

NCI Director's Update

*National Cancer Advisory Board &
Board of Scientific Advisors*

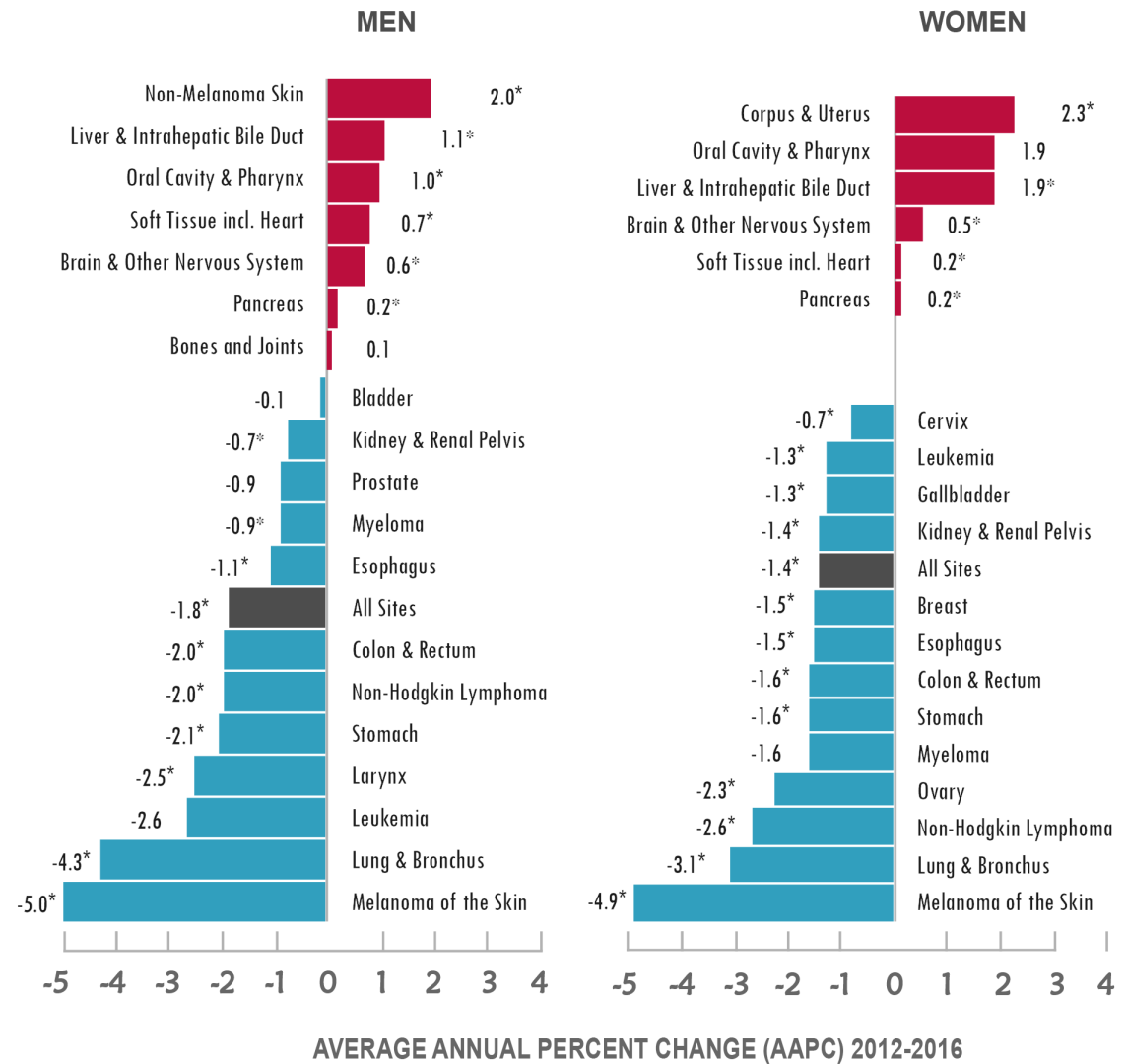
Douglas R. Lowy, M.D.
Acting Director

@TheNCI
@NCIDrDougLowy

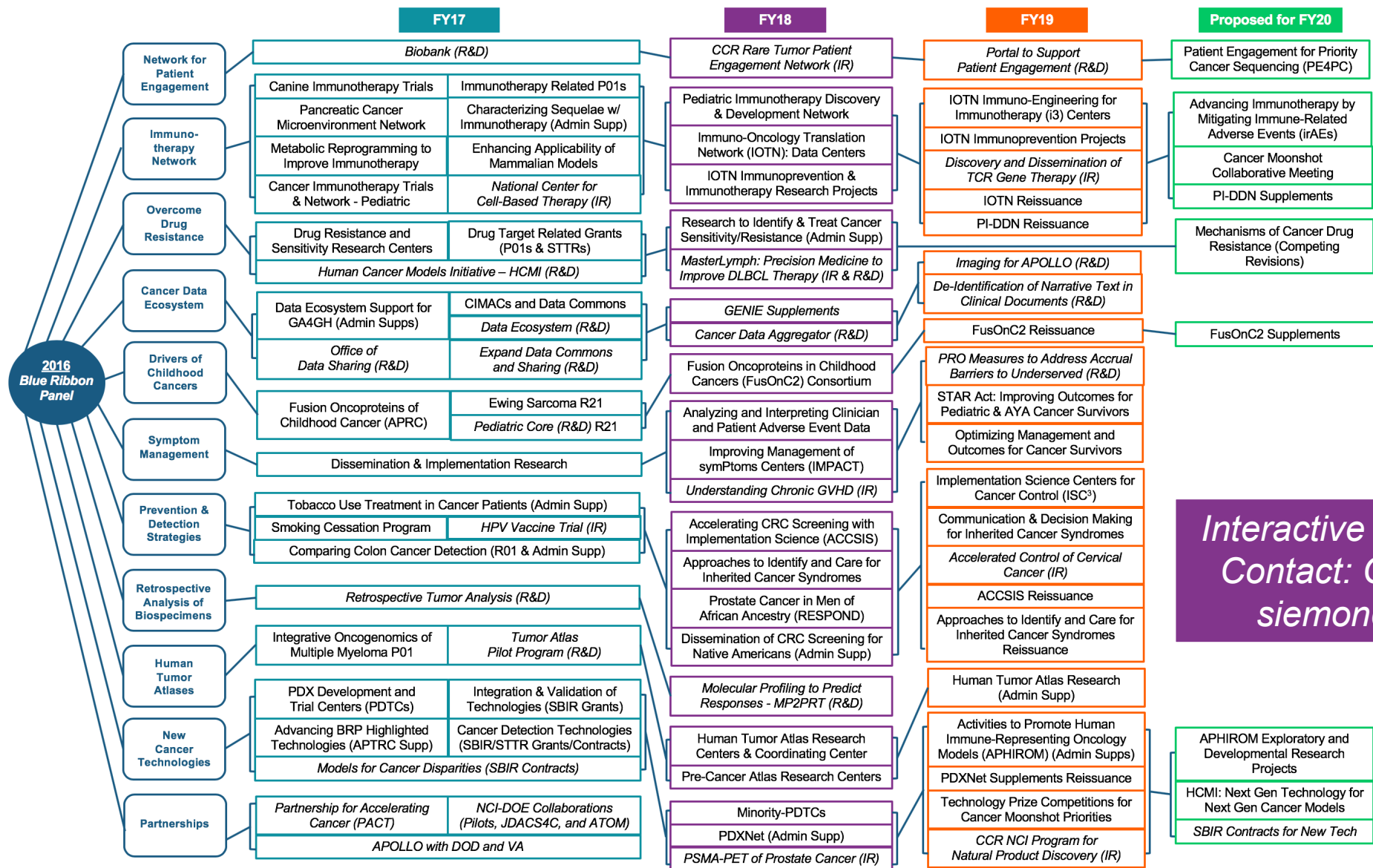


ANNUAL REPORT TO THE NATION ON THE STATUS OF CANCER

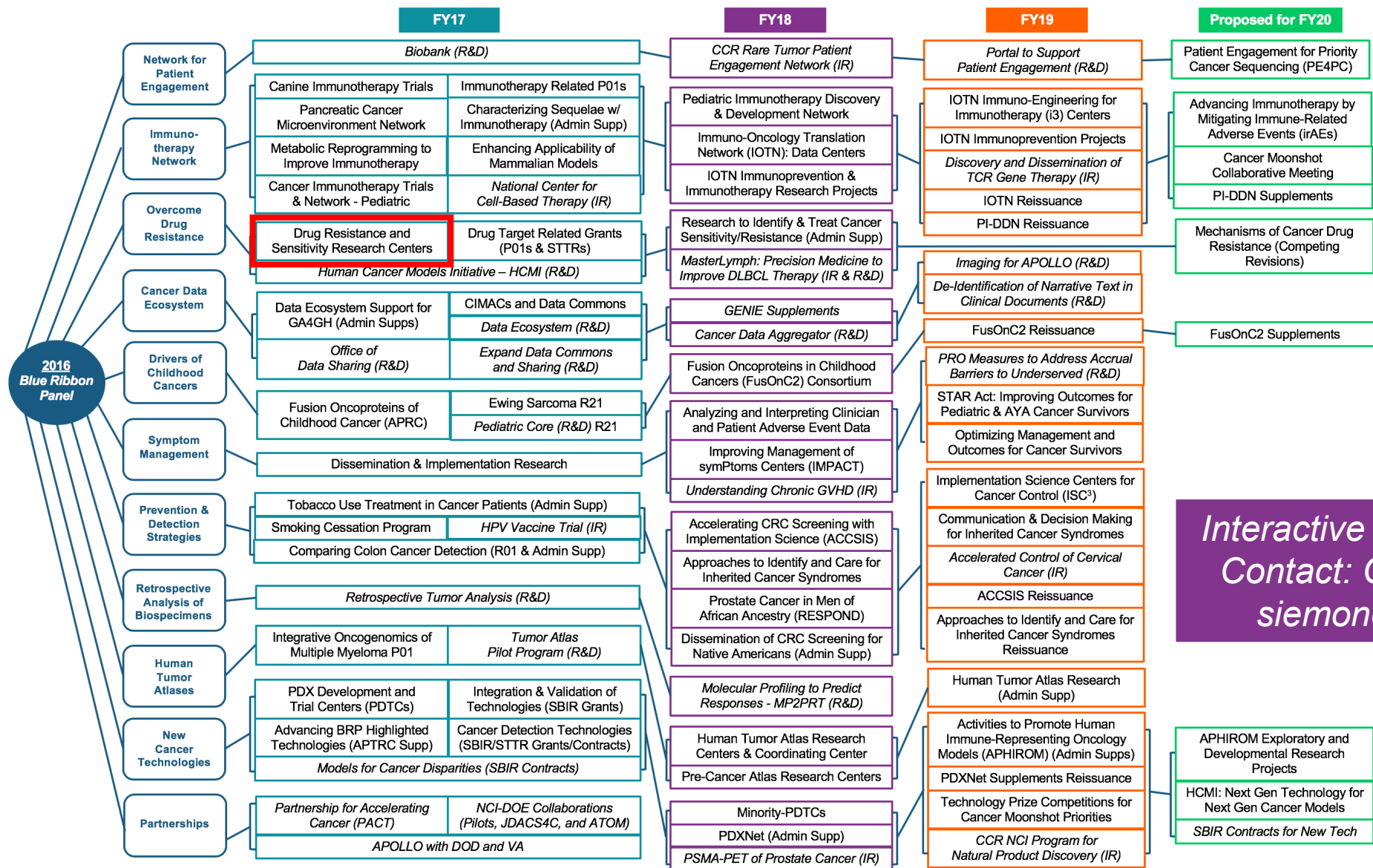
RELEASED
MAY 30, 2019



NCI Moonshot Landscape



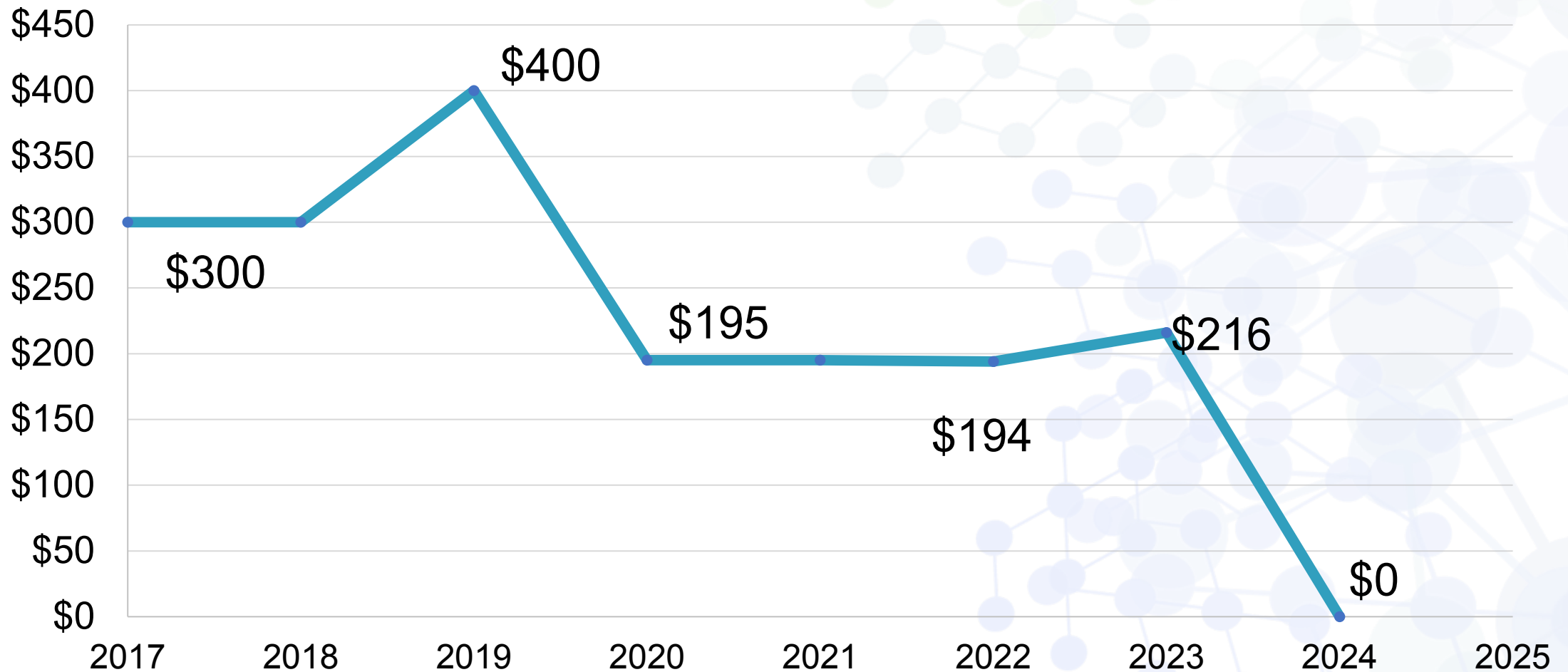
NCI Moonshot Landscape



Interactive map available
Contact: Chris Siemon
siemonc@nih.gov

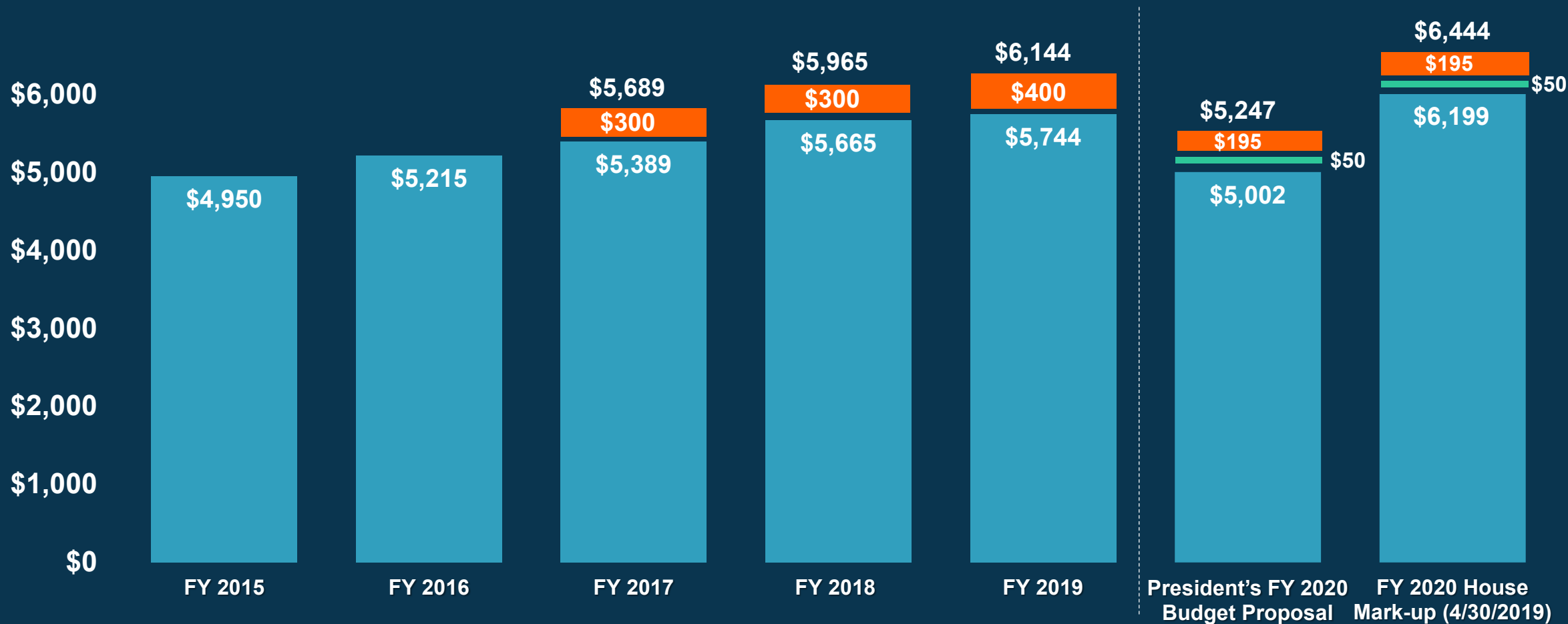
Cancer Moonshot

Funding Authorized under 21st Century Cures Act (dollars in millions)



NCI Appropriations FY 2015 – 2020 (in millions)

21st Century Cures Act - orange
Childhood Cancer Initiative - green





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

FY 2020

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

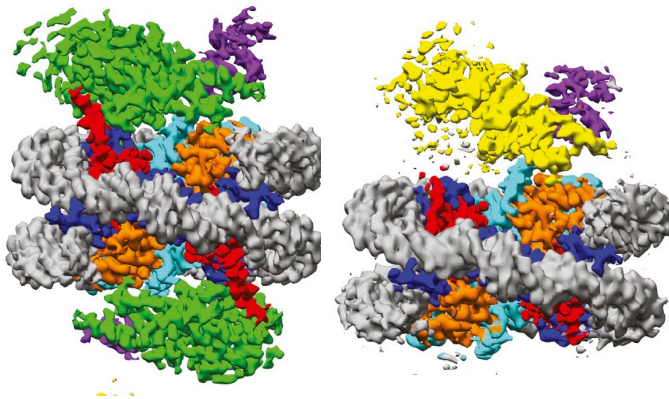
Structures Solved with the National Cryo-EM Facility

Frederick National Laboratory for Cancer Research

Dot1L methyltransferase complex with H2B-ubiquitinated nucleosomes

Dr. Cynthia Wolberger
Johns Hopkins University

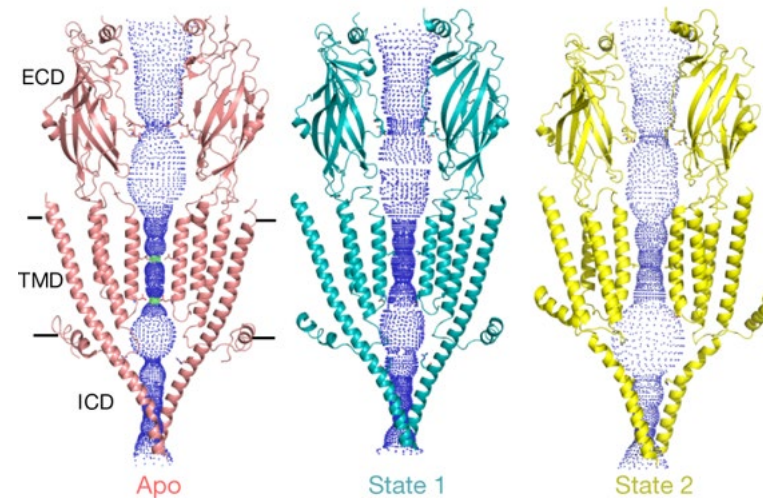
Worden et al. (2019) Cell S0092-8674(19)30151-5



Serotonin receptor (5-HT3AR)

Dr. Sudha Chakrapani
Case Western Reserve University

Basak et al. (2018) Nature 563, 270-274



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



**CHILDHOOD
CANCERS**



**INVESTIGATOR-
INITIATED
RESEARCH**

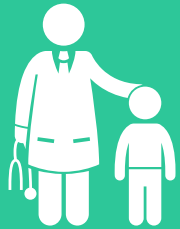


**HEALTH
DISPARITIES**



**DRUG
RESISTANCE**

Four Areas of Added Emphasis



**CHILDHOOD
CANCERS**



**INVESTIGATOR-
INITIATED
RESEARCH**

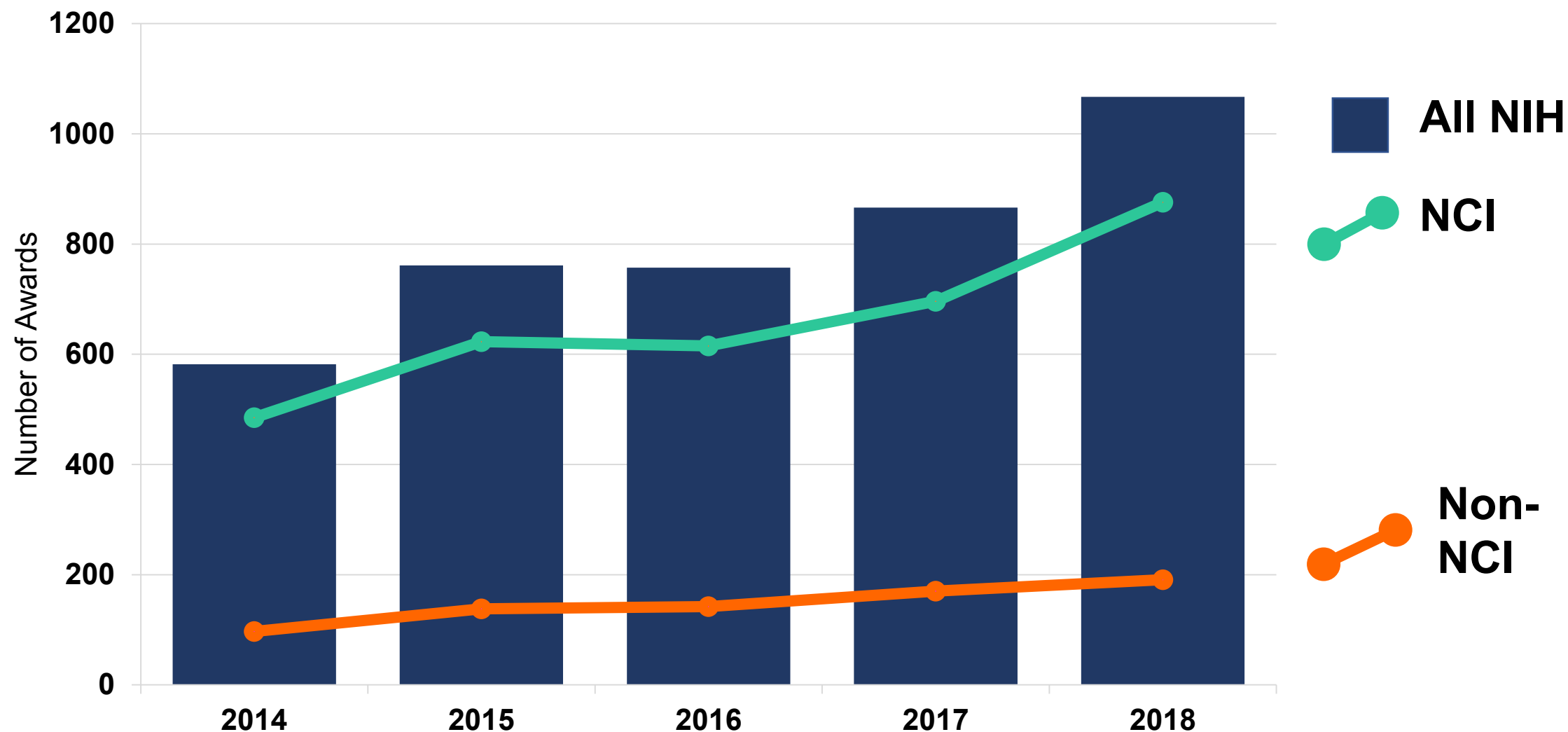


**HEALTH
DISPARITIES**



**DRUG
RESISTANCE**

Pediatric cancer research conducted or supported by NCI/NIH: 2014 - 2018



NCI-COG Pediatric MATCH

Interim Analysis Presented at the ASCO Annual Meeting

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.

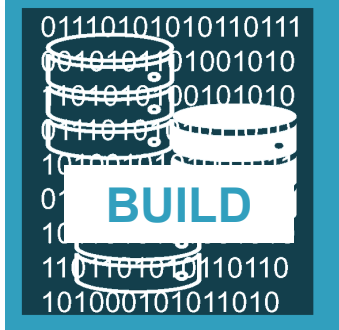


Childhood Cancer Research Presidential Initiative

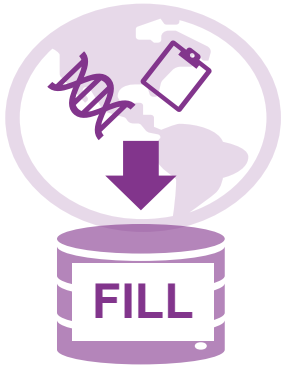


- President's FY 2020 budget proposal includes \$50M
- White House has convened several stakeholder events

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](https://www.cancer.gov) > search > **CCDI**



Four Areas of Added Emphasis



**CHILDHOOD
CANCERS**



**INVESTIGATOR-
INITIATED
RESEARCH**



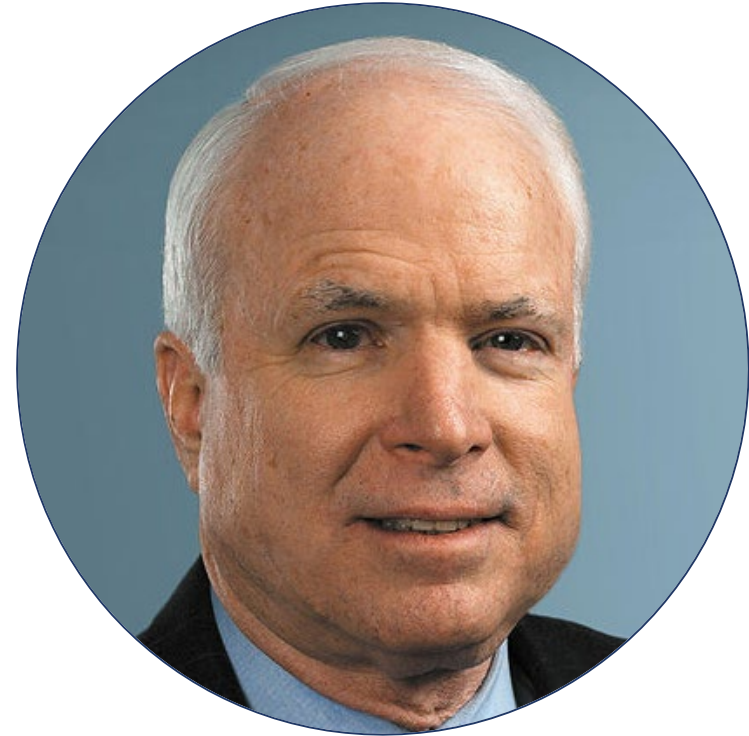
**HEALTH
DISPARITIES**



**THERAPEUTIC
RESISTANCE**



President Jimmy Carter
Metastatic melanoma



Senator John McCain
Glioblastoma

Contribution of NIH funding to new drug approvals 2010–2016

PNAS | March 6, 2018 | vol. 115 | no. 10 | 2329–2334

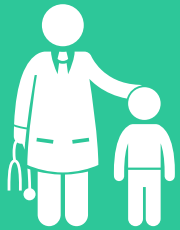
Ekaterina Galkina Cleary, Jennifer M. Beierlein, Navleen Surjit Khanuja, Laura M. McNamee, and Fred D. Ledley

^aCenter for Integration of Science and Industry, Bentley University, Waltham, MA 02452; ^bDepartment of Natural and Applied Sciences, Bentley University, Waltham, MA 02452; and ^cDepartment of Management, Bentley University, Waltham, MA 02452

**“ ...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**

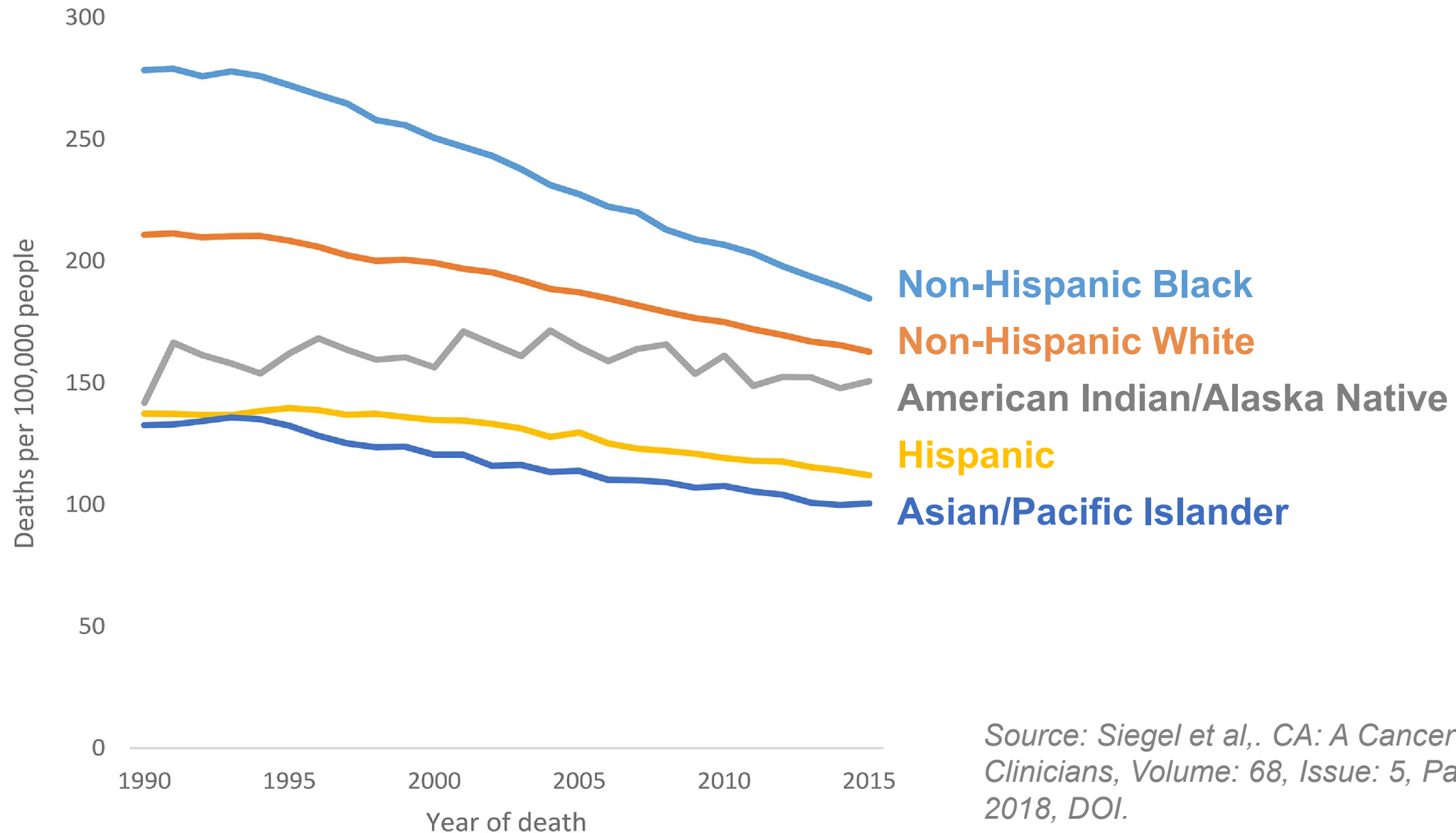


**HEALTH
DISPARITIES**



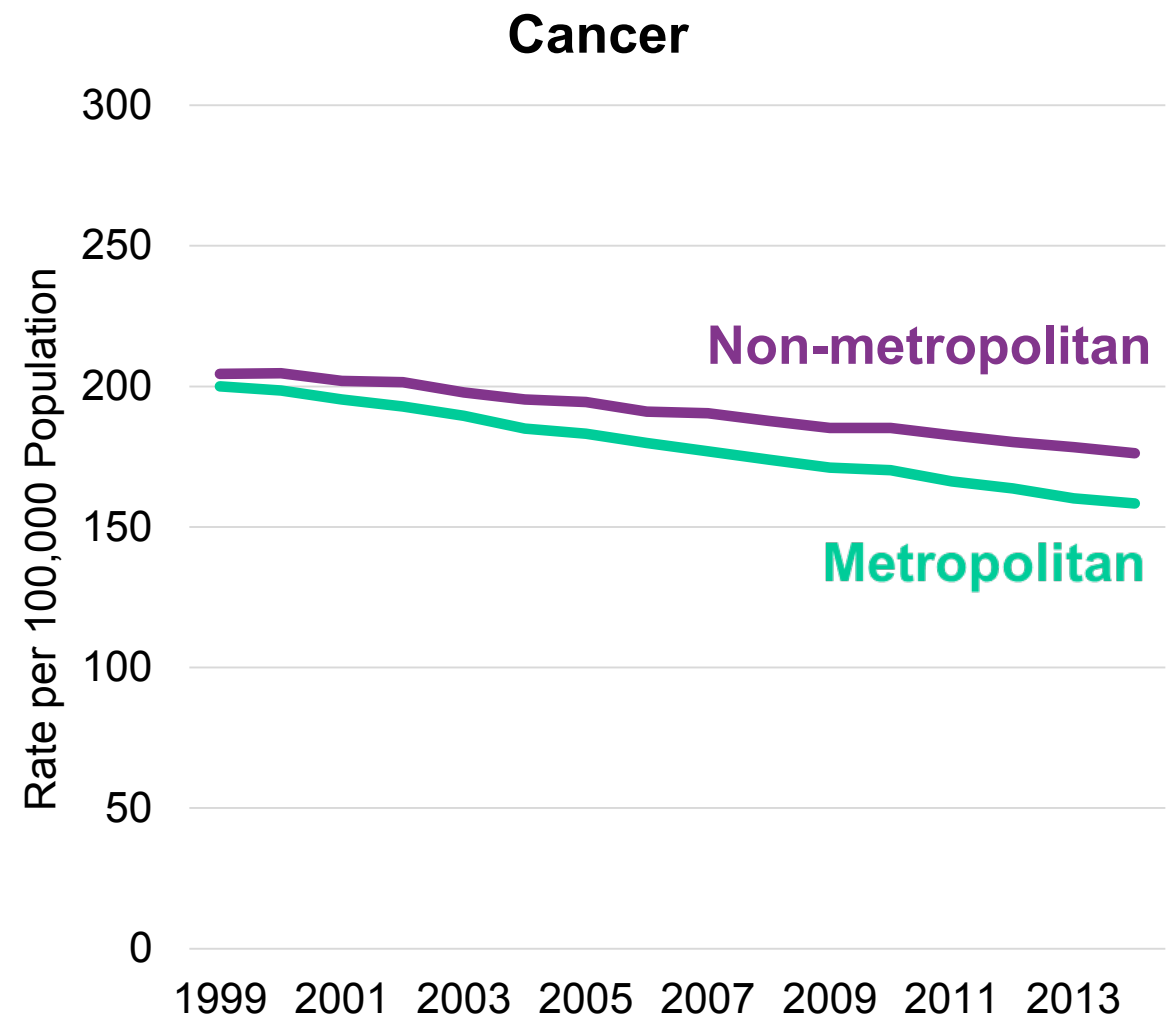
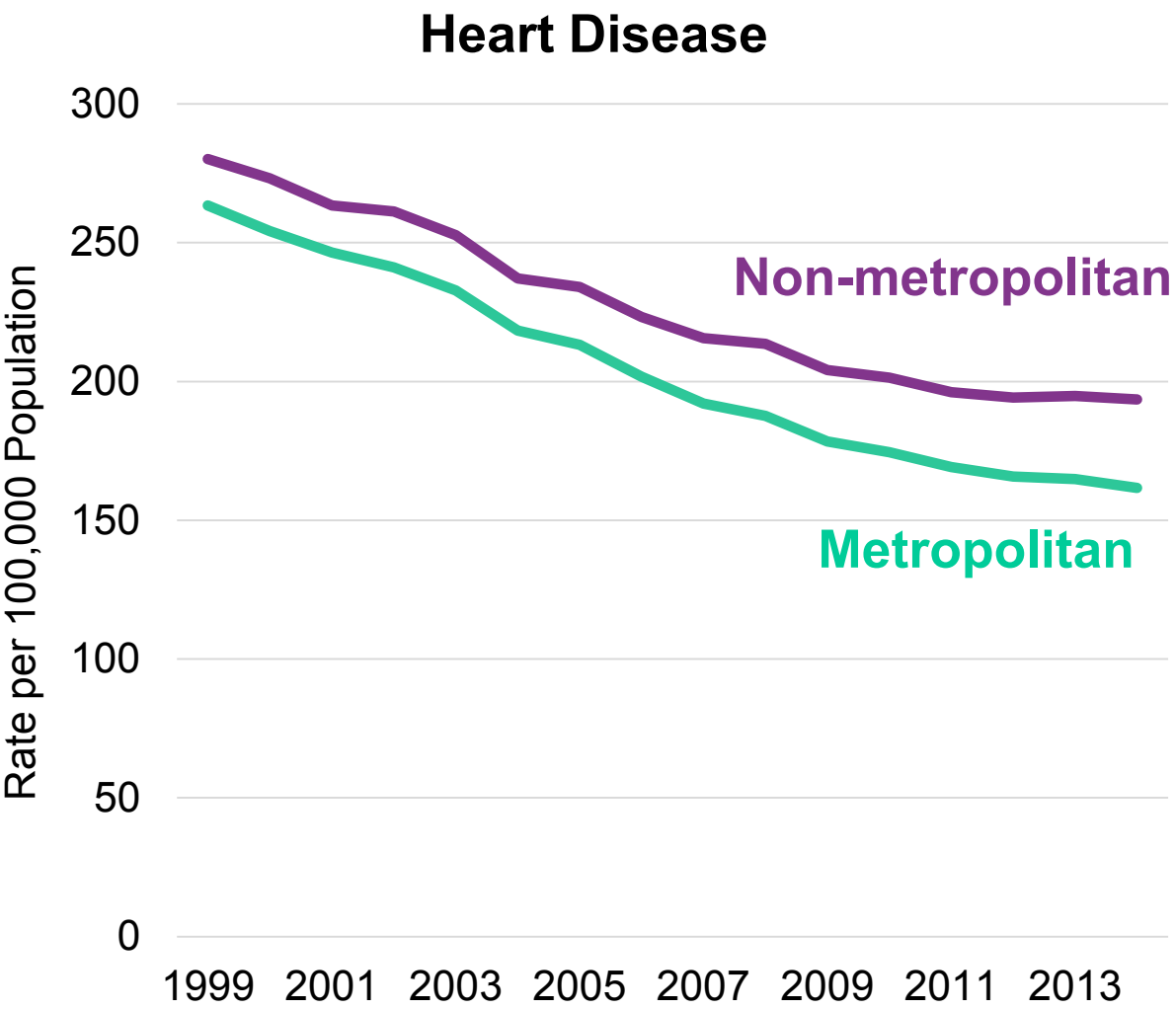
**THERAPEUTIC
RESISTANCE**

U.S. cancer mortality trends by race/ethnicity: 1990-2015



Source: Siegel et al., *CA: A Cancer Journal for Clinicians*, Volume: 68, Issue: 5, Pages: 329-339, 2018, DOI.

Heart disease and cancer mortality rates, age adjusted



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

Collaborative Minority Health and Health Disparities Research with Tribal Epidemiology Centers	R21 PAR-17-483 R01 PAR-17-484	12/5/2019
Research to Improve Native American Health	R01 PAR-17-496 R21 PAR-17-464	May 14, 2020
Administrative Supplements to Support Cancer Disparity Collaborative Research	P30 PA-18-842	9/10/2019, 9/10/2020

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

(RFA-CA-17-009)

NCI DRUG
RESISTANCE &
SENSITIVITY
NETWORK

DRSN Mission

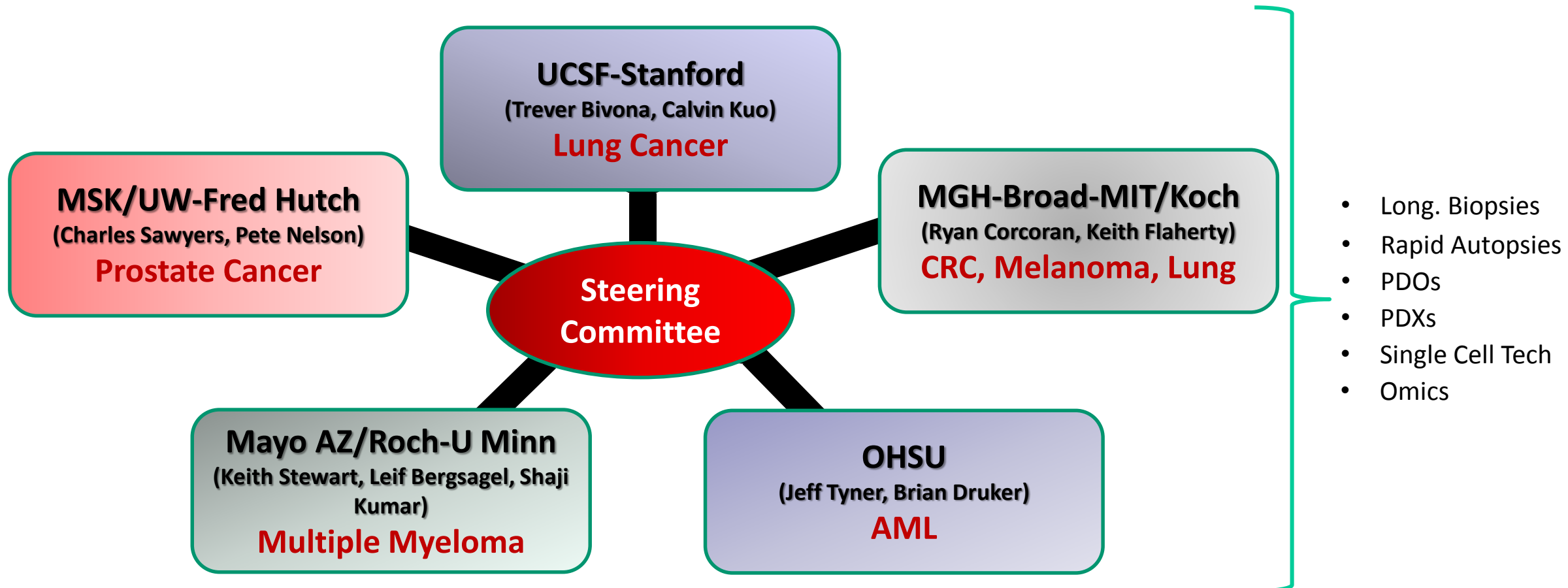
To conduct preclinical research focused on innovative strategies to understand and combat mechanisms of tumor resistance (intrinsic and acquired) and/or exploit tumor sensitivities to anti-cancer therapies.

- 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





DRSN

NCI DRUG
RESISTANCE &
SENSITIVITY
NETWORK

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

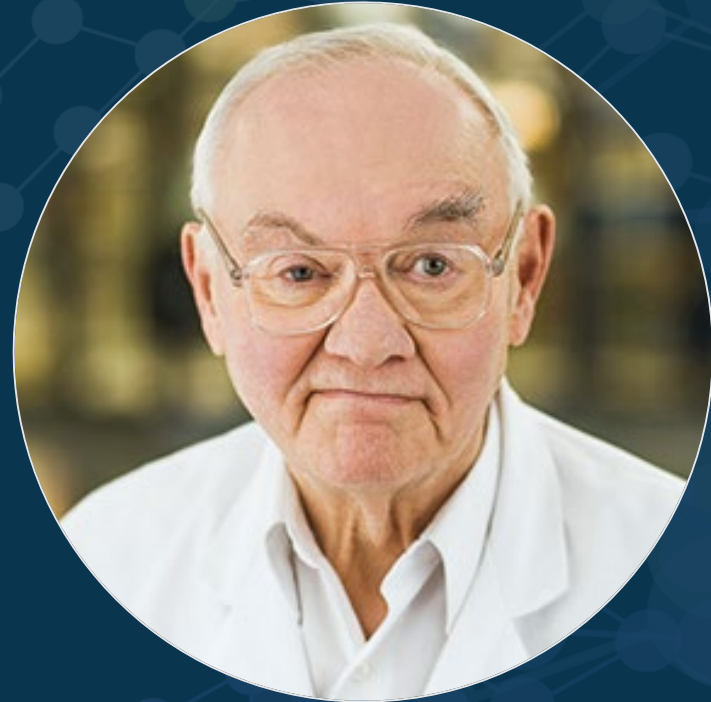
Director, Division of Cancer Prevention (DCP)

Debbie Winn, Acting

In Memoriam



LaSalle D. Leffall, Jr., MD



Henry T. Lynch, MD



**NATIONAL
CANCER
INSTITUTE**

www.cancer.gov

www.cancer.gov/espanol