designated Cancer Centers rely on the critical infrastructure, supported by NCI funding.

IMPROVED OUTCOMES

NCI-supported scientists, research, and programs collectively improve our understanding of cancer biology; produce new approvals for cancer prevention, diagnosis, and treatment; and enhance patient care.



These components are not a comprehensive representation of NCI investments.

Recent Accomplishments:

FDA Approvals

- An NCI clinical trial led to the first FDA-approved drug for the treatment of advanced alveolar soft part sarcoma, an extremely rare cancer that mainly affects adolescents and young adults.
- An NCI-sponsored Children's Oncology Group trial led to the FDA approval of a drug in combination with chemotherapy for high-risk Hodgkin lymphoma in children and adolescents, providing the first targeted therapy for children with this disease.

Cancer Moonshot Progress

- Immunotherapy research networks for both adult and pediatric cancers have made significant advances in cell therapy for solid tumors including identifying new antigens to target, engineering more effective T cells and natural killer cells, overcoming T cell exhaustion, and reducing the side effects associated with this type of therapy.

Current Activities:

Rural Cancer Control Initiatives

- NCI launched the Persistent Poverty Initiative to alleviate the cumulative effects of persistent poverty on cancer outcomes by building research capacity, fostering cancer prevention research, and promoting the implementation of community-based programs. It is the first major program to address the structural and institutional factors of persistent poverty in the context of cancer.

Diversifying the Cancer Research Workforce

- The first Cancer Moonshot Scholars cohort was announced in FY 2023 with at least two more cohorts planned. This program is designed to advance cancer science while also diversifying the pool of researchers and the approaches to cancer research.

Future Initiatives:

Clinical Trials

- In 2024, the new Cancer Screening Research Network will launch the NCI Vanguard Study, a pilot study that will evaluate whether the benefits of using multi-cancer detection tests to screen for cancer outweigh the harms, and whether these tests can detect cancer early enough to reduce deaths. The Vanguard Study will inform the design of a larger trial involving about 225,000 people.
- NCI is revolutionizing cancer clinical trials to increase accrual and completion rates and make them more representative of the U.S. population. This initiative also includes designing flexible or pragmatic trials that save on cost and time, such as the NCI Pragmatica-Lung study.

A Cancer Research Data Ecosystem

- Building a Cancer Research Data Ecosystem will harness the power of cancer research data and support all of cancer research and cancer care. This ecosystem will collect, integrate, and share data from a broad range of sources to maximize data utility from every laboratory experiment, clinical trial, and patient experience. The cloud-based Cancer Research Data Commons is an important component of this ecosystem.

Major Changes in the Budget Request

Major changes by budget mechanism or budget activity are briefly described below. Note that there may be overlap between budget mechanisms and activity detail, and the highlights on this page will not sum to the total change for the FY 2025 President's Budget. The FY 2025 President's Budget request for the National Cancer Institute (NCI), excluding mandatory funding for the Cancer MoonshotSM, is \$7,839.1 million, an increase of \$521.9 million or 7.1 percent from the FY 2023 Final level. The FY 2025 request includes \$716.0 million in discretionary funds to support the Cancer Moonshot and \$50.0 million for the Childhood Cancer Data Initiative (CCDI). In addition to the discretionary funds, the Budget proposes to reauthorize the Biden Cancer Moonshot through 2026, providing \$1,448.0 million in mandatory funding in both 2025 and 2026. The changes by mechanism below reflect only the discretionary funding, with the mandatory funds addressed in a separate paragraph at the end, and in their own mechanism table. The FY 2025 President's Budget reflects the Administration's fiscal policy goals for the Federal Government. Within that framework, NCI will pursue its highest research priorities through strategic investments and careful stewardship of appropriated funds.

Research Project Grants (RPG) (+\$222.1 million; total \$3,412.7 million): Through the Cancer Moonshot, NCI can fund non-competing RPGs at their full commitment level, and support additional and new, competing investigator initiated R01 awards. For example, this will allow NCI to support more Cancer Moonshot Scholars to diversify the pool of researchers and the approaches to cancer research that NCI funds. In total, NCI will support 1,353 competing RPGs in FY 2025.

Research Centers (+\$7.7 million; total \$644.5 million): This increase represents an investment in Cancer Moonshot initiatives conducted through the NCI-Designated Cancer Centers. The NCI Cancer Centers program is a cornerstone of the Nation's Cancer Research Program. Together with their community partners, the 72 NCI-Designated Cancer Centers form the backbone of NCI's extramural program for studying and controlling cancer.

Other Research (+\$68.9 million; total \$730.0 million): This increase will bolster NCI efforts to increase the number of clinical trials NCI supports across the country, and expand clinical trial accrual, including the diversity of participants to meet the goals of the Cancer Moonshot.

Research & Development (R&D) Contracts (-\$85.6 million; total \$842.0 million): NCI will reduce research contracts to fund other cancer research priorities, such as supporting clinical trials, early stage investigators, and research infrastructure. In FY 2025, NCI will support the National Cancer Research Data Ecosystem, and continue investing in improved data infrastructure and analytics for cancer researchers and clinicians. Funding will also support critical shared infrastructure across NIH, enhanced information technology, and continued funding of the Frederick National Laboratory for Cancer Research (FNLRCR), the only Federally Funded Research and Development Center (FFRDC) focused on biomedical research. The FNLRCR is a national asset and a unique resource overseen by NCI that brings public and private partners together to address the most difficult cancer research challenges.

Intramural Research (+\$54.9 million; total \$1,337.6 million): The increase will support critical NIH shared infrastructure and high priority intramural science that remains an important priority within the overall NCI cancer research portfolio. NCI intramural research will emphasize high-risk, high-reward cancer research unlikely to be conducted by other entities.

Training Awards (+\$16.8 million; total \$107.1 million): During FY 2025, NCI will increase the National Research Service Awards (NRSA) budget, supporting 250 additional trainees compared to FY 2023. Programs to train and retain a diverse workforce of researchers with the skills required to conduct cancer research are a high priority for NCI, as seen by NCI's investment in the RPG-based Cancer Moonshot Scholars Program. NCI training programs produce a strong cadre of future researchers capable of delivering important research results for people with cancer and those at risk for the disease.

Research Management and Support (RMS) (+\$217.0 million; total \$715.1 million): In FY 2025, NCI will fund management and infrastructure costs to support expanded Cancer Moonshot programs. The remaining funds will cover pay and other inflationary costs for existing RMS activities.

Buildings and Facilities (+\$20.0 million; total \$50.0 million): The NCI Federally Funded Research and Development Center in Frederick has many facilities that are over 50 years old. The \$20.0 million increase in budget authority will help NCI manage continuously increasing facilities costs. During FY 2025, NCI will replace aging building infrastructure, modify laboratories to install state-of-the-art research instrumentation and equipment, reconfigure laboratory space to support emerging cancer research needs, and provide new infrastructure to protect mission-critical operations of the Frederick National Laboratory for Cancer Research.

Mandatory Cancer Moonshot: In addition to the discretionary funds, the mandatory Biden Cancer Moonshot request for FY 2025 provides \$717.8 million in R&D Contracts, \$590.9 million in Other Research, \$97.3 million in Research Centers, and \$42.0 million in Intramural research. Much of the investment in Other Research and R&D Contracts supports the goal of revolutionizing cancer clinical trials to increase accrual and support clinical trials networks that span the country to reach into all communities. The funds for Research and Development Contracts also represents NCI's commitment to building a Cancer Research Data Ecosystem, as NCI seeks to bring cancer data together and support all of cancer research and cancer care.

BUDGET MECHANISM TABLE

NATIONAL INSTITUTES OF HEALTH

National Cancer Institute

Budget Mechanism ^{*,1}

(Dollars in Thousands)

Mechanism	FY 2023 Final ²		FY 2024 CR		FY 2025 President's Budget		FY 2025 +/- FY 2023	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
<u>Research Projects:</u>								
Noncompeting	4,176	\$2,266,595	4,361	\$2,278,526	4,792	\$2,503,585	616	\$236,990
Administrative Supplements	(365)	\$40,533	(359)	\$37,000	(285)	\$29,350	-(80)	-\$11,183
<u>Competing:</u>								
Renewal	160	\$107,406	144	\$99,961	160	\$111,345	0	\$3,939
New	1,226	\$600,753	1,071	\$540,039	1,193	\$601,538	-33	\$785
Supplements	0	\$0	0	\$0	0	\$0	0	\$0
Subtotal, Competing	1,386	\$708,159	1,215	\$640,000	1,353	\$712,882	-33	\$4,724
Subtotal, RPGs	5,562	\$3,015,287	5,576	\$2,955,526	6,145	\$3,245,817	583	\$230,530
SBIR/STTR	228	\$175,373	221	\$170,925	216	\$166,905	-12	-\$8,468
Research Project Grants	5,790	\$3,190,660	5,797	\$3,126,451	6,361	\$3,412,722	571	\$222,062
<u>Research Centers</u>								
Specialized/Comprehensive	258	\$636,793	236	\$603,770	252	\$644,532	-6	\$7,739
Clinical Research	0	\$0	0	\$0	0	\$0	0	\$0
Biotechnology	0	\$0	0	\$0	0	\$0	0	\$0
Comparative Medicine	0	\$0	0	\$0	0	\$0	0	\$0
Research Centers in Minority Institutions	0	\$0	0	\$0	0	\$0	0	\$0
Research Centers	258	\$636,793	236	\$603,770	252	\$644,532	-6	\$7,739
<u>Other Research:</u>								
Research Careers	536	\$110,335	516	\$106,050	516	\$106,050	-20	-\$4,286
Cancer Education	83	\$23,219	82	\$22,837	82	\$22,837	-1	-\$382
Cooperative Clinical Research	118	\$303,624	113	\$305,293	149	\$402,738	31	\$99,115
Biomedical Research Support	0	\$0	0	\$0	0	\$0	0	\$0
Minority Biomedical Research Support	0	\$2,563	0	\$2,637	0	\$2,637	0	\$74
Other	290	\$221,371	228	\$153,845	290	\$195,786	0	-\$25,585
Other Research	1,027	\$661,112	939	\$590,662	1,037	\$730,048	10	\$68,936
Total Research Grants	7,075	\$4,488,565	6,972	\$4,320,883	7,650	\$4,787,303	575	\$298,738
<u>Ruth L Kirschstein Training Awards:</u>	<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>	
Individual Awards	523	\$24,273	619	\$28,933	610	\$28,933	87	\$4,660
Institutional Awards	974	\$66,052	1,153	\$78,188	1,137	\$78,188	163	\$12,136
Total Research Training	1,497	\$90,325	1,772	\$107,120	1,747	\$107,120	250	\$16,796
Research & Develop. Contracts	445	\$927,565	354	\$800,682	364	\$841,965	-81	-\$85,600
SBIR/STTR (non-add)	(29)	(\$24,398)	(23)	(\$17,658)	(42)	(\$32,035)	(13)	(\$7,638)
Intramural Research	1,865	\$1,282,682	1,957	\$1,316,543	1,894	\$1,337,627	29	\$54,945
Res. Management & Support	1,385	\$498,105	1,511	\$528,931	1,574	\$715,126	189	\$217,021
SBIR Admin. (non-add)		(\$3,484)		(\$3,484)		(\$4,710)		(\$1,226)
Construction		\$0		\$0		\$0		\$0
Buildings and Facilities		\$30,000		\$30,000		\$50,000		\$20,000
Total, NCI	3,250	\$7,317,241	3,468	\$7,104,159	3,468	\$7,839,141	218	\$521,900

* All items in italics and brackets are non-add entries.

¹ Of which \$216.0 million in FY 2023 is derived by transfer from the NIH Innovation Account under the 21st Century Cures Act.

² Includes FY 2023 21st Century Cures Act funding not obligated in FY 2023, and carried over into FY 2024.

NATIONAL INSTITUTES OF HEALTH
NCI Mandatory Cancer Moonshot

Budget Mechanism*
(Dollars in Thousands)

Mechanism	FY 2023 Final		FY 2024 CR		FY 2025 President's Budget		FY 2025 +/- FY 2023	
	Number	Amount	Number	Amount	Number	Amount	Number	Amount
<u>Research Projects:</u>								
Noncompeting	0	\$0	0	\$0	0	\$0	0	\$0
Administrative Supplements	(0)	\$0	(0)	\$0	(0)	\$0	(0)	\$0
<u>Competing:</u>								
Renewal	0	\$0	0	\$0	0	\$0	0	\$0
New	0	\$0	0	\$0	0	\$0	0	\$0
Supplements	0	\$0	0	\$0	0	\$0	0	\$0
Subtotal, Competing	0	\$0	0	\$0	0	\$0	0	\$0
Subtotal, RPGs	0	\$0	0	\$0	0	\$0	0	\$0
SBIR/STTR	0	\$0	0	\$0	0	\$0	0	\$0
Research Project Grants	0	\$0	0	\$0	0	\$0	0	\$0
<u>Research Centers</u>								
Specialized/Comprehensive	0	\$0	0	\$0	38	\$97,329	38	\$97,329
Clinical Research	0	\$0	0	\$0	0	\$0	0	\$0
Biotechnology	0	\$0	0	\$0	0	\$0	0	\$0
Comparative Medicine	0	\$0	0	\$0	0	\$0	0	\$0
Research Centers in Minority Institutions	0	\$0	0	\$0	0	\$0	0	\$0
Research Centers	0	\$0	0	\$0	38	\$97,329	38	\$97,329
<u>Other Research:</u>								
Research Careers	0	\$0	0	\$0	0	\$0	0	\$0
Cancer Education	0	\$0	0	\$0	0	\$0	0	\$0
Cooperative Clinical Research	0	\$0	0	\$0	159	\$430,373	159	\$430,373
Biomedical Research Support	0	\$0	0	\$0	0	\$0	0	\$0
Minority Biomedical Research Support	0	\$0	0	\$0	0	\$0	0	\$0
Other	0	\$0	0	\$0	238	\$160,500	238	\$160,500
Other Research	0	\$0	0	\$0	397	\$590,873	397	\$590,873
Total Research Grants	0	\$0	0	\$0	435	\$688,202	435	\$688,202
<u>Ruth L Kirschstein Training Awards:</u>	<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>		<u>FTTPs</u>	
Individual Awards	0	\$0	0	\$0	0	\$0	0	\$0
Institutional Awards	0	\$0	0	\$0	0	\$0	0	\$0
Total Research Training	0	\$0	0	\$0	0	\$0	0	\$0
Research & Develop. Contracts	0	\$0	0	\$0	310	\$717,789	310	\$717,789
<i>SBIR/STTR (non-add)</i>	<i>(0)</i>	<i>(\$0)</i>	<i>(0)</i>	<i>(\$0)</i>	<i>(66)</i>	<i>(\$50,819)</i>	<i>(66)</i>	<i>(\$50,819)</i>
Intramural Research	0	\$0	0	\$0	0	\$42,009	0	\$42,009
Res. Management & Support	0	\$0	0	\$0	0	\$0	0	\$0
<i>SBIR Admin. (non-add)</i>		<i>(\$0)</i>		<i>(\$0)</i>		<i>(\$0)</i>		<i>(\$0)</i>
Construction		\$0		\$0		\$0		\$0
Buildings and Facilities		\$0		\$0		\$0		\$0
Total, Program Level		\$0		\$0		\$1,448,000		\$1,448,000

* All numbers in italics and brackets are non-add.

NATIONAL INSTITUTES OF HEALTH

NATIONAL CANCER INSTITUTE

For carrying out section 301 and title IV of the PHS Act with respect to cancer, \$7,839,141,000, of which \$716,000,000 shall remain available until expended, and of which up to \$50,000,000 may be used for facilities repairs and improvements at the National Cancer Institute—Frederick Federally Funded Research and Development Center in Frederick, Maryland.

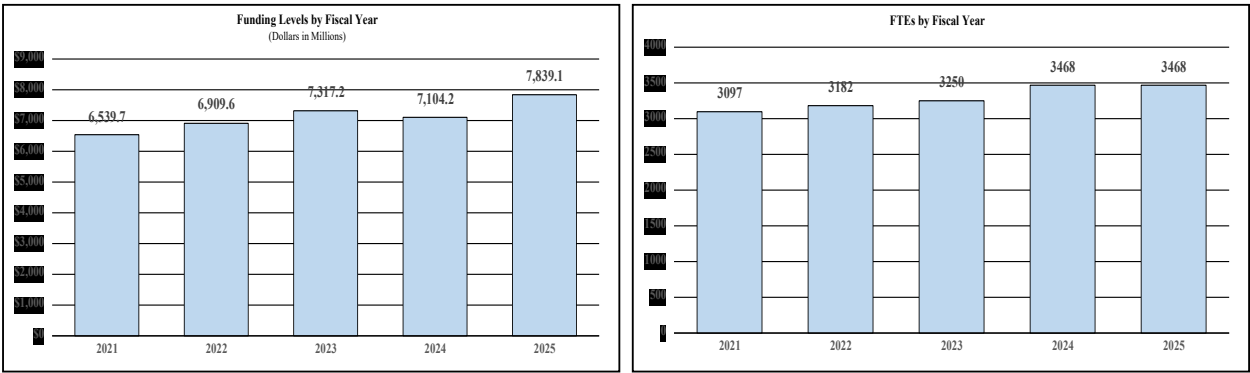
SUMMARY OF CHANGES

NATIONAL INSTITUTES OF HEALTH National Cancer Institute

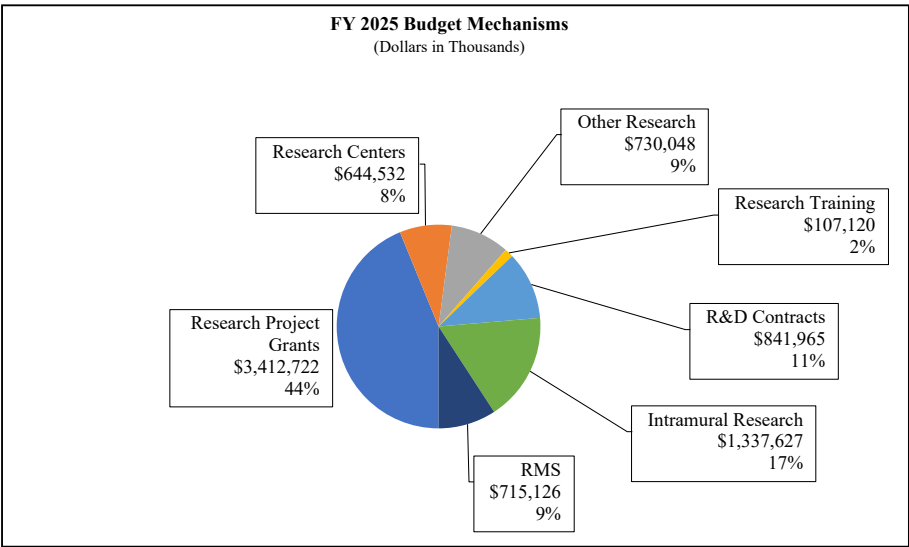
Summary of Changes (Dollars in Thousands)

CHANGES	FY 2023 Final		FY 2025 President's Budget		Built-In Change from FY 2023 Final	
	FTEs	Budget Authority	FTEs	Budget Authority	FTEs	Budget Authority
1. Intramural Research:						
A. Built-in cost changes:						
a. FY 2024 effect of FY 2023 pay & benefits increase		\$465,487		\$503,680		\$5,490
b. FY 2024 effect of FY 2024 pay & benefits increase		\$465,487		\$503,680		\$18,113
c. FY 2024 paid days adjustment		\$465,487		\$503,680		\$1,792
d. Differences attributable to FY 2024 change in FTE		\$465,487		\$503,680		\$23,049
e. FY 2025 effect of FY 2024 pay & benefits increase		\$465,487		\$503,680		\$6,236
f. FY 2025 effect of FY 2025 pay & benefits increase		\$465,487		\$503,680		\$8,441
g. FY 2025 paid days adjustment		\$465,487		\$503,680		\$0
h. Differences attributable to FY 2025 change in FTE		\$465,487		\$503,680		-\$16,114
i. Payment for centrally furnished services		\$197,524		\$215,265		\$17,741
j. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$645,533		\$668,682		\$48,785
Subtotal, IR built-in cost changes						\$113,533
2. Research Management and Support:						
A. Built-in cost changes:						
a. FY 2024 effect of FY 2023 pay & benefits increase		\$270,090		\$314,683		\$3,192
b. FY 2024 effect of FY 2024 pay & benefits increase		\$270,090		\$314,683		\$10,508
c. FY 2024 paid days adjustment		\$270,090		\$314,683		\$1,040
d. Differences attributable to FY 2024 change in FTE		\$270,090		\$314,683		\$24,643
e. FY 2025 effect of FY 2024 pay & benefits increase		\$270,090		\$314,683		\$3,687
f. FY 2025 effect of FY 2025 pay & benefits increase		\$270,090		\$314,683		\$5,069
g. FY 2025 paid days adjustment		\$270,090		\$314,683		\$0
h. Differences attributable to FY 2025 change in FTE		\$270,090		\$314,683		\$12,381
i. Payment for centrally furnished services		\$21,597		\$39,219		\$17,622
j. Cost of laboratory supplies, materials, other expenses, and non-recurring costs		\$206,099		\$361,224		\$13,451
Subtotal, RMS built-in cost changes						\$91,594
CHANGES	FY 2023 Final		FY 2025 President's Budget		Program Change from FY 2023 Final	
	No.	Amount	No.	Amount	No.	Amount
B. Program:						
1. Research Project Grants:						
a. Noncompeting	4,176	\$2,307,128	4,792	\$2,532,935	616	\$225,807
b. Competing	1,386	\$708,159	1,353	\$712,882	-33	\$4,724
c. SBIR/STTR	228	\$175,373	216	\$166,905	-12	-\$8,468
Subtotal, RPGs	5,790	\$3,190,660	6,361	\$3,412,722	571	\$222,062
2. Research Centers	258	\$636,793	252	\$644,532	-6	\$7,739
3. Other Research	1,027	\$661,112	1,037	\$730,048	10	\$68,936
4. Research Training	1,497	\$90,325	1,747	\$107,120	250	\$16,796
5. Research and development contracts	445	\$927,565	364	\$841,965	-81	-\$85,600
Subtotal, Extramural		\$5,506,455		\$5,736,388		\$229,933
6. Intramural Research	1,865	\$1,282,682	1,894	\$1,337,627	29	-\$58,588
7. Research Management and Support	1,385	\$498,105	1,574	\$715,126	189	\$125,428
8. Construction		\$0		\$0		\$0
9. Buildings and Facilities		\$30,000		\$50,000		\$20,000
Subtotal, program changes						\$316,773
Total built-in and program changes	3,250	\$7,317,241	3,468	\$7,839,141	218	\$521,900

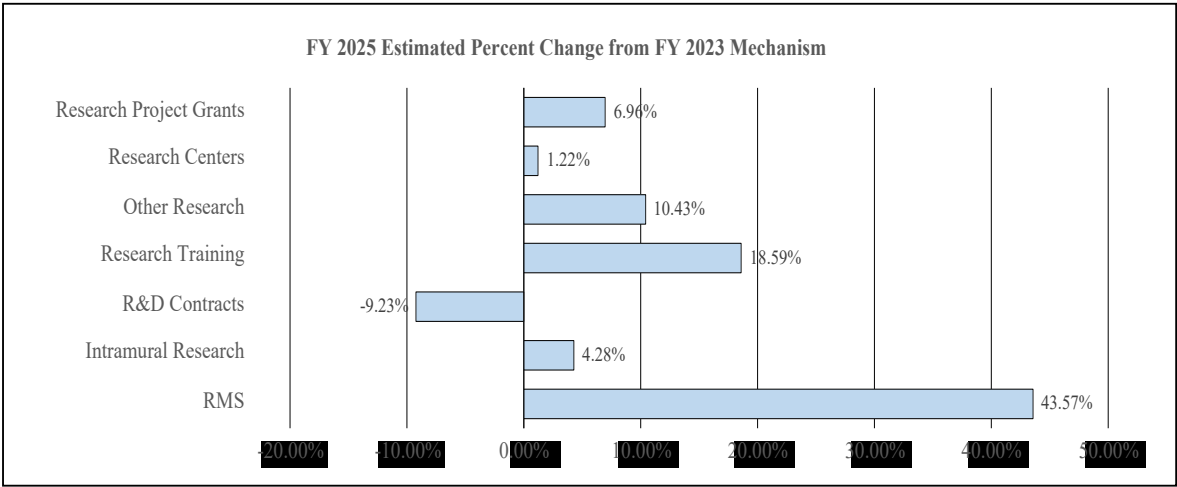
History of Budget Authority and FTEs:

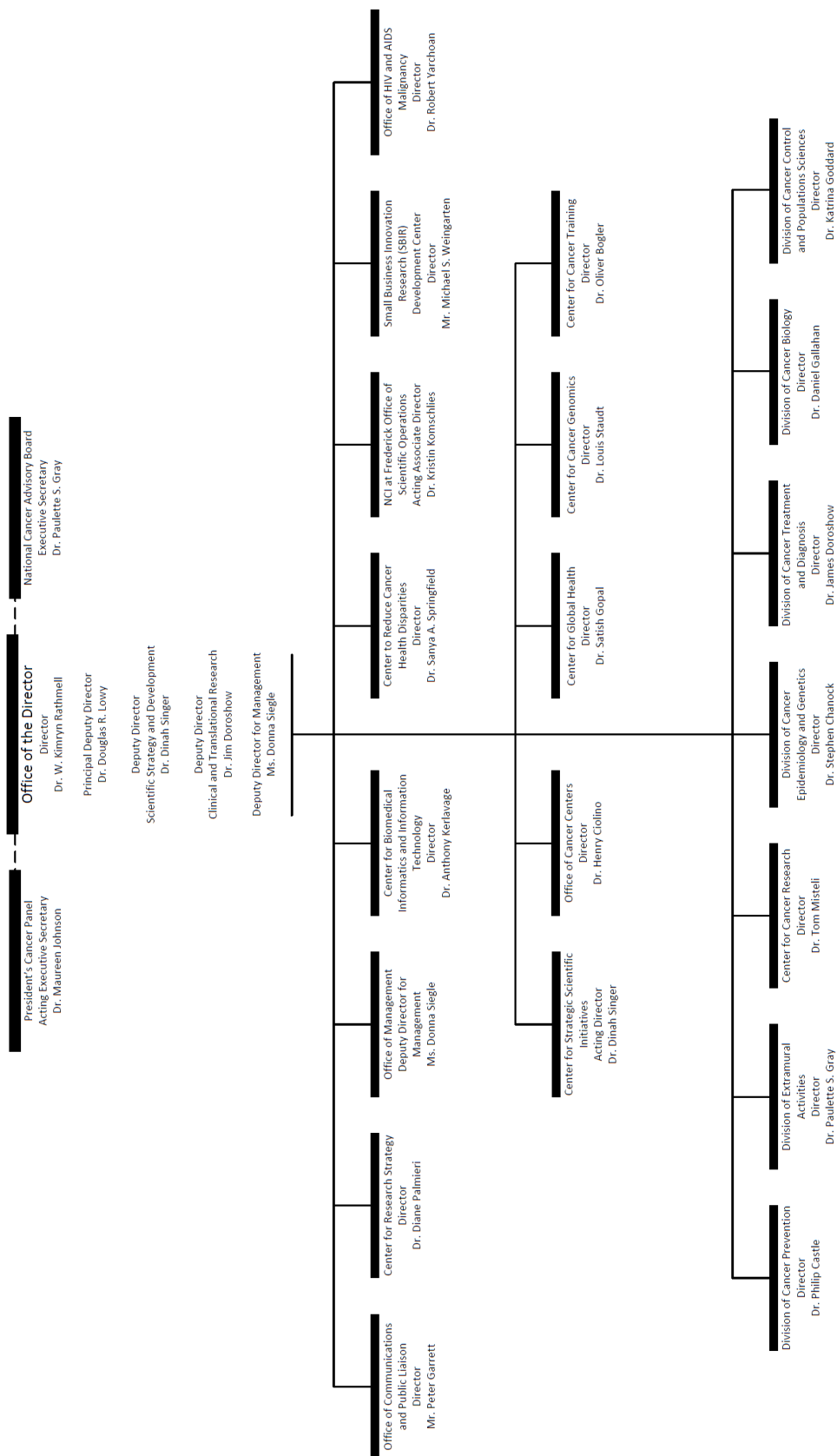


Distribution by Mechanism:



Change by Selected Mechanisms:





ORGANIZATION CHART

BUDGET AUTHORITY BY ACTIVITY TABLE

**NATIONAL INSTITUTES OF HEALTH
National Cancer Institute**

Budget Authority by Activity *
(Dollars in Thousands)

	FY 2023 Final		FY 2024 CR		FY 2025 President's Budget		FY 2025 +/- FY 2023 Final	
Extramural Research	FTE	Amount	FTE	Amount	FTE	Amount	FTE	Amount
Detail								
Understanding How Cancer Develops		\$1,058,666		\$1,004,683		\$1,101,186		\$42,521
Understanding the Causes of Cancer		\$1,171,281		\$1,102,461		\$1,229,803		\$58,523
Detecting and Diagnosing Cancer		\$661,431		\$646,182		\$673,346		\$11,915
Treating Cancer and Improving Survivorship		\$1,438,092		\$1,391,217		\$1,522,193		\$84,101
Improving Cancer Prevention and Control		\$269,924		\$254,137		\$283,319		\$13,395
Cancer Centers		\$636,793		\$548,420		\$644,532		\$7,739
Research Workforce Development		\$223,879		\$235,585		\$236,007		\$12,129
Repairs and Improvements		\$30,000		\$30,000		\$50,000		\$20,000
Childhood Cancer Data Initiative (CCDI) ¹		\$46,388		\$46,000		\$46,000		-\$388
<i>(Cancer Moonshot (mandatory funding)) ²</i>		<i>(\$0)</i>		<i>(\$0)</i>		<i>(\$1,448,000)</i>		<i>(\$1,448,000)</i>
Subtotal, Extramural		\$5,536,455		\$5,258,685		\$5,786,388		\$249,933
Intramural Research	1,865	\$1,282,682	1,957	\$1,316,543	1,894	\$1,337,627	29	\$54,945
Research Management & Support	1,385	\$498,105	1,511	\$528,931	1,574	\$715,126	189	\$217,021
TOTAL	3,250	\$7,317,241	3,468	\$7,104,159	3,468	\$7,839,141	218	\$521,900

* Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

¹ Includes CCDI extramural program costs. Total CCDI costs, including intramural research, are \$50.0 million in each year from FY 2023 through FY 2025.

² Total mandatory Cancer Moonshot is a non-add line. The total includes extramural and intramural research costs.

JUSTIFICATION OF BUDGET REQUEST

National Cancer Institute

Authorizing Legislation: Section 301 and title IV of the Public Health Service Act, as amended.

Budget Authority (BA):

	<u>FY 2023 Final</u>	<u>FY 2024 CR</u>	<u>FY 2025 President's Budget</u>	<u>FY 2025 +/- FY 2023</u>
BA Cancer Moonshot Mandatory	\$7,317,241,000	\$7,104,159,000	\$9,287,141,000	\$1,969,900,000
BA	<u>\$0</u>	<u>\$0</u>	<u>-\$1,448,000,000</u>	<u>-\$1,448,000,000</u>
Labor/HHS	\$7,317,241,000	\$7,104,159,000	\$7,839,141,000	\$521,900,000
FTE	3,250	3,468	3,468	218

Program funds are allocated as follows: Competitive Grants/Cooperative Agreements; Contracts; Direct Federal/Intramural and Other.

Overall Budget Policy: The FY 2025 President's Budget request for the National Cancer Institute (NCI) is \$7,839.1 million, excluding mandatory funding for Cancer MoonshotSM, an increase of \$521.9 million or 7.1 percent compared with the FY 2023 Final level. This includes \$716.0 million in discretionary funds to support the Cancer Moonshot, an increase of \$500.0 million from FY 2023. In addition, the Budget proposes to reauthorize the Biden Cancer Moonshot through 2026, providing \$1,448.0 million in mandatory funding in both 2025 and in 2026.

Program Descriptions

NCI is the largest funder of cancer research in the world, supporting research project grants, training programs, and infrastructure that lead to an in-depth understanding of cancer and innovative prevention, screening, and treatment strategies. NCI supports basic and applied research that advances five broad scientific goals:

- Understanding How Cancer Develops
- Understanding the Causes of Cancer
- Detecting and Diagnosing Cancer
- Treating Cancer and Improving Survivorship
- Improving Cancer Prevention and Control

Importantly, NCI research supported under one scientific goal can contribute to and influence the approaches used to advance other goals. NCI supports investigator-initiated and other types of

research project grants, clinical trials networks, NCI-Designated Cancer Centers, training, infrastructure, and two intramural research programs. NCI also manages research contracts, including a federally funded research and development center (FFRDC) that serves the Frederick National Laboratory for Cancer Research. NCI operates research facilities to support the FFRDC and the intramural research programs.

Investigator-initiated research project grants constitute a large portion of the research investment for all five scientific goals. During FY 2023, NCI issued 7,686 new and continuing grant awards across all mechanisms, including 4,068 traditional research projects (R01/R37).¹

Also, during FY 2023, more than 50,000 new patients enrolled in over 750 clinical trials that NCI sponsored or supported. NCI-sponsored trials include those coordinated by the National Clinical Trials Network (NCTN) and the NCI Community Oncology Research Program (NCORP), where NCI funds infrastructure and other costs to support the networks and trials. NCTN and NCORP accounted for about half of all new patients enrolled in clinical trials in FY 2023. NCI-supported trials are conducted by investigators with funding from NCI, such as R01 grants.

Cancer is not a single disease. Even within a single organ a variety of different cell types can undergo malignant transformation and different disease subtypes can arise from the same cell type. Moreover, each person's cancer is distinct. This complexity underscores the importance of NCI's work. The following sections highlight select examples of NCI-supported progress and programs, as well as planned future activities. See cancer.gov for more research and resources.

I. Understanding How Cancer Develops

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 progress against cancer. NCI-supported research strives for a comprehensive understanding of cancer biology to catalyze the development of newer and safer ways to prevent, detect, diagnose, and treat cancer.

NCI supports an array of programs to understand how cancer develops, including the Program on the Origins of Gastroesophageal Cancers that examines and defines the earliest biological changes that precede the occurrence of these cancers, and the Pancreatic Ductal Adenocarcinoma (PDAC) Stromal Reprogramming Consortium that focuses on tumor microenvironmental elements driving PDAC progression and response to therapy. Selected major advances spurred by NCI-funded research include therapies that unleash the power of a person's immune system to attack their cancer, novel drugs that target previously "undruggable" cancer driver proteins, and the identification of genes that can influence metastasis for certain cancers.

Next-generation cancer models: Experimental models, such as materials derived from patient tissues grown in a laboratory or an animal, are essential for understanding cancer initiation,

¹ Grant counts include grants awarded in FY 2023 from 21st Century Act (Cures Act) funding carried over from previous years, and exclude grants anticipated to be awarded from FY 2023 Cures Act funding carried over into future years.

progression, and metastasis; identifying novel therapeutic targets and mechanisms of treatment resistance; and developing diagnostic or predictive biomarkers. As the use of precision cancer treatments increases, there is a need for personalized cancer models. NCI supports programs to develop patient-derived models to understand unique characteristics of individual cancers, identify possible treatments, and test those treatments for efficacy. The Human Cancers Model Initiative is an international collaboration that has generated over 250 models from 27 different cancer types available to researchers through an online catalogue. Similarly, NCI's Patient-Derived Models Repository has created over 1,800 various patient-derived models to date that it distributes to the cancer research community upon request.

Computational models are an increasingly used tool in cancer research. NCI supports the development and use of computational models to understand how cancer develops, progresses, and may or may not respond to treatment. NCI-funded researchers recently used mouse and computational models to understand the evolution of pancreatic cancers, including inflammatory events that can lead to tumor development in certain subpopulations of cells with a specific mutation. Having this roadmap for how cancer develops can help with strategies to detect or even prevent pancreatic tumors before they reach an advanced stage.

Progress in understanding pediatric cancers: Although our understanding of the biology underlying cancers that occur in children has increased tremendously in the past decade and we have made progress in the treatment of several types of childhood cancers, critical gaps in our knowledge remain. Two such areas are brain tumors and fusion oncoprotein-driven cancers which are caused by fusion of two gene pieces into a new cancer-promoting gene. A recent study in pediatric diffuse midline glioma, an aggressive brain tumor, identified metabolic vulnerabilities in these tumors that can potentially be targeted to inhibit their growth. Previous Cancer MoonshotSM investments supported the Fusion Oncoprotein in Childhood Cancer Consortium, which identified a new therapeutic target for Ewing sarcoma. Work from this consortium led to the development of a subsequent Cancer Moonshot-supported network, Targeting Fusion Oncoproteins in Childhood Cancers, which will apply novel chemical biology strategies to drug discovery and development for fusion oncoprotein-driven cancers. This network is now accepting applications, and NCI plans to fund new awards in FY 2024.

Understanding cancer progression: Knowledge gained from basic cancer biology research has taught us that understanding tumor evolution is key for effectively treating cancer. Although researchers have made progress in understanding tumor evolution, a great deal is still unknown about how the biology of and interactions within a tumor change over time and in response to treatments. NCI supports several programs, including the Human Tumor Atlas Network (HTAN) and the Cancer Systems Biology Consortium, that are focused on unraveling the evolution of cellular, structural, and molecular characteristics of cancer over time. The Cancer Moonshot-funded HTAN has published 13 dynamic, 3-dimensional tumor atlases that characterize tumor architecture over time, including a comprehensive atlas of colorectal cancer that captures fine details on tumor composition never seen before. This more detailed view of colorectal cancer has opened new areas of research for diagnosing and treating this cancer, whose incidence is increasing in people under 50 years of age.

The spread of cancer cells from the primary tumor to other sites in the body (metastasis) is responsible for most cancer deaths. Previous NCI investments have led to innovative technologies that, when combined with the large body of knowledge about cancer biology and advanced computational modeling, provide novel insights into the mechanisms driving cancer metastasis. The Metastasis Research Network (MetNet) is using systems-level approaches to better understand the dynamic processes underlying cancer metastasis. MetNet began with teams of investigators at five centers and added two new research grants in FY 2023.

Budget Policy: The FY 2025 President’s Budget request for this area is \$1,101.2 million, an increase of \$42.5 million or 4.0 percent compared with the FY 2023 Final level.

II. Understanding the Causes of Cancer

The risk of developing cancer is influenced by the interplay of a variety of factors. In some cases, cancer risk is strongly influenced by inheriting a mutation (a variant of a gene). In other cases, cancer risk is influenced by external factors, such as exposure to tobacco or infectious agents. Understanding the interactions among genetic, environmental, and health factors will improve the ability of scientists to prevent, diagnose, and treat cancers. NCI-funded studies on the causes of cancer range from laboratory-based research to large-scale population studies.

NCI supports an array of programs to understand the causes of cancer including the PFAS (per- and polyfluoroalkyl substance) Exposure and Risk of Cancer program that is identifying specific cancers associated with PFAS at normal exposure levels, and the Childhood Cancer Data Initiative Data Ecosystem that is providing a more complete understanding of childhood cancers. Selected major advances from NCI-funded research on understanding the causes of cancer include the identification of inherited BRCA1 mutations that predispose certain people to breast and other cancers, and studies on tobacco that are the foundation of population-based tobacco control policies and tobacco cessation programs.

Population studies on cancer risk: Epidemiological approaches—including cohort studies, exposure-assessment studies, and genomic studies—are used to identify possible causes of cancer and study the patterns of risk in large populations. NCI funded three projects testing a unique “traceback” strategy, where researchers work backwards to improve the detection of families at risk for certain cancers. These projects used different approaches to find women who were previously diagnosed with ovarian cancer, communicate with them (or with their family members if they have died), and offer genetic testing.

Modern cohorts that represent the diversity (race/ethnicity, geography, age, etc.) of the United States are needed to study new and future exposures that may affect cancer risk, and they should include broad groups of people to make sure discoveries benefit all people. The Connect for Cancer Prevention Study will investigate the causes of cancer and learn how to prevent it by following a diverse group of 200,000 adults over a long period of time.

Impact of alcohol, tobacco, and climate on cancer risk: NCI supports research to identify and evaluate risk factors and exposures that may be linked to cancer, plus research to understand the mechanisms of how they induce and promote cancer. For example, a recent NCI study found a lack of public awareness that drinking alcohol increases the risk of several types of cancer, as

less than one third of study participants were aware of this connection. In FY 2025, NCI plans to fund a new program on population-level research approaches to increase awareness of the relationship between alcohol and cancer risk, and develop, test, and implement population-level interventions to reduce alcohol-related cancer risk.

Trying e-cigarettes and multiple other tobacco products before age 18 is strongly associated with later daily cigarette smoking, which can lead to multiple cancers. A new NCI program will support studies that develop, test, implement, and evaluate behavioral tobacco cessation interventions for adolescents, with a focus on the critical developmental risk period of mid- to late adolescence. The first round of awards is expected in FY 2024.

In FY 2024, another new NCI program will fund innovative research relevant to advancing the understanding of the effects of climate change across the cancer control continuum, from causes and risks through survivorship, and ways to prevent or mitigate negative health effects.

Budget Policy: The FY 2025 President's Budget request for this area is \$1,229.8 million, an increase of \$58.5 million or 5.0 percent compared with the FY 2023 Final level.

III. Detecting and Diagnosing Cancer

Reducing mortality from cancer by accurately identifying cancer and precancerous lesions and assessing their severity is the primary goal of cancer detection and diagnosis research. While early detection can save lives, imprecise assessments can lead to overdiagnosis, overtreatment, and unnecessary physical, psychological, and financial harm.

NCI supports a variety of programs to improve screening, early detection, and diagnosis. Examples include the Liquid Biopsy Consortium that advances and validates technologies specifically targeted for early-stage cancer detection and the NCTN Biospecimen Banks that obtain high-quality biospecimens and data from cancer clinical trials for the research community to use for biomarker discovery. Select major advances in cancer screening, detection, and diagnosis that have come from NCI-funded research include establishing the effectiveness of screening mammography for detecting early-stage breast cancer and the use of genomic sequencing to help identify treatments for people with advanced cancers.

New methods to detect and diagnosis cancer: NCI supports research to improve cancer detection tests and develop new approaches to benefit all people. For example, NCI researchers recently validated a rapid, mobile, and affordable human papillomavirus (HPV) DNA genotyping test for risk-based cervical cancer screening in resource-limited settings where routine screening is logistically and cost prohibitive. More than 300,000 people die each year from HPV-associated cancers. Tests like this can help lower that number and improve outcomes.

Skin cancer screening is routinely done through visual inspection and follow-up biopsies. NCI's Small Business Innovation Research program recently funded a company to expand its database of digital images of a specific precancerous lesion caused by excessive sun exposure. These images will be used to train deep learning algorithms and allow researchers to create a virtual biopsy to understand why some precancers progress to cancer and others do not. In the future,

imaging technologies, coupled with artificial intelligence, may be able to identify the presence, type, stage, and genetic features of many cancer types without the need for an invasive biopsy.

NCI research is fueling the development of innovative technologies that will change cancer detection and diagnosis. Someday, a simple blood draw (liquid biopsy) may be used to detect, diagnose, and monitor many cancers. NCI launched the Cancer Moonshot–supported Vanguard study to evaluate the effectiveness of new multi-cancer detection tests for less invasive detection of one or more cancers. In 2024, NCI will begin enrolling 24,000 healthy people in the study.

Research to improve screening: Having effective tests that detect cancer or precancers is only one component of cancer screening. Broad adoption of screening protocols is a challenge, including for people who are most at risk. For example, existing cancer screening tests like mammography and colonoscopy can help save lives, but rural residents face multiple challenges when it comes to routine screening and have lower screening rates as a result. An NCI-funded study tested multiple approaches and found the most effective outreach strategy to get women in rural areas up to date on three cancer screenings at once (breast, cervical, and colorectal). This was the first clinical trial to try a three-in-one screening approach. Other creative approaches are still needed to reach all populations, especially those underserved and at high risk. Importantly, new screening technologies must be thoroughly tested to examine the risks, benefits, and impact of screening on patient outcomes. In FY 2023, NCI launched the Cancer Screening Research Network to conduct trials and studies specifically related to cancer screening methods. These multicenter trials and studies will include large and diverse populations in a variety of health care settings with the goal of reducing cancer incidence and cancer-related deaths.

Several Cancer Moonshot programs focus on the dissemination and implementation of evidence-based practices to increase colon cancer screenings in underserved populations, including the Dissemination of a Colorectal Cancer Screening Program Across American Indian Communities in the Southern Plains and Southwest United States consortia that addressed the need for improved evidence-based screening interventions in this critically underserved population. The initiative distributed thousands of fecal immunochemical tests, providing individuals with an easy, at-home way to collect a sample for colon cancer screening and offered multiple return options depending on community need and input.

Budget Policy: The FY 2025 President’s Budget request for this area is \$673.3 million, an increase of \$11.9 million or 1.8 percent compared with the FY 2023 Final level.

IV. Treating Cancer and Improving Survivorship

For more than 50 years, NCI-supported research has played a vital role in the development of treatments for people with cancer. Increasingly, progress in successfully treating patients is linked to basic cancer biology research that has advanced knowledge about molecular fingerprints of tumors, cancer-associated molecules, cancer cells’ interactions with the microenvironment and immune system, and the altered behaviors cancer cells acquire. Cancer treatment research goes beyond developing and testing therapies, including controlling symptoms, managing toxicities, and improving care. Following treatment, research is focused on enhancing quality of life and long-term survivorship.

NCI supports a variety of programs to improve treatment and survivorship, including the NCI Experimental Therapeutics Program, which works with researchers to advance promising or novel therapies from the earliest stages of research to human clinical trials, and groundbreaking precision medicine clinical trials that began with the Molecular Analysis for Therapy Choice (MATCH) Trial and led to subsequent MATCH derivatives. Selected major advances in cancer treatment that have come from NCI-funded research include studies that led to the development of the landmark drug imatinib (Gleevec) that vastly improved outcomes for patients with a certain type of blood cancer and pioneering immunotherapy treatments for many cancers.

New treatment advances: Recently, results from an NCI-sponsored clinical trial led to the U.S. Food and Drug Administration (FDA) approval of an immunotherapy drug for advanced alveolar soft part sarcoma (ASPS), an extremely rare cancer that mainly affects adolescents and young adults. This is the first approved treatment for ASPS, and the first time this drug has been approved for children, providing an important therapeutic option for this rare disease that has been challenging to treat.

Pancreatic cancer is an aggressive disease that is notoriously resistant to treatment. Many cancers and most pancreatic cancers are driven by mutations in a gene called *KRAS*. A new study identified a promising experimental drug that directly targets pancreatic tumors with a specific *KRAS* mutation. The *RAS* gene family has been difficult to target, and the NCI RAS Initiative focuses on understanding and targeting mutant RAS. Among its achievements, the RAS Initiative generated the first high resolution structure of mutant KRAS, providing critical information on KRAS protein interactions for drug discovery and development.

Most ovarian cancer patients treated with PARP inhibitors (a class of drugs that interfere with DNA repair) eventually develop resistance and their cancer returns, so alternative treatment options are needed. NCI researchers recently identified two genes whose activity may predict

NCI CLINICAL TRIALS NETWORKS

NCI supports the cancer clinical trials infrastructure that serves as the nation's backbone for testing innovative therapies. Through a system of complementary trial networks, individuals in all 50 states, the District of Columbia, Puerto Rico, and Guam have the opportunity to participate in cutting-edge research. Together, these networks include thousands of sites that enroll patients in NCI-sponsored trials, from NCI-Designated Cancer Centers to safety-net hospitals to community oncology clinics.

The National Clinical Trials Network (NCTN) coordinates and supports cancer clinical trials at more than 2,200 sites across the United States and internationally. This includes the NCI Community Oncology Research Program (NCORP), consisting of approximately 1,000 sites across the United States, with an emphasis on reaching rural and other medically underserved populations.

Other smaller NCI networks focus on early phase trials, rare and pediatric cancers, and cancer prevention such as the Experimental Therapeutics Clinical Trials Network, the Pediatric Early Phase Clinical Trials Network, the Pediatric Brain Tumor Consortium, and the Cancer Prevention Clinical Trials Network.

The NCTN conducted the groundbreaking MATCH precision medicine trial that validated the use of tumor genomic sequencing for treatment planning for people with advanced cancers. The NCORP also participated and was responsible for many of the 6,000 patients screened and 1,593 enrolled nationwide.

Additionally, NCI's Center for Cancer Research, located in the NIH Clinical Center in Bethesda, MD, welcomes patients from across the country and around the world for trials developed in alignment with the Clinical Center's highly successful bench-to-bedside research model, which has been broadly adopted by clinical research programs worldwide.

treatment success with an experimental drug for patients with ovarian cancer whose tumors are resistant to PARP inhibitors. The information learned from this study is currently being incorporated into an ongoing clinical trial.

Drug discovery, development, and testing: NCI-supported researchers are working to develop more effective and potentially less toxic treatments, such as targeted therapies, immunotherapies, and cancer vaccines, for all cancers. The new Cancer Moonshot–supported Pediatric Immunotherapy Network (PIN) aims to accelerate the development of effective immunotherapies for pediatric solid tumors. PIN investigators will expand upon the work of the Cancer Moonshot–funded Pediatric Immunotherapy Discovery & Development Network (PI-DDN), which funded 11 projects that made important advances in CAR T-cell therapies and identified immune signatures that can predict immunotherapy response for certain cancers. Six PIN projects were awarded in FY 2023.

Innovation in clinical trials is needed to enroll participants that resemble the U.S. population and make trials testing new therapies accessible to all. Launched in FY 2023, the Pragmatica-Lung Study is testing a two-drug combination in patients with advanced non-small cell lung cancer and will enroll up to 700 people. This trial uses a design that removes many of the barriers that prevent people from joining clinical trials. For example, while many studies restrict who can enroll based on how well they can perform the functions of daily life (a measure called performance status), the Pragmatica-Lung trial allows patients with a lower performance status to participate. These patients are more representative of people with advanced lung cancer. This trial has also removed many of the extra tests, data collections, and secondary study goals that are often included in clinical trials since the drugs being tested are already FDA approved, reducing burden for the study doctors and patients. Pragmatica-Lung is part of a broader NCI effort to modernize clinical trials to reach a wider and more diverse patient population.

Childhood Cancer Data Initiative (CCDI): NCI developed CCDI to gather, harness, and share data as a means of speeding research and discovery in childhood cancers. To advance these goals, CCDI launched a series of projects: the Molecular Characterization Initiative (MCI), the Childhood Cancer Datasets Catalog, the National Childhood Cancer Registry*Explorer, and the Molecular Targets Platform. The Molecular Characterization Initiative provides state-of-the-art molecular characterization of tumors at the time of diagnosis that helps participants and doctors select the best and most appropriate treatment strategy. The data generated will also be made accessible to researchers for future studies to enable them to create better clinical trials, learn about the origins and drivers of childhood cancer, and make faster progress in the development of new treatments, especially for childhood cancers with limited effective treatments. In its first year, the Initiative returned results to more than 1,000 patients. CCDI is also collaborating with the biobanking project established through the Childhood Cancer STAR Act to support biospecimen collection for the MCI and the Childhood Cancer Survivor Study. The NCI is also building a CCDI Data Ecosystem that will include infrastructure to connect data and tools, the National Childhood Cancer Registry, and a preclinical data common. This ecosystem will expand comprehensive data collection and enhance data sharing.

Symptom science research: This area of research aims to identify individuals at risk for developing treatment-related symptoms and limiting their occurrence and severity. This is

critical for allowing the increasing number of cancer survivors to maintain productive and vibrant lives. Two new NCI programs aim to better understand and improve symptom management. One program, in collaboration with two other NIH institutes, is studying the benefits and harms of cannabis and cannabinoid use among adult cancer patients during active treatment, with five awards that began in FY 2023. The other program, Understanding Expectancies in Cancer Symptom Management, will work to understand how beliefs about outcomes play a role in cancer symptom management, especially within medically underserved populations. The first round of awards is expected in FY 2024.

Survivorship: NCI supports an extensive research portfolio devoted to helping survivors of adult and pediatric cancers improve both their quality of life and long-term survival. Many people with cancer experience severe side effects of the disease and its treatment that have long-term consequences, including an increased risk of a second cancer. For childhood cancer survivors in particular, the long-term effects of cancer treatment can have a lifelong impact. The Childhood Cancer STAR Act aims to advance childhood, adolescent, and young adult cancer research, with an emphasis on improving survivorship and enhancing biospecimen collection. The STAR Act was reauthorized for five more years in 2023. More than 30 survivorship projects have been funded through NCI's implementation of the STAR Act, and NCI is supporting several biospecimen and biobanking projects through the Children's Oncology Group and the Childhood Cancer Survivor Study. Two new NCI programs will focus on survivorship outcomes for other populations: sexual and gender minority populations and individuals with advanced cancer. The latter program, which awarded four projects in FY 2023, is working to better understand and address needs of individuals living with advanced, likely incurable cancers.

Budget Policy: The FY 2025 President's Budget request for this area is \$1,522.2 million, an increase of \$84.1 million or 5.8 percent compared with the FY 2023 Final level.

V. Improving Cancer Prevention and Control

Scientists estimate that 30 to 50 percent of cancers could be prevented through approaches including education, behavior modification, vaccination and other preventive treatments, and policies that limit carcinogen exposure. Cancer prevention and control research focuses on identifying ways to reduce cancer risk and improve cancer outcomes at the individual and population levels.

NCI supports a broad range of prevention research, including the PREVENT program that funds preclinical development of innovative interventions and biomarkers for cancer prevention and interception. An initiative that supports cancer control research is the Improving the Reach and Quality of Cancer Care in Rural Populations initiative, which includes rural low-income areas and underserved. Selected major NCI-supported advances in cancer prevention and control include development of the HPV vaccine and developing the evidence base supporting smoking cessation among cancer patients to improve treatment and survivorship outcomes.

Cancer prevention research: Vaccines are one successful approach to cancer prevention. NCI intramural scientists played a critical role in the development of an HPV vaccine to prevent cervical and other HPV-related cancers for millions around the world. FDA-approved HPV vaccines prevent up to 90 percent of cervical cancer, but adoption and dissemination of the

vaccine is ongoing. A recent NCI-supported study found that one dose of the vaccine was effective, which could greatly improve uptake and accessibility worldwide, save an estimated \$300 million per year in vaccine costs in the United States, and serve as a blueprint for how to develop vaccines that can provide long-term protection from one dose.

Drugs and other compounds also have the potential to prevent cancer. The new Discovery and Development of Natural Products for Cancer Interception and Prevention Program (DDNP-CIP) will support the discovery and development of new natural products that are safe, nontoxic, and efficacious for cancer interception and prevention. This network will make use of the NCI Natural Products Repository, which is available to researchers worldwide. While DDNP-CIP focuses on preclinical studies for prevention, the Cancer Prevention Clinical Trials Network performs early-phase clinical trials to assess the safety, tolerability, and cancer preventive potential of agents and interventions to advance their further clinical development for cancer prevention. There are currently 13 open clinical trials through the network.

Cancer control science: The Surveillance, Epidemiology, and End Results (SEER) Program is the cornerstone of NCI's cancer control program. Established by the National Cancer Act, SEER initially launched with registries in 5 states and 2 metropolitan areas that encompassed less than 10 percent of the U.S. population. Fifty years later, the program has expanded to 18 registries, covering about 48 percent of the U.S. population. The SEER Program works with many health provider data sources, such as pharmacies and genomic testing laboratories, to enable centralized links to cancer registries, offering comprehensive data with clinical information often not accessible through traditional reporting mechanisms. SEER is continually improving consistency and working toward real-time cancer statistic reporting.

Not all populations have benefited equally from progress against cancer. Cancer disparities are often the result of historical, social, and structural inequities with implications across the cancer control continuum. Additionally, rural populations and areas with persistent poverty suffer disproportionately from some cancers. In addition to research programs in rural cancer control, the new Cancer Control Research in Persistent Poverty Areas is an initiative to alleviate the cumulative effects of persistent poverty on cancer outcomes by building research capacity, fostering cancer prevention research, and promoting the implementation of community-based programs. Five centers were funded in FY 2023 that focus on multiple aspects of persistent poverty and cancer including obesity and obesity-related cancer, guaranteed basic income and cancer outcomes, and tobacco cessation programs. Another new NCI program set to receive funding in FY 2024 will support four research centers that address the impact of social determinants of health on adverse cancer control outcomes.

Budget Policy: The FY 2025 President's Budget request for this area is \$283.3 million, an increase of \$13.4 million or 5.0 percent compared with the FY 2023 Final level.

VI. Cancer Centers

The 72 NCI-Designated Cancer Centers, together with their community partners, form the backbone of the nation's cancer research program. At any given time, hundreds of research studies are underway at cancer centers. Many of these studies are collaborative and involve several cancer centers, as well as other partners.

NCI-Designated Cancer Centers deliver cutting-edge cancer treatments to patients in communities across the United States through clinical trials. Recent examples that led to FDA approvals include a combination of two targeted drugs for people with advanced colorectal cancer that produces an excess amount of a protein called HER2, a novel stem cell treatment for pediatric and adult patients with high-risk blood cancers, and use of a targeted drug as therapy after surgery in patients with early-stage non-small cell lung cancer with certain mutations.

In 2023, the University of Florida Health Cancer Center became the 72nd cancer center. Additionally, three cancer centers earned comprehensive status: the Virginia Commonwealth University Massey Cancer Center, the University of Kentucky Markey Cancer Center, and the Montefiore Einstein Cancer Center in New York.

Budget Policy: The FY 2025 President's Budget request for this area is \$644.5 million, an increase of \$7.7 million or 1.2 percent compared with the FY 2023 Final level.

VII. Research Workforce Development

NCI has a long-standing commitment to train, develop, and support a strong and diverse workforce of researchers spanning the career continuum. Through formal training programs, individual fellowships, and career development awards, NCI supports training at institutions across the country. Those supported by training grants include predoctoral candidates, postdoctoral fellows, and new independent faculty. In FY 2023, NCI supported over 1,400 extramural training awards, with 41 percent going to predoctoral researchers and 59 percent to postdoctoral researchers and those in early stages of independence. Research project grants, including investigator-initiated awards, also support trainees and provide mentoring for future cancer researchers. In addition, NCI supports research training for high school, college, graduate and medical students, and postdoctoral fellows in NCI's intramural research programs.

Cancer Moonshot scholars: This program is designed to advance cancer science, while also diversifying the pool of researchers and the approaches to cancer research that NCI funds. It seeks to support early-career individuals from diverse backgrounds and to increase the diversity of thought and approaches to cancer research. In its inaugural year, a cohort of 11 scholars received their first R01 awards. Overall, NCI plans to support an additional 30 Cancer Moonshot Scholars.

Support for early-stage investigators: The Early Investigator Advancement Program (EIAP) is an NCI-wide program that aims to assist cancer researchers and clinician scientists to attain an R01 or R-type equivalent funding through grant application guidance, mentoring, and peer networks. The inaugural cohort of 20 EIAP Scholars began in 2022 and a second cohort of 25 Scholars was announced in 2023. While still early in the program, eight Scholars have received their first independent awards. The Method to Extend Research in Time (MERIT/R37) Award provides longer-term grant support to Early-Stage Investigators through an extension of up to two additional years on their initial R01 award. Since beginning in FY 2018, 351 MERIT awards have been funded and the majority of the first cohort of investigators are leveraging their extension period. The NCI Pathway to Independence Award for Outstanding Early-Stage Postdoctoral Researchers supports outstanding researchers who do not require extended periods

of mentored training beyond their doctoral degrees before transitioning to independence. These awards are given for data science, cancer control, or other specified fields.

Specialized avenues of support for other career stages: The Research Specialist Award (R50) encourages the development of stable research career opportunities in any area of NCI-funded research for exceptional scientists who pursue research within the context of a research team or core. The NCI Outstanding Investigator Award (R35) supports investigators with outstanding records of cancer research accomplishments by providing extended funding stability and encouraging investigators to continue or embark on a research program of unusual potential in cancer. Over the 9 years of the program, NCI has supported 185 outstanding investigators.

Other programs focus on populations that have not been historically well supported in science. For example, NCI's Small Business Innovation Research Women's Innovation Network aims to enable a positive shift in the entrepreneurial trajectory of women participants through skill building and education and mentorship to ultimately accelerate the success trajectory and expedite the delivery of innovations to the market.

Budget Policy: The FY 2025 President's Budget request for this area is \$236.0 million, an increase of \$12.1 million or 5.4 percent compared with the FY 2023 Final level.

VIII. Intramural Research

The scientists, physicians, and clinicians who make up the NCI intramural research program (IRP) conduct basic, translational, clinical, and population-based research that complements all aspects of the National Cancer Program. The IRP encompasses the Center for Cancer Research and the Division of Cancer Epidemiology and Genetics with investigators whose expertise spans a wide variety of disciplines. The intramural program has a unique ability to conduct long-term studies that may not be possible in other research settings, such as longitudinal studies or clinical trials that may take decades to complete due to disease rarity and the associated challenge of recruiting patients to participate. This is highlighted by a recent study that found that people with low-grade lymphomatoid granulomatosis, a rare precancerous condition that can progress to a high-grade form if left untreated and subsequently to an aggressive and fatal B-cell lymphoma, could live for decades if treated with a specific immunotherapy. Patients who received this treatment lived for a median of 20 years, compared to less than 2 years for people who had developed high-grade disease prior to treatment development. This is a significant improvement in survival outcomes that can inform a new standard of care for this rare disease.

Budget Policy: The FY 2025 President's Budget request for this area is \$1,337.6 million, an increase of \$54.9 million or 4.3 percent compared with the FY 2023 Final level.

IX. Research Management and Support

NCI research management and support staff serve an indispensable role by enabling the success of all NCI programs. Their activities include central administration, program direction, grant and contract administration, human resources, program coordination, and financial management.

Budget Policy: The FY 2025 President's Budget request for this area is \$715.1 million, an increase of \$217.0 million or 43.6 percent compared with the FY 2023 Final level. Most of this

increase will fund the management and infrastructure costs to support expanded Cancer Moonshot programs. The remaining funds will cover pay increases and other inflationary costs for existing RMS activities.

X. Repairs and Improvements

Funding for repairs and improvements allows NCI to operate facilities at the Frederick National Laboratory for Cancer Research at Fort Detrick, Maryland, as a modern research enterprise.

Budget Policy: The FY 2025 President's Budget request for this area is \$50.0 million, an increase of \$20.0 million compared with the FY 2023 Final level. NCI will replace aging building infrastructure, modify laboratories to install state-of-art research instrumentation and equipment, reconfigure laboratory space to support emerging cancer research needs, and provide new infrastructure to protect mission-critical operations.

**NATIONAL INSTITUTES OF HEALTH
National Cancer Institute**

Appropriations History¹

Fiscal Year	Budget Estimate to Congress	House Allowance	Senate Allowance	Appropriation
2016 Rescission	\$5,098,479,000	\$5,081,812,000	\$5,204,058,000	\$5,214,701,000 \$0
2017 ² Rescission	\$5,893,509,000	\$5,388,444,000	\$5,429,769,000	\$5,689,329,000 \$0
2018 Rescission	\$4,474,222,000	\$5,771,181,000	\$5,858,270,000	\$5,964,800,000 \$0
2019 Rescission	\$5,626,312,000	\$6,136,037,000	\$6,147,125,000	\$6,143,892,000 \$0
2020 Rescission	\$5,246,737,000	\$6,444,165,000	\$6,351,863,000	\$6,440,442,000 \$0
2021 Rescission	\$5,881,173,000	\$6,494,155,000	\$6,722,656,000	\$6,559,852,000 \$0
2022 Rescission	\$6,733,302,000	\$6,994,056,000	\$6,772,469,000	\$6,912,522,000 \$0
2023 Rescission	\$6,713,851,000	\$7,378,579,000	\$7,203,064,000	\$7,320,159,000 \$0
2024 Rescission	\$7,820,159,000	\$7,104,159,000	\$7,380,159,000	\$7,104,159,000 \$0
2025 ³	\$9,287,141,000			

¹ Includes funds derived by transfer from the NIH Innovation Account under the 21st Century Cures Act.

² Budget Estimate to Congress includes mandatory financing.

³ The 2025 Budget Estimate to Congress includes \$1,448 million mandatory funding for Cancer Moonshot.

AUTHORIZING LEGISLATION

**NATIONAL INSTITUTES OF HEALTH
National Cancer Institute**

Authorizing Legislation

	PHS Act/ Other Citation	U.S. Code Citation	2024 Amount Authorized	FY 2024 CR	2025 Amount Authorized	FY 2025 President's Budget
Research and Investigation	Section 301	42§241	Indefinite		Indefinite	
				\$7,104,159,000		\$7,839,141,000
National Cancer Institute	Section 401(a)	42§281	Indefinite		Indefinite	
Total, Budget Authority				\$7,104,159,000		\$7,839,141,000

AMOUNTS AVAILABLE FOR OBLIGATION

NATIONAL INSTITUTES OF HEALTH
National Cancer Institute

Amounts Available for Obligation ¹
(Dollars in Thousands)

Source of Funding	FY 2023 Final	FY 2024 CR	FY 2025 President's Budget
Appropriation ^{2,3}	\$7,320,159	\$7,104,159	\$7,839,141
Mandatory Appropriation: (non-add)			
<i>Type 1 Diabetes</i>	(\$0)	(\$0)	(\$0)
<i>Other Mandatory financing</i>	(\$0)	(\$0)	(\$1,448,000)
Subtotal, adjusted appropriation	\$7,320,159	\$7,104,159	\$7,839,141
OAR HIV/AIDS Transfers	-\$2,918	\$0	\$0
Subtotal, adjusted budget authority	\$7,317,241	\$7,104,159	\$7,839,141
Unobligated balance, start of year ⁴	\$201,631	\$293,224	\$0
Unobligated balance, end of year (carryover) ⁵	-\$293,224	\$0	\$0
Subtotal, adjusted budget authority	\$7,225,648	\$7,397,383	\$7,839,141
Unobligated balance lapsing	-\$234	\$0	\$0
Total obligations	\$7,225,414	\$7,397,383	\$7,839,141

¹ Excludes the following amounts (in thousands) for reimbursable activities carried out by this account: FY 2023 - \$43,693 FY 2024 - \$45,000 FY 2025 - \$45,000

² Of which \$216.0 million in FY 2023 is derived by transfer from the NIH Innovation Account under the 21st Century Cures Act.

³ Of which \$50.0 million is included for the Childhood Cancer Data Initiative (CCDI) in all years.

⁴ In FY 2023, reflects 21st Century Cures Act funding carried over from FY 2017 through FY 2022 into FY 2023. In FY 2024, reflects 21st Century Cures Act funding carried over from FY 2017 through FY 2023 into FY 2024.

⁵ Reflects 21st Century Cures Act funding carried over from FY 2017 through FY 2022 into FY 2023.

BUDGET AUTHORITY BY OBJECT CLASS

NATIONAL INSTITUTES OF HEALTH National Cancer Institute

Budget Authority by Object Class¹ (Dollars in Thousands)

	FY 2024 CR	FY 2025 President's Budget
Total compensable workyears:		
Full-time equivalent	3,468	3,468
Full-time equivalent of overtime and holiday hours	1	1
Average ES salary	\$222	\$226
Average GM/GS grade	12.8	12.8
Average GM/GS salary	\$140	\$143
Average salary, Commissioned Corps (42 U.S.C. 207)	\$125	\$131
Average salary of ungraded positions	\$176	\$185
OBJECT CLASSES	FY 2024 CR	FY 2025 President's Budget
Personnel Compensation		
11.1 Full-Time Permanent	\$305,280	\$318,649
11.3 Other Than Full-Time Permanent	\$180,971	\$182,660
11.5 Other Personnel Compensation	\$20,367	\$21,156
11.7 Military Personnel	\$3,470	\$3,631
11.8 Special Personnel Services Payments	\$83,854	\$84,543
11.9 Subtotal Personnel Compensation	\$593,943	\$610,638
12.1 Civilian Personnel Benefits	\$200,269	\$206,974
12.2 Military Personnel Benefits	\$717	\$751
13.0 Benefits to Former Personnel	\$0	\$0
Subtotal Pay Costs	\$794,929	\$818,363
21.0 Travel & Transportation of Persons	\$14,302	\$14,617
22.0 Transportation of Things	\$1,598	\$1,794
23.1 Rental Payments to GSA	\$36,401	\$42,082
23.2 Rental Payments to Others	\$3	\$6
23.3 Communications, Utilities & Misc. Charges	\$5,618	\$7,996
24.0 Printing & Reproduction	\$31	\$39
25.1 Consulting Services	\$354,279	\$383,744
25.2 Other Services	\$229,647	\$290,883
25.3 Purchase of Goods and Services from Government Accounts	\$580,707	\$674,096
25.4 Operation & Maintenance of Facilities	\$1,678	\$2,931
25.5 R&D Contracts	\$583,643	\$616,985
25.6 Medical Care	\$6,127	\$6,519
25.7 Operation & Maintenance of Equipment	\$82,840	\$90,753
25.8 Subsistence & Support of Persons	\$0	\$0
25.0 Subtotal Other Contractual Services	\$1,838,922	\$2,065,912
26.0 Supplies & Materials	\$62,568	\$79,918
31.0 Equipment	\$18,248	\$20,039
32.0 Land and Structures	\$6,971	\$7,515
33.0 Investments & Loans	\$0	\$0
41.0 Grants, Subsidies & Contributions	\$4,324,465	\$4,780,755
42.0 Insurance Claims & Indemnities	\$0	\$0
43.0 Interest & Dividends	\$101	\$104
44.0 Refunds	\$0	\$0
Subtotal Non-Pay Costs	\$6,309,230	\$7,020,778
Total Budget Authority by Object Class	\$7,104,159	\$7,839,141

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.

NATIONAL INSTITUTES OF HEALTH**National Cancer Institute****Salaries and Expenses**

(Dollars in Thousands)

Object Classes	FY 2024 CR	FY 2025 President's Budget
Personnel Compensation		
Full-Time Permanent (11.1)	\$305,280	\$318,649
Other Than Full-Time Permanent (11.3)	\$180,971	\$182,660
Other Personnel Compensation (11.5)	\$20,367	\$21,156
Military Personnel (11.7)	\$3,470	\$3,631
Special Personnel Services Payments (11.8)	\$83,854	\$84,543
Subtotal, Personnel Compensation (11.9)	\$593,943	\$610,638
Civilian Personnel Benefits (12.1)	\$200,269	\$206,974
Military Personnel Benefits (12.2)	\$717	\$751
Benefits to Former Personnel (13.0)	\$0	\$0
Subtotal Pay Costs	\$794,929	\$818,363
Travel & Transportation of Persons (21.0)	\$14,302	\$14,617
Transportation of Things (22.0)	\$1,598	\$1,794
Rental Payments to Others (23.2)	\$3	\$6
Communications, Utilities & Misc. Charges (23.3)	\$5,618	\$7,996
Printing & Reproduction (24.0)	\$31	\$39
Other Contractual Services		
Consultant Services (25.1)	\$292,535	\$318,753
Other Services (25.2)	\$229,647	\$290,883
Purchase of Goods and Services from Government Accounts (25.3)	\$428,730	\$509,442
Operation & Maintenance of Facilities (25.4)	\$1,678	\$2,931
Operation & Maintenance of Equipment (25.7)	\$82,840	\$90,753
Subsistence & Support of Persons (25.8)	\$0	\$0
Subtotal Other Contractual Services	\$1,035,430	\$1,212,763
Supplies & Materials (26.0)	\$62,568	\$79,918
Subtotal Non-Pay Costs	\$1,119,552	\$1,317,132
Total Administrative Costs	\$1,914,480	\$2,135,495

DETAIL OF FULL-TIME EQUIVALENT EMPLOYMENT (FTE)

NATIONAL INSTITUTES OF HEALTH National Cancer Institute

Detail of Full-Time Equivalent Employment (FTE)

Office	FY 2023 Final			FY 2024 CR			FY 2025 President's Budget		
	Civilian	Military	Total	Civilian	Military	Total	Civilian	Military	Total
Division of Extramural Activities									
Direct:	90	2	92	108	2	110	108	2	110
Total:	90	2	92	108	2	110	108	2	110
Office of the Director									
Direct:	896	3	899	972	3	975	972	3	975
Reimbursable:	3	-	3	3	-	3	3	-	3
Total:	899	3	902	975	3	978	975	3	978
Center for Cancer Research									
Direct:	1,487	11	1,498	1,524	11	1,535	1,520	11	1,531
Reimbursable:	7	-	7	7	-	7	7	-	7
Total:	1,494	11	1,505	1,531	11	1,542	1,527	11	1,538
Division of Cancer Biology									
Direct:	54	-	54	58	-	58	59	-	59
Total:	54	-	54	58	-	58	59	-	59
Division of Cancer Treatment and Diagnosis									
Direct:	242	-	242	295	-	295	296	-	296
Total:	242	-	242	295	-	295	296	-	296
Division of Cancer Prevention									
Direct:	100	1	101	118	-	118	120	-	120
Total:	100	1	101	118	-	118	120	-	120
Division of Cancer Control and Population Sciences									
Direct:	176	1	177	186	1	187	186	1	187
Reimbursable:	1	-	1	1	-	1	1	-	1
Total:	177	1	178	187	1	188	187	1	188
Division of Cancer Epidemiology and Genetics									
Direct:	174	2	176	177	2	179	177	2	179
Total:	174	2	176	177	2	179	177	2	179
Total	3,230	20	3,250	3,449	19	3,468	3,449	19	3,468
Includes FTEs whose payroll obligations are supported by the NIH Common Fund.									
FTEs supported by funds from Cooperative Research and Development Agreements.	0	0	0	0	0	0	0	0	0
FISCAL YEAR	Average GS Grade								
2021	12.7								
2022	12.7								
2023	12.8								
2024	12.8								
2025	12.8								

DETAIL OF POSITIONS

NATIONAL INSTITUTES OF HEALTH
National Cancer Institute

Detail of Positions ¹

GRADE	FY 2023 Final	FY 2024 CR	FY 2025 President's Budget
Total, ES Positions	1	2	2
Total, ES Salary	\$212,100	\$443,800	\$452,676
General Schedule			
GM/GS-15	351	351	351
GM/GS-14	493	543	543
GM/GS-13	680	735	735
GS-12	397	421	421
GS-11	162	177	177
GS-10	6	6	6
GS-9	94	101	101
GS-8	37	37	37
GS-7	35	33	33
GS-6	7	7	7
GS-5	4	4	4
GS-4	5	5	5
GS-3	3	2	2
GS-2	7	7	7
GS-1	1	1	1
Subtotal	2,282	2,430	2,430
Commissioned Corps (42 U.S.C. 207)			
Assistant Surgeon General	0	0	0
Director Grade	8	7	7
Senior Grade	4	4	4
Full Grade	7	7	7
Senior Assistant Grade	1	1	1
Assistant Grade	0	0	0
Junior Assistant	0	0	0
Subtotal	20	19	19
Ungraded	1,013	1,073	1,073
Total permanent positions	2,222	2,289	2,478
Total positions, end of year	3,316	3,524	3,524
Total full-time equivalent (FTE) employment, end of year	3,250	3,468	3,468
Average ES salary	\$212,100	\$221,900	\$226,338
Average GM/GS grade	12.8	12.8	12.8
Average GM/GS salary	\$132,806	\$139,513	\$143,419

¹ Includes FTEs whose payroll obligations are supported by the NIH Common Fund.