NCI Director’s Update

National Cancer Advisory Board & Board of Scientific Advisors

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ANNUAL REPORT TO THE NATION ON THE STATUS OF CANCER

RELEASED MAY 30, 2019

AVERAGE ANNUAL PERCENT CHANGE (AAPC) 2012-2016

MEN
- Non-Melanoma Skin 2.0%
- Liver & Intrahepatic Bile Duct 1.1%
- Oral Cavity & Pharynx 1.0%
- Soft Tissue incl. Heart 0.7%
- Brain & Other Nervous System 0.6%
- Pancreas 0.2%
- Bones and Joints 0.1

WOMEN
- Corpus & Uterus 2.3%
- Oral Cavity & Pharynx 1.9%
- Liver & Intrahepatic Bile Duct 1.9%
- Brain & Other Nervous System 0.5%
- Soft Tissue incl. Heart 0.2%
- Pancreas 0.2%

- Cervix 1.5%
- Leukemia 1.4%
- Gallbladder 1.4%
- Kidney & Renal Pelvis 1.3%
- All Sites 1.3%
- Breast 1.0%
- Esophagus 1.0%
- Colon & Rectum 1.0%
- Stomach 0.9%
- Myeloma 0.9%
- Ovary 0.9%
- Non-Hodgkin Lymphoma 0.8%
- Lung & Bronchus 0.8%
- Melanoma of the Skin 0.8%
Cancer Moonshot
Funding Authorized under 21st Century Cures Act (dollars in millions)
NCI/NIH BUDGET PROCESS FOR REGULAR APPROPRIATION

STEP 1
White House OMB coordinates with federal agencies to formulate the President’s budget proposal

STEP 2
Congressional appropriations committees consider President’s proposal & prepare legislation

STEP 3
Congress reconciles & finalizes appropriations legislation & sends to the President

STEP 4
President signs the appropriations bill into law making funds available for NIH & NCI

FY 2019
FY 2020
Structures Solved with the National Cryo-EM Facility
Frederick National Laboratory for Cancer Research

Dot1L methyltransferase complex with H2B-ubiquitinated nucleosomes

Dr. Cynthia Wolberger
Johns Hopkins University


Serotonin receptor (5-HT3AR)

Dr. Sudha Chakrapani
Case Western Reserve University

Two New NCI Working Groups

- Internal Working Group on Screening and Early Detection
- Board of Scientific Advisors Ad Hoc Working Group on Prevention
Four Areas of Added Emphasis

- Childhoood Cancers
- Investigator-Initiated Research
- Health Disparities
- Drug Resistance
Four Areas of Added Emphasis

- CHILDHOOD CANCERS
- INVESTIGATOR-INITIATED RESEARCH
- HEALTH DISPARITIES
- DRUG RESISTANCE
Pediatric cancer research conducted or supported by NCI/NIH: 2014 - 2018

Number of Awards

- All NIH
- NCI
- Non-NCI
As of the end of 2018:

- More than 400 patients screened
- 24% of patients were eligible to receive a targeted therapy treatment in the trial, representing a wide spectrum of different childhood cancers
  - This is significantly higher than the projected 10% match rate
- 10% of patients who had their tumors sequenced have already received a targeted therapy treatment in the trial

NCI-COG Pediatric MATCH has created a collaborative framework for efficient collection, processing, and sequencing of refractory pediatric cancers.
Childhood Cancer Research Presidential Initiative

• President’s FY 2020 budget proposal includes $50M
• White House has convened several stakeholder events
Childhood Cancer Data Initiative (CCDI)

Facilitate the sharing of childhood cancer data from multiple sources through a connected data infrastructure

Identify opportunities to align and integrate multiple data sources to make data work better for patients, clinicians, and researchers

Maximize every opportunity to improve treatments and outcomes for children with cancer
Childhood Cancer Data Initiative – Next Steps

**Scientific Planning Meeting**
July 29-31, 2019
Washington, D.C.

*For more information, visit [Cancer.gov > search > CCDI]*
Four Areas of Added Emphasis

CHILDHOOD CANCERS

INVESTIGATOR-INITIATED RESEARCH

HEALTH DISPARITIES

THERAPEUTIC RESISTANCE
President Jimmy Carter
Metastatic melanoma

Senator John McCain
Glioblastoma
Contribution of NIH funding to new drug approvals 2010–2016

Ekaterina Galkina Cleary, Jennifer M. Beierlein, Navleen Surjit Khanuja, Laura M. McNamee, and Fred D. Ledley

…NIH funding contributed to every one of the 210 new drugs approved by the Food and Drug Administration from 2010–2016.
Four Areas of Added Emphasis

- **CHILDHOOD CANCERS**
- **INVESTIGATOR-INITIATED RESEARCH**
- **HEALTH DISPARITIES**
- **THERAPEUTIC RESISTANCE**

Non-Hispanic Black
Non-Hispanic White
American Indian/Alaska Native
Hispanic
Asian/Pacific Islander

Heart disease and cancer mortality rates, age adjusted

Heart Disease

Rate per 100,000 Population

1999  2001  2003  2005  2007  2009  2011  2013

Cancer

Rate per 100,000 Population

1999  2001  2003  2005  2007  2009  2011  2013

Moy et al, MMWR Surveil Summ, 2017
NCI Activities in Rural Cancer Control

- 21 Cancer Centers received supplements in FY18 to focus on rural populations.
- RFA-CA-18-026 (R01) *Improving the Reach and Quality of Cancer Care in Rural Populations* (Closed)

### Additional relevant FOAs

<table>
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<tr>
<th>Description</th>
<th>Type</th>
<th>PAR No.</th>
<th>Date</th>
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<tr>
<td>Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers</td>
<td>R21</td>
<td>PAR-17-483 R01 PAR-17-484</td>
<td>12/5/2019</td>
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<td>Research to Improve Native American Health</td>
<td>R01</td>
<td>PAR-17-496 R21 PAR-17-464</td>
<td>May 14, 2020</td>
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<td>Administrative Supplements to Support Cancer Disparity Collaborative Research</td>
<td>P30</td>
<td>PA-18-842</td>
<td>9/10/2019, 9/10/2020</td>
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Four Areas of Added Emphasis

- **Childhood Cancers**
- **Investigator-Initiated Research**
- **Health Disparities**
- **Therapeutic Resistance**
Therapeutic Target Identification to Overcome Cancer Drug Resistance

**Co-Chairs:** Percy Ivy (DCTD) & Jeff Hildesheim (DCB)

**Program Director, Drug Resistance & Sensitivity Network:** Austin Doyle (DCTD)
DRSN Mission

To conduct preclinical research focused on innovative strategies to understand and combat mechanisms of tumor resistance (intrinsic and acquired) and/or exploit tumor sensitivities to anti-cancer therapies.

- Serve as a critical component to NCI’s CTEP clinical drug development program/clinical trials network
- Instrumental to providing novel agents and aiding novel combinations/therapeutic strategies in clinical settings
DRSN
(RFA-CA-17-009)

NCI DRUG RESISTANCE & SENSITIVITY NETWORK

Steering Committee

UCSF-Stanford
(Trever Bivona, Calvin Kuo)
Lung Cancer

MGH-Broad-MIT/Koch
(Ryan Corcoran, Keith Flaherty)
CRC, Melanoma, Lung

MSK/UW-Fred Hutch
(Charles Sawyers, Pete Nelson)
Prostate Cancer

Mayo AZ/Roch-U Minn
(Keith Stewart, Leif Bergsagel, Shaji Kumar)
Multiple Myeloma

OHSU
(Jeff Tyner, Brian Druker)
AML

- Long. Biopsies
- Rapid Autopsies
- PDOs
- PDXs
- Single Cell Tech
- Omics
An integral part of this U54 network

PAR-18-752 Administrative Supplements to Support Collaborations with the DRSN
NCI’s Cancer Information Service

Questions about the contract recompetition should be directed to NCI’s Office of Acquisitions: cancer.gov > search: acquisitions
Recent Leadership Appointments

Chief Data Scientist, DCEG - Jonas Almeida
Associate Director, NCI at Frederick - Sara Hook
Director, CBIIT - Tony Kerlavage
Budget Director - Weston Ricks
Chief Information Officer - Jeff Shilling
Leadership Vacancies

Director, Center for Global Health (CGH)
Bob Croyle, Acting

Associate Director, Cancer Therapy Evaluation Program (CTEP)
Meg Mooney, Acting

Director, Division of Cancer Prevention (DCP)
Debbie Winn, Acting
In Memoriam

LaSalle D. Leffall, Jr., MD

Henry T. Lynch, MD