

NCI Director's Report: Opportunities and realities for cancer research

W. Kimryn Rathmell, M.D., Ph.D.

Director, National Cancer Institute

8th Virtual Meeting of the Board of Scientific Advisors

March 20, 2024

@NCIDirector
@TheNCI

Today's Topics:

1. Brief introduction
2. Budget outlook
3. Research highlights
4. Q&A

A little about me

Background in brief:

- Scientist
- Clinician, oncologist
- Educator/mentor
- Health care management and administration
- Leader
- Advocacy
- Basketball player (and aficionado)

Principles I value



Listening, openness



Teamwork, collaboration



Solving complex problems

Grad students, postdocs, fellows, residents, undergraduates

MSTP, AD Education and Training LCCC

K12, CRCERA, T32, DD VICC

RCC clinical trials

HIF biology, RCC metabolism

HIF biology, RCC metabolism

Ror2, Wnt signaling

Immunometabolism in RCC TME

VHL knock-in models

Imaging biomarkers, PET, CEUS

TCGA

Transcription subsets of RCC, ccA/ccB

SETD2, Chromatin, Mitosis, Replication Stress

2003

2005

2007

2009

2011

2013

2015

2017

2019

2021

2023

GU oncologist

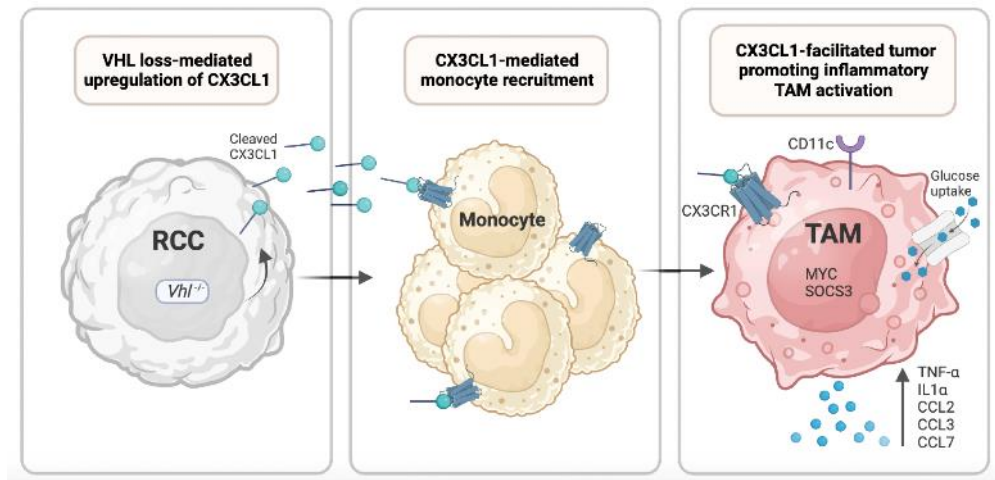
GU oncologist

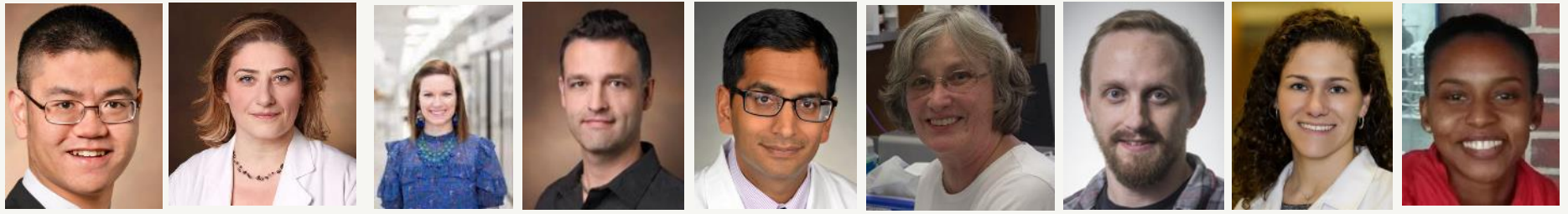
RCC oncologist

VHL clinic

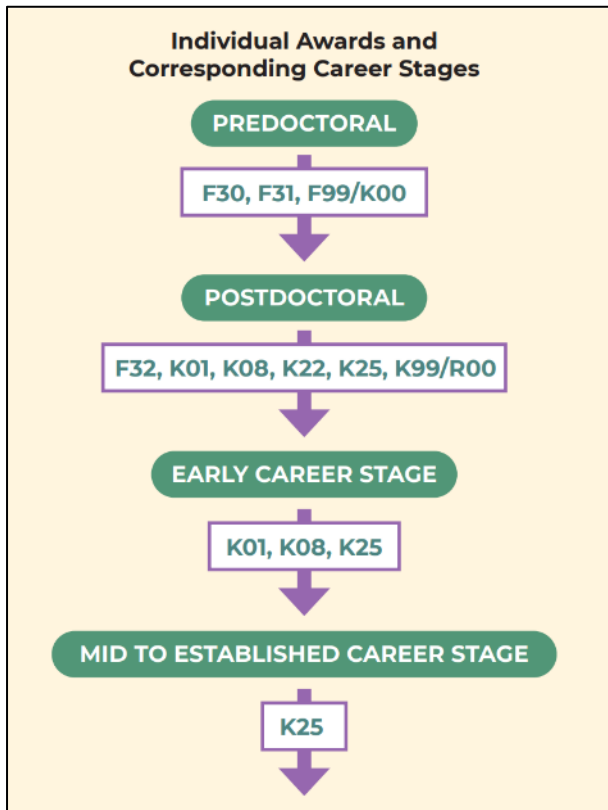
Research Thread

- HIF1/HIF2 metabolism
- Transcription features
- PET imaging
- Heterogeneity
- “Tumor Juice”
- Macrophages
- Cytokines
- Obesity

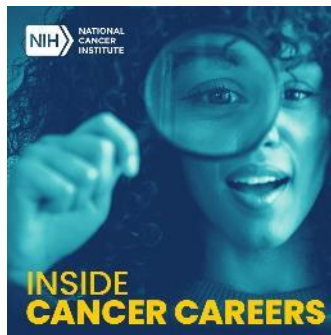




NCI's empowering the next generation



NanCI



Awards to Promote Diversity
 F31, K01, K08, K22, R25, Diversity Supplement

Institutional Awards
 T32, K12, R25



Budget outlook

Where we are today (for FY24)



Potential lapses in
appropriation
averted:

September 30, 2023
November 17, 2023
February 2, 2024
March 8



Current Continuing
Resolution expires
March 22
(halfway through the
fiscal year).



Interim grant policies
have been set.
Final adjustments will
be made when NCI
receives a full-year
appropriation.

NCI's budget is determined within the federal budget ecosystem

alongside many other
national priorities

Appropriations bills for FY24

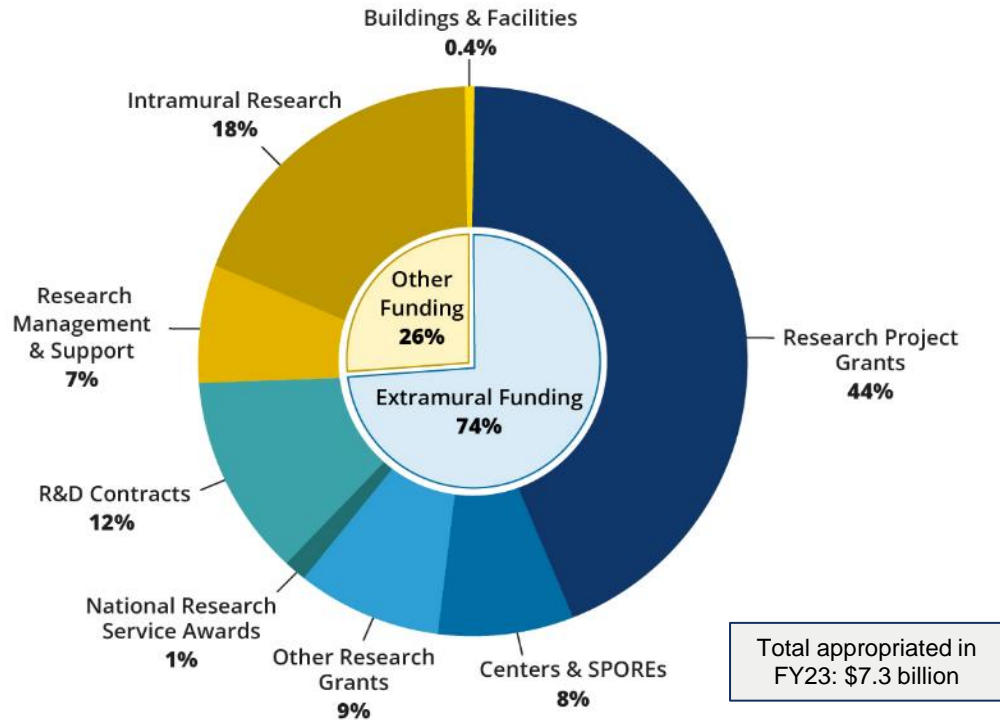
Completed on March 9

- Agriculture, Rural Development, FDA, and Related Agencies
- Commerce, Justice, Science, and Related Agencies
- Energy and Water Development
- Interior, Environment, and Related Agencies
- Military Construction, Veterans Affairs, and Related Agencies
- Transportation, Housing and Urban Development, and Related Agencies

Pending (continuing resolution through March 22)

- Defense
- Financial Services and General Government
- Homeland Security
- *Labor, Health and Human Services, Education, and Related Agencies*
- Legislative Branch
- State, Foreign Operations, and Related Programs

How NCI spends its budget



Major areas of NCI's work span more than one of the categories in the chart:

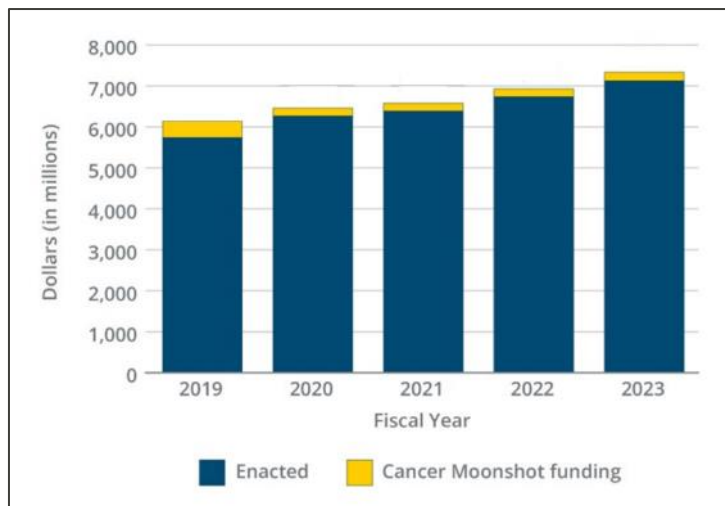
- Clinical trials
- Training & career development
- Basic science

These efforts are funded through multiple mechanisms and approaches, including:

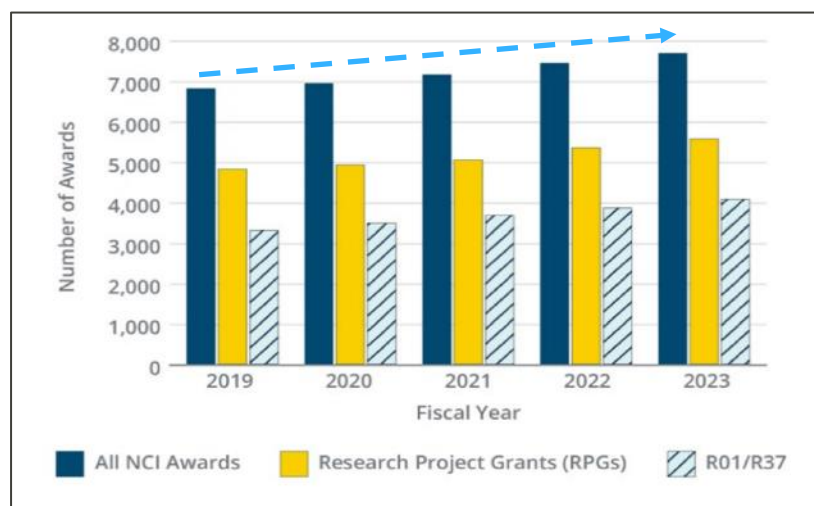
- Intramural research
- Extramural research
- National networks
- Research project grants

NCI has been funding more awards year over year

NCI Budget History (appropriations)
FY19 – FY23



NCI Grant Awards (competing and non-competing)
FY19 – FY23

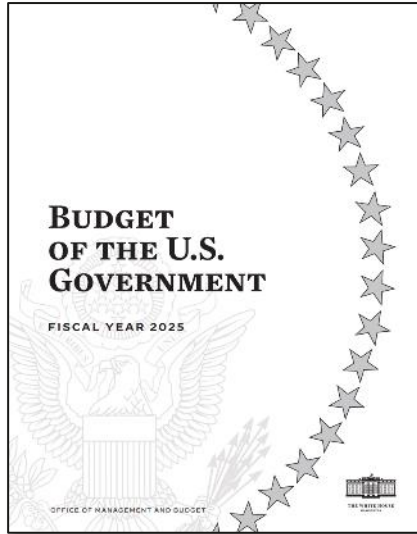


What it would cost to do what we expect for cancer

	NCI's Professional Judgment Budget Proposal	Actual NCI Budget
FY 2024	\$9.988B	?
FY 2025	\$11.466B	?

- *FY 2023 total appropriation: \$7.3 billion*

FY 2025 President's Budget Proposal released last week



FY 2025 President's
Budget Proposal

\$7.839B (discretionary)
+ \$1.448B (mandatory)
= \$9.287B total

- Proposes \$716M of discretionary funding for Cancer Moonshot
- Proposes \$1.448B of mandatory funding for Cancer Moonshot

NCI Fiscal Year 2025 Professional Judgment Budget Proposal

 NATIONAL CANCER INSTITUTE



Leading Progress against Cancer
NCI Fiscal Year 2025 Professional Judgment Budget Proposal

View the budget proposal and the Director's Message:
www.cancer.gov/research/leading-progress

Highlighted Scientific Opportunities

- Improving patients' lives through symptom science research
- Revolutionizing cancer clinical trials
- Clarifying the impact of the environment on cancer risk
- Harnessing the power of cancer data
- Unraveling the complexity of cancer metastasis

A “flat” budget is not truly flat – it is a reduction

Why?

- End of 21st Century Cures Act funding for the Cancer MoonshotSM
- Research costs and salaries increase (COLA)
- Non-negotiable expenses for NCI increase each year by \$75M to \$100M
- RPG cost increases \$250M annually to fully fund at current levels

Available levers to manage constrained budget:

Research Project Grants (RPGs)

- Decrease the “payline” for new awards
- Fund non-competing awards < 100%

Cancer Center Support Grants (CCSGs)

- Forgo increases for competing renewals
- Decreases to non-competing CCSGs

Cancer Training Awards

- Fewer new awards (F’s, K’s, T’s)

Specialized Programs of Research Excellence (SPORE) Grants

- Fewer new awards and renewals
- Decreases to non-competing awards

Intramural Research Program

- Planned budget reductions
- Reduced hiring
- Decreased contractor utilization
- Trim programs

Resources about NCI budget and appropriations



Sept. 6, 2023 NCAB meeting: NCI budget overview
www.videocast.nih.gov/watch=52268&start=3723

NCI's Fiscal Year 2024 Budget Challenges and Interim Paylines Explained

Subscribe
November 15, 2023, by NCI Acting Director, Dr. Douglas R. Lowy

UPDATE: Since this blog was posted on November 15, Congress passed another short-term continuing resolution that extends funding for the National Institutes of Health at last fiscal year's budget levels through February 2, 2024. In this post, NCI Acting Director Dr. Lowy describes key challenges that this "flat" budget presents to NCI and its effects on NCI's ability to support cancer research. He also discusses newly announced interim paylines for competing grants.



NCI *Bottom Line* blog post on FY24 budget outlook:
www.cancer.gov/grants-training/nci-bottom-line-blog/



Updated budget and appropriations page:
www.cancer.gov/about-nci/budget



NCI Fiscal Year 2025
Professional Judgment Budget Proposal:
www.cancer.gov/research/leading-progress

National Cancer Plan

Prevent Cancer
Detect Cancers Early
Develop Effective Treatments
Deliver Optimal Care
Eliminate Inequities
Maximize Data Utility
Optimize the Workforce
Engage Every Person



THE PRESIDENT AND FIRST LADY'S

CANCER MOONSHOT

ENDING CANCER AS WE KNOW IT

Goals of the reignited Cancer Moonshot

- Reduce U.S. cancer mortality rate by 50% by 2047
- Improve the experience of people and their families living with and surviving cancer

Recent wins – some examples

Recent wins and accomplishments in cancer research

- ✓ First FDA approval of **cell therapy in solid tumors** (tumor-infiltrating lymphocytes, TILs, for advanced melanoma)
- ✓ Preliminary studies show promise of **CAR T-cell therapy to treat glioblastoma**
- ✓ Study reveals **tobacco and nicotine use disparities among sexual and gender minorities** in California
- ✓ **HHS Framework to Support and Accelerate Smoking Cessation 2024** released
- ✓ New “SHIP” Trial Network announced: **Self-collection for HPV testing to Improve Cervical Cancer Prevention**
- ✓ New **Cancer Screening Research Network** launched
- ✓ New **NCI Virtual Clinical Trials Office** launched
- ✓ Announcement of new **Cancer Grand Challenges** teams and challenges

(More details in following slides.)

*More at NCI Cancer Currents blog:
www.cancer.gov/blog*

Breakthrough in cellular therapy for solid tumors – pioneered by decades of NCI research

Tumor-infiltrating lymphocytes (TILs) for advanced melanoma

- First-ever FDA approval of cellular therapy for solid tumors
- Marks a new era of cancer treatment

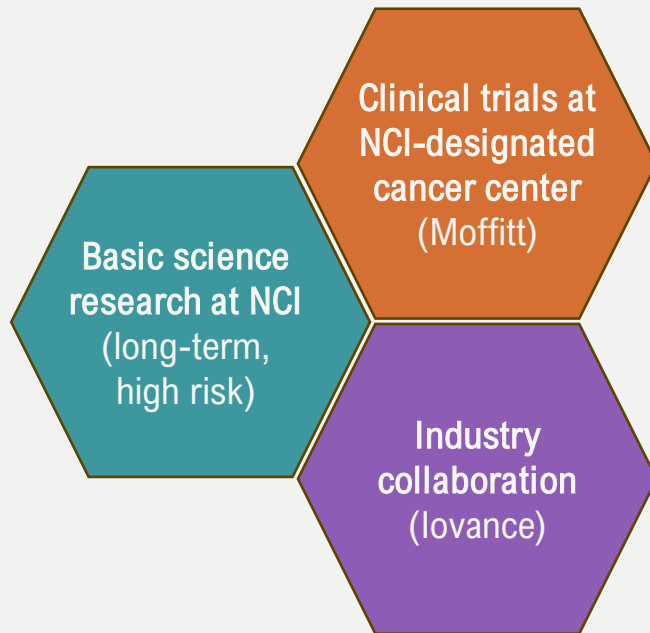
Exemplary model of collaboration and translational science:
basic science > clinical research > treatment development

Considerations: Scaling; application to other cancers; access



Pioneered by Dr. Steven A. Rosenberg
NCI Center for Cancer Research

- ~40 years of basic science research



Contributes to National Cancer Plan goals:



New “SHIP” trial network on self-sampling for cervical cancer prevention announced at White House (January 25, 2024)



As part of the Forum, National Cancer Institute (NCI) Director Kimryn Rathmell announced a new NCI-supported trial to drive progress on cervical cancer prevention. The brand new 'Last Mile' Initiative, Self-collection for HPV testing to Improve Cervical Cancer Prevention (SHIP) Trial Network aims to test the performance of multiple self-collection devices for HPV, the leading driver of cervical cancer, so that cervical cancer screening can be brought closer to the people in the communities that are behind on screening.

www.whitehouse.gov/briefing-room

Self-collection for HPV testing to Improve Cervical Cancer Prevention (SHIP) Trial Network

- Great example of:
 - ✓ Broad collaboration – within research and beyond, including federal and private sector
 - ✓ Addressing disparities
 - ✓ Engaging with the community, beneficiaries of research

Contributes to National Cancer Plan goals:

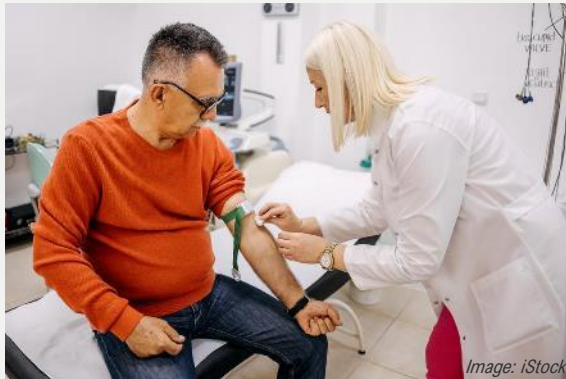


First large-scale network on cancer screening launched: Cancer Screening Research Network (CSRN)

NCI Press Release

NIH launches research network to evaluate emerging cancer screening technologies

February 21, 2024



Goal: To evaluate emerging cancer screening technologies (e.g., multi-cancer detection blood tests) – with the ultimate aim to save lives.

CSRN is the first large scale network to focus on cancer screening.



Contributes to National Cancer Plan goals

New NCI Virtual Clinical Trials Office pilot program

NCI Media Advisory

NIH to address dwindling clinical trial patient enrollment with centralized staffing support

February 29, 2024



What:

- Centralized, remote staff support for NCI-supported clinical trials activities

Aims:

- **Improve accrual and retention rate to trials** – by addressing staffing challenges and burdens of clinical research

Status:

- 6 sites selected for initial pilot phase

Contributes to National Cancer Plan goals:



Childhood Cancer Data Initiative (CCDI) continues to make progress toward National Cancer Plan goals

- Recent progress
 - **Molecular Characterization Initiative (MCI)** expands enrollment to children newly diagnosed with advanced stage neuroblastoma
 - Includes **Renal Medullary Carcinoma (RMC)**
- Upcoming events
 - **March CCDI Community Forum (3/18)** – interactive Q&A for community input



CCDI continues to make important contributions to National Cancer Plan goals

WHAT IS THE CCDI MOLECULAR CHARACTERIZATION INITIATIVE?

- Provides state-of-the-art **molecular characterization at time of diagnosis** to inform optimal treatment decisions.
- A **national collaboration** between:
 - ✓ Childhood cancer community (including COG)
 - ✓ Advocates
 - ✓ Pediatric oncologists
 - ✓ Researchers
 - ✓ Data scientists
 - ✓ Children, adolescents, and young adults with cancer
 - ✓ Families

Cancer Grand Challenges

New teams announced

CANCER
GRAND
CHALLENGES



Five teams, four challenges:

Reducing cancer inequities

Understanding mechanisms of early-onset cancers

Developing drugs for solid tumors in children

Broadening knowledge about how T cells recognize cancer cells

About Cancer Grand Challenges

- Global funding initiative to advance **bold cancer research**
- Co-founded by NCI and Cancer Research UK (CRUK) in 2020
- Each team receives up to \$25M over five years
- New awardees:
 - Span 12 countries
 - Represent 45 institutions
 - Include ~70 investigators and researchers

What I need from BSA...

Simply...

- Are there areas you would like to hear more or less about?
- Re: RFA's and PAR's.
 - Are we in spaces that are better served by foundations or industry?
 - Do we have the right balance of number, too many, too few?
 - Your thoughts on directions to develop new RFA/PAR
- Are we resourcing programs so that they can be successful?

Closing thoughts

Given the budget realities...

We must work together – creatively, collaboratively, and efficiently – to make the best decisions given the tough reality.

Our work is ultimately for the benefit of people, patients and families touched by cancer.

We will use the National Cancer Plan as our roadmap toward ending cancer as we know it.



*Working together to assemble puzzle.
Image generated by AI.*

Thank You!

www.cancer.gov

www.cancer.gov/espanol

1-800-4-CANCER

NCInfo@nih.gov

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