

# Challenges and Opportunities in Cancer Control and Population Sciences

*Joint Meeting of the Board of Scientific Advisors and the National Cancer Advisory Board*

*December 8, 2021*



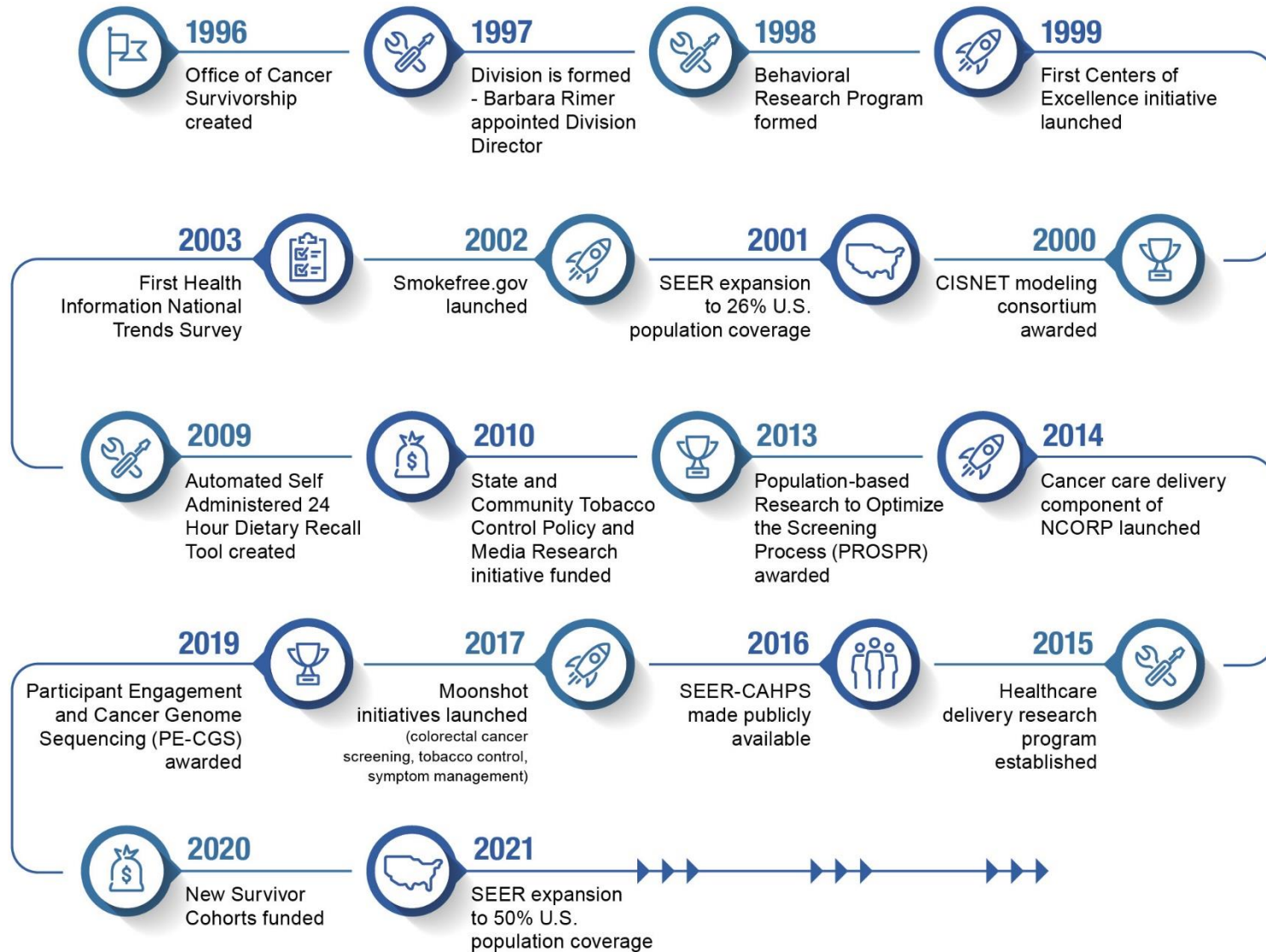
Robert T. Croyle, PhD  
Former Director, Division of  
Cancer Control and Population  
Sciences  
National Cancer Institute  
National Institutes of Health

[cancercontrol.cancer.gov](https://cancercontrol.cancer.gov)

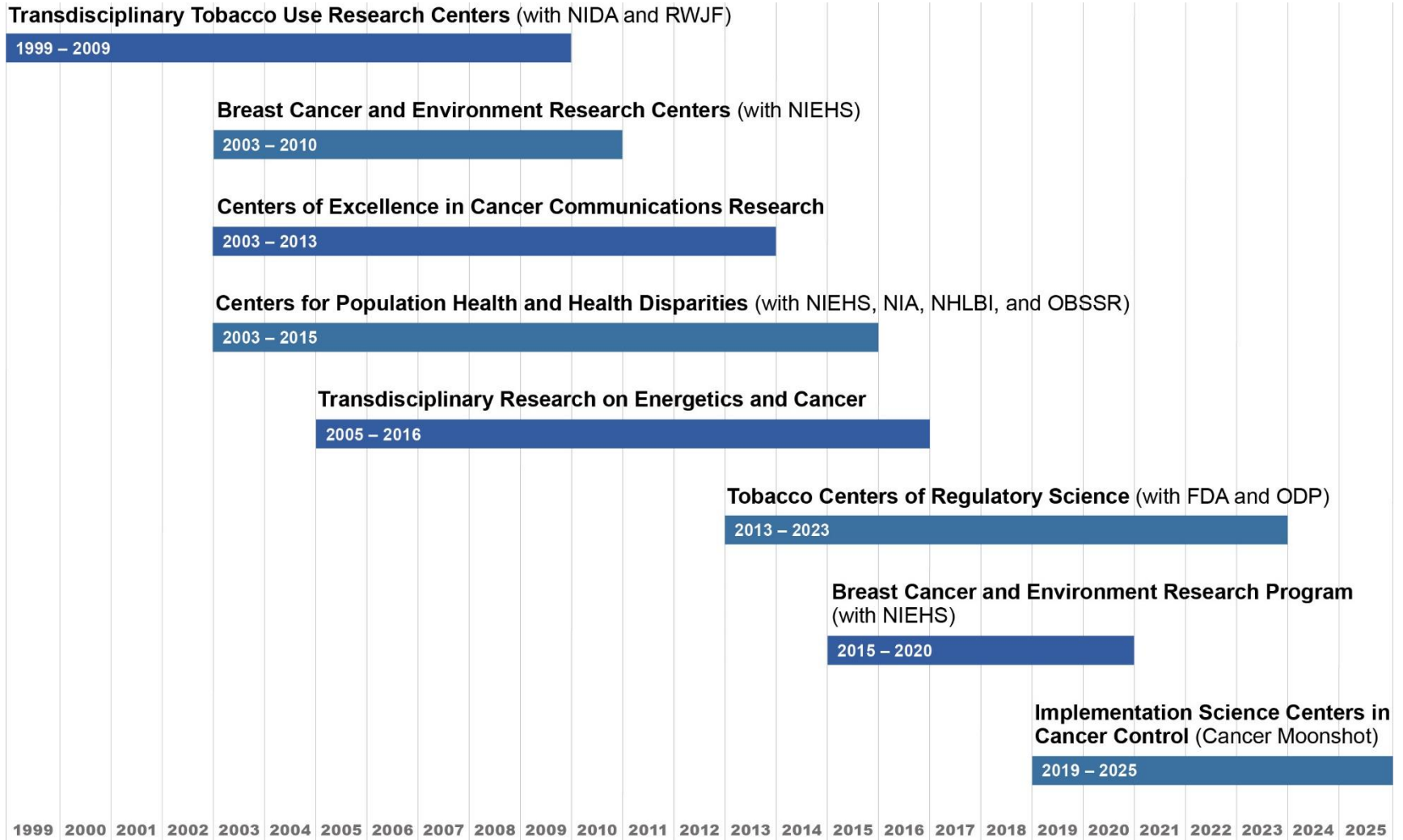
## Outline

1. *The Launch of the NCI DCCPS*
2. *Major Programs and Initiatives*
  - *Centers of Excellence*
  - *Progress in Tobacco Control*
  - *The Obesity Challenge*
3. *Essential Research Infrastructure*
  - *Epidemiology Cohorts & Consortia*
  - *Surveillance*
  - *Leveraging Cancer Centers*
4. *Health Disparities*
5. *Transition to New Leadership*

# Major Events in the History of DCCPS

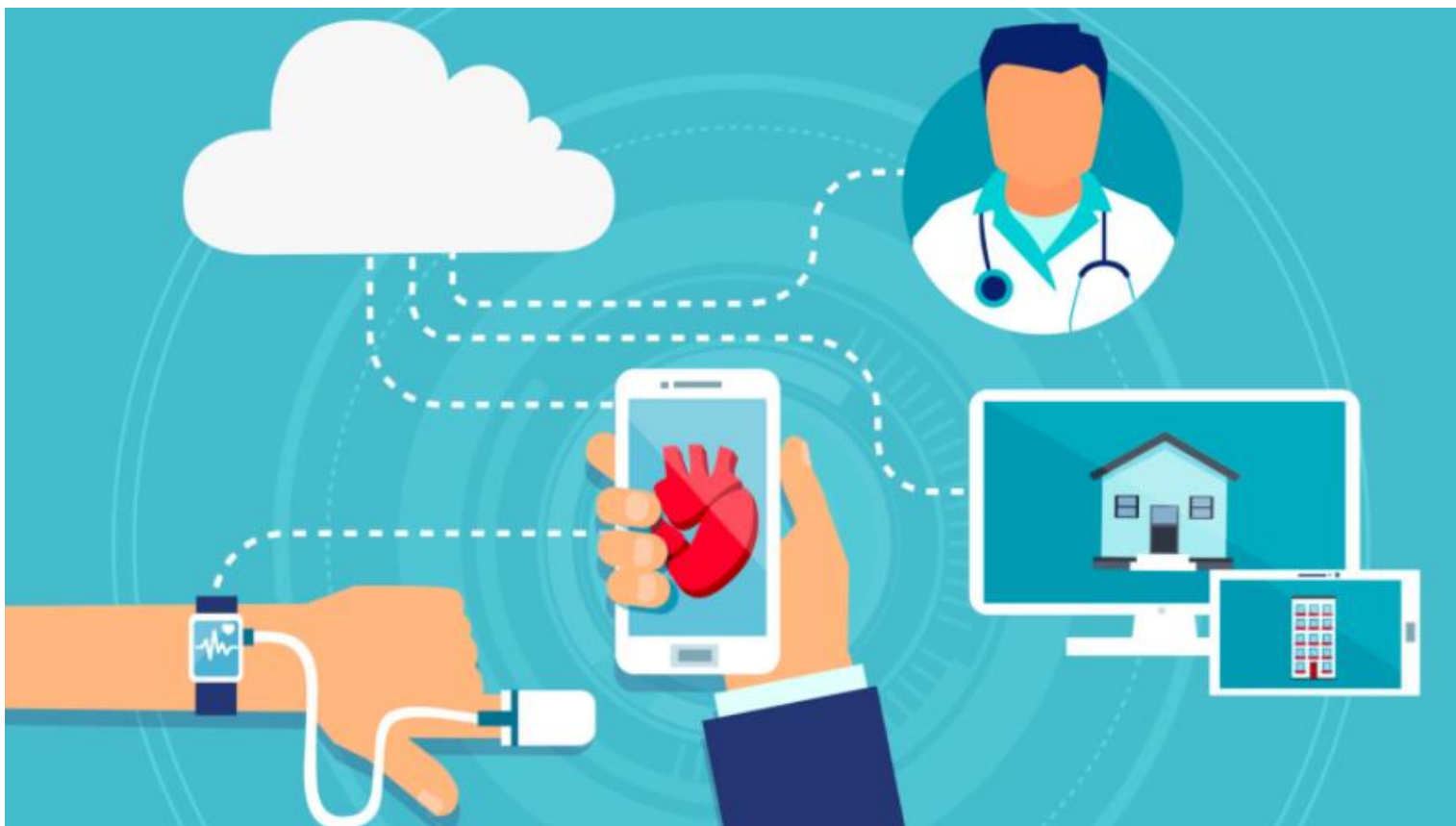


# Centers of Excellence Initiatives



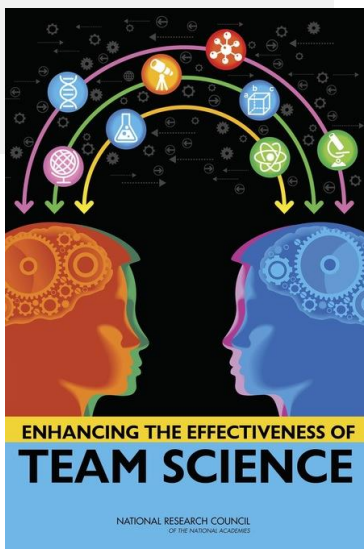
## What's Next?

- Centers on Telehealth Research and Cancer-Related Care (funding in FY22)



## Lessons Learned

- Team formation
- Leadership
- Communication and coordination
- Training
- Institutional policies and structure



INSciTS

Building the knowledge base  
for effective team science

International Network for the Science of Team Science

Kara L. Hall · Amanda L. Vogel  
Robert T. Croyle *Editors*

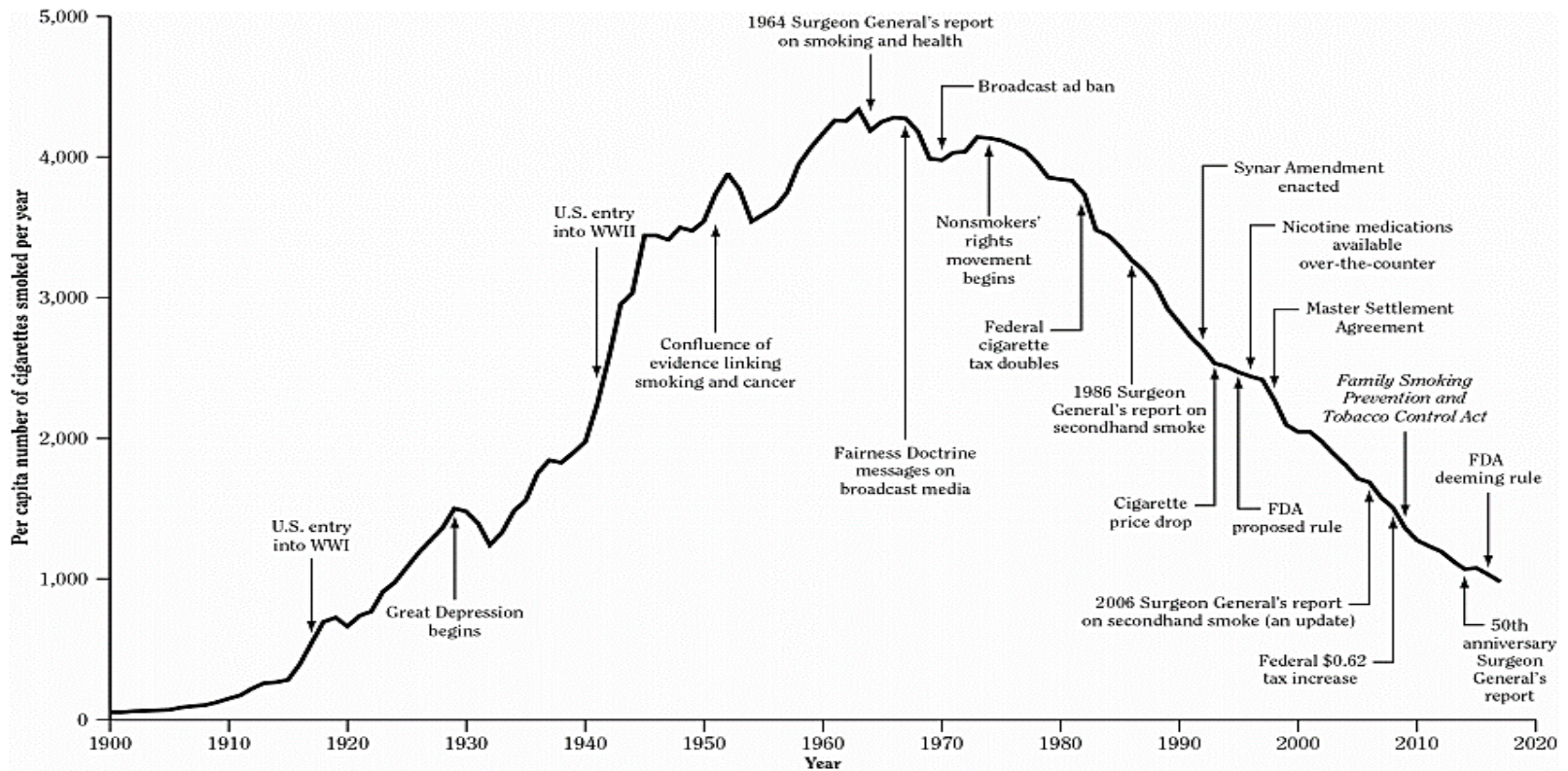
# Strategies for Team Science Success

Handbook of Evidence-Based Principles  
for Cross-Disciplinary Science and Practical  
Lessons Learned from Health Researchers

 Springer

CANCER CONTROL'S MOST  
IMPORTANT CHALLENGE:  
TOBACCO CONTROL

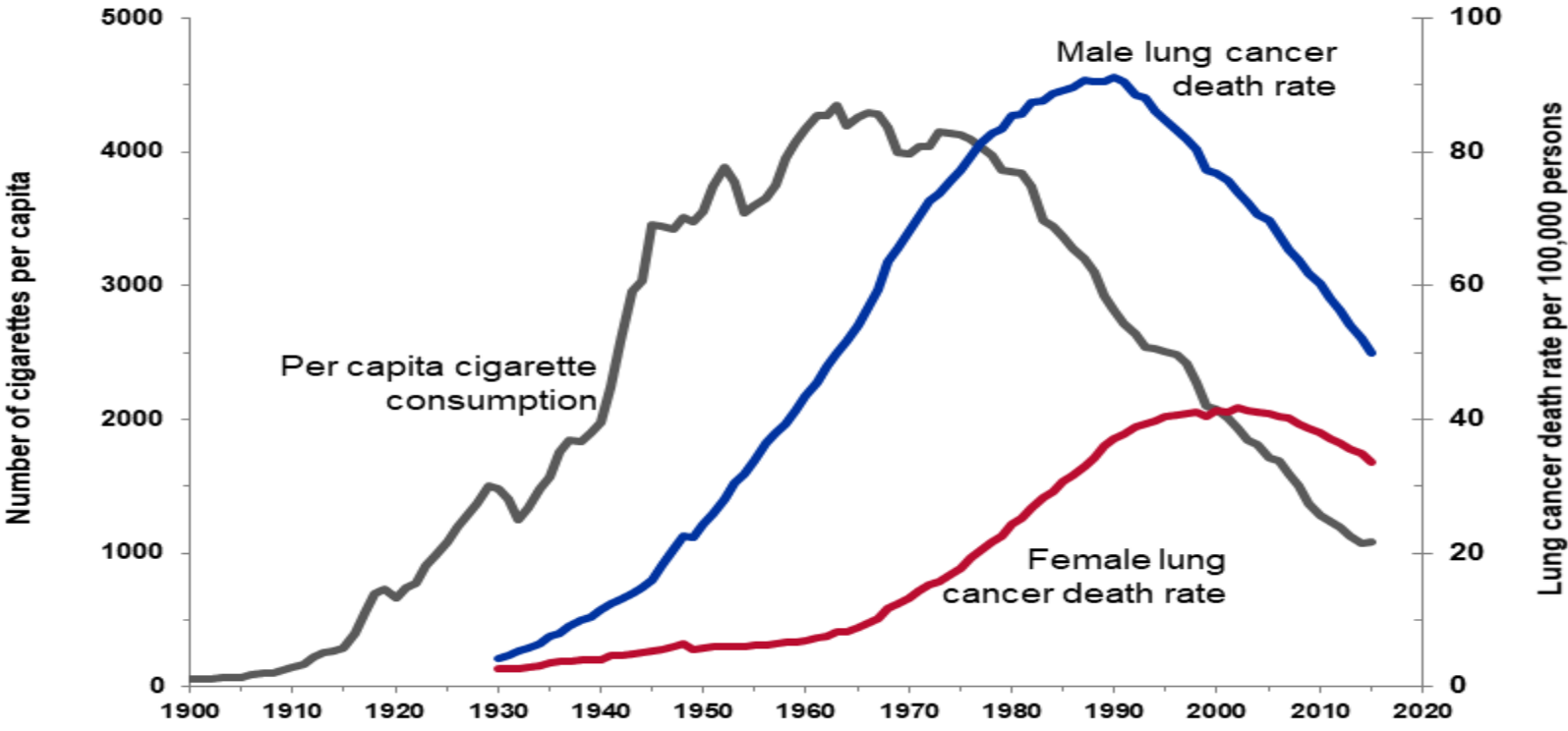
## Per capita annual cigarette consumption among adults, 18 years of age and older, and major smoking and health events in the United States, 1900-2017



Source: Smoking Cessation. A Report of the Surgeon General (2020). Adapted from Warner (1985) with permission from Massachusetts Medical Society, © 1985; as cited in USDHHS (2014).



# Trends in Tobacco Use and Lung Cancer Death Rates in the US



Note: Rates are age-adjusted to the 2000 US standard population. Due to changes in ICD coding, numerator information has changed over time. Rates for cancers of the lung and bronchus are affected by these coding changes.

Source: Mortality and excise tax data, see notes for citation.

## Key Challenges in Tobacco Control

1. *Inform FDA's Ability to Regulate Tobacco Products, Including Nicotine Levels*
2. *Improve the Efficacy and Effectiveness of Cessation in Teens and Young Adults*
3. *Focus on Low SES Populations*
4. *Resolve the E-Cigarette Debate*

## Public Health Comparison of 20-Year Obesity-Associated Cancer Mortality Trends With Heart Disease Mortality Trends in the US

Christy L. Avery, PhD; Annie Green Howard, PhD; Hazel B. Nichols, PhD

*“Using 20 years of cross-sectional mortality data, this study found that after 2011, mortality improvements accelerated for cancers not associated with obesity. In contrast, mortality improvements decelerated for obesity-associated cancers, paralleling recent trends for heart disease mortality.”*

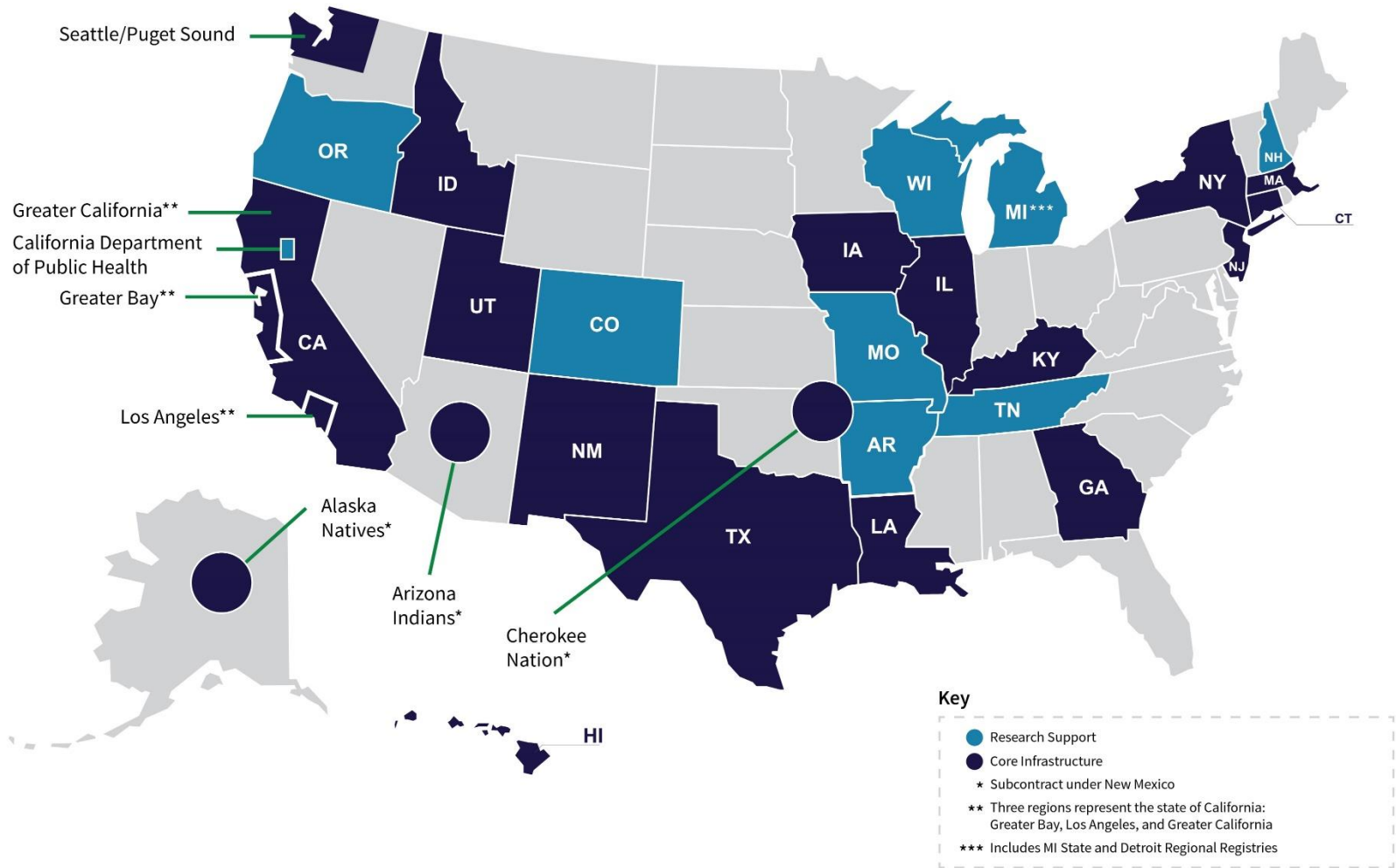
JAMA Network Open. 2021;4(5)

# ESSENTIAL INFRASTRUCTURE FOR POPULATION SCIENCE

# CANCER EPIDEMIOLOGY COHORTS AND CONSORTIA

# CANCER SURVEILLANCE

# Map of SEER Program



## Reasons for SEER Expansion 2021

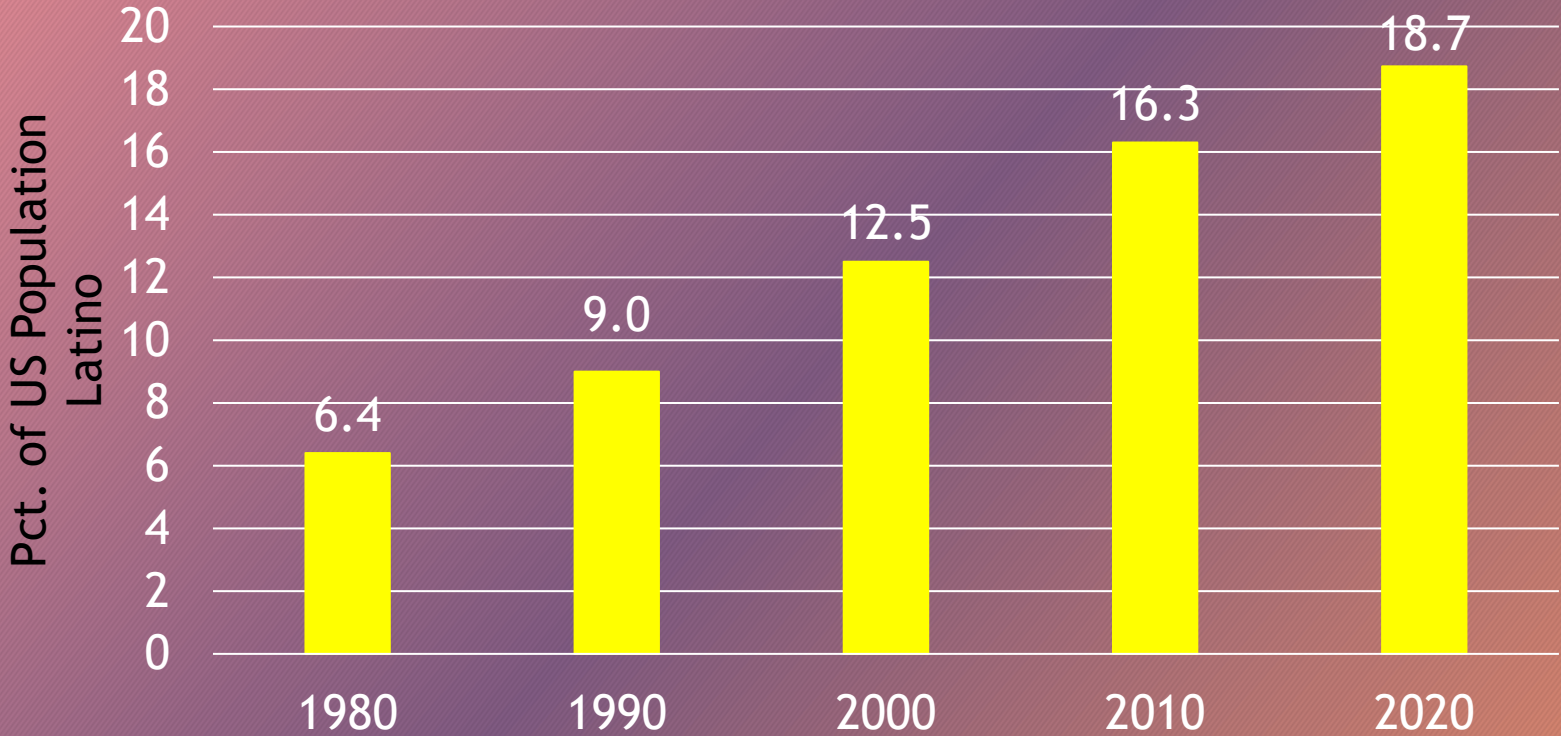
In order to represent real-world data at the population level

- Increase data coverage to
  - Enable reporting of trends in more refined, clinical categories such as
    - histologic subtype
    - biomarkers status
    - treatment categories
  - and by important population subgroups
- As of June 1, 2021, SEER now covers ~50% of the US population
  - Represents >850,000 incident cancers reported annually





# Percent of US Population Latino, 1980 to 2020



Courtesy of Scarlett Gomez

# Percent Increase for US Population Subgroups with SEER Expansion May 2021

Total Population	White	Black	AI/AN	Asian	Native HI/PI
13.3%	12.5%	14.6%	6.5%	14.6%	5.0%

---

2 or More Races	Chinese	Filipino	Japanese	Hispanic
12.3%	11.3%	12.5%	6.1%	25.2%

---

# What is HINTS?

The Health Information National Trends Survey (HINTS) regularly collects nationally representative data about the American public's knowledge of, attitudes toward, and use of cancer- and health-related information. HINTS data are used to monitor changes in the rapidly evolving fields of health communication and health information technology and to create more effective health communication strategies across different populations.

[Learn More](#)



## Download Data

Nationally representative HINTS data are free to download and analyze. HINTS data are available in SAS, SPSS, and STATA formats.

[Download Data >](#)



## HINTS Briefs

HINTS *Briefs* provide a snapshot of noteworthy, data-driven HINTS research findings. Many *Briefs* summarize research findings from recent peer-reviewed journal articles using HINTS data.

[View All Briefs >](#)



## HINTS Items

The HINTS *online codebook* provides summary data for HINTS items across all cycles, including estimated U.S. population values, interactive data visualizations, and the ability to look at trend data over time at the item level.

[View HINTS Online Codebook>](#)

## What's New

**HINTS Data Errors, Remediation, and Recommendations**



## Our Latest Tweets

HINTS Briefs provide a snapshot of

# LEVERAGING NCI-DESIGNATED CANCER CENTERS FOR CANCER CONTROL

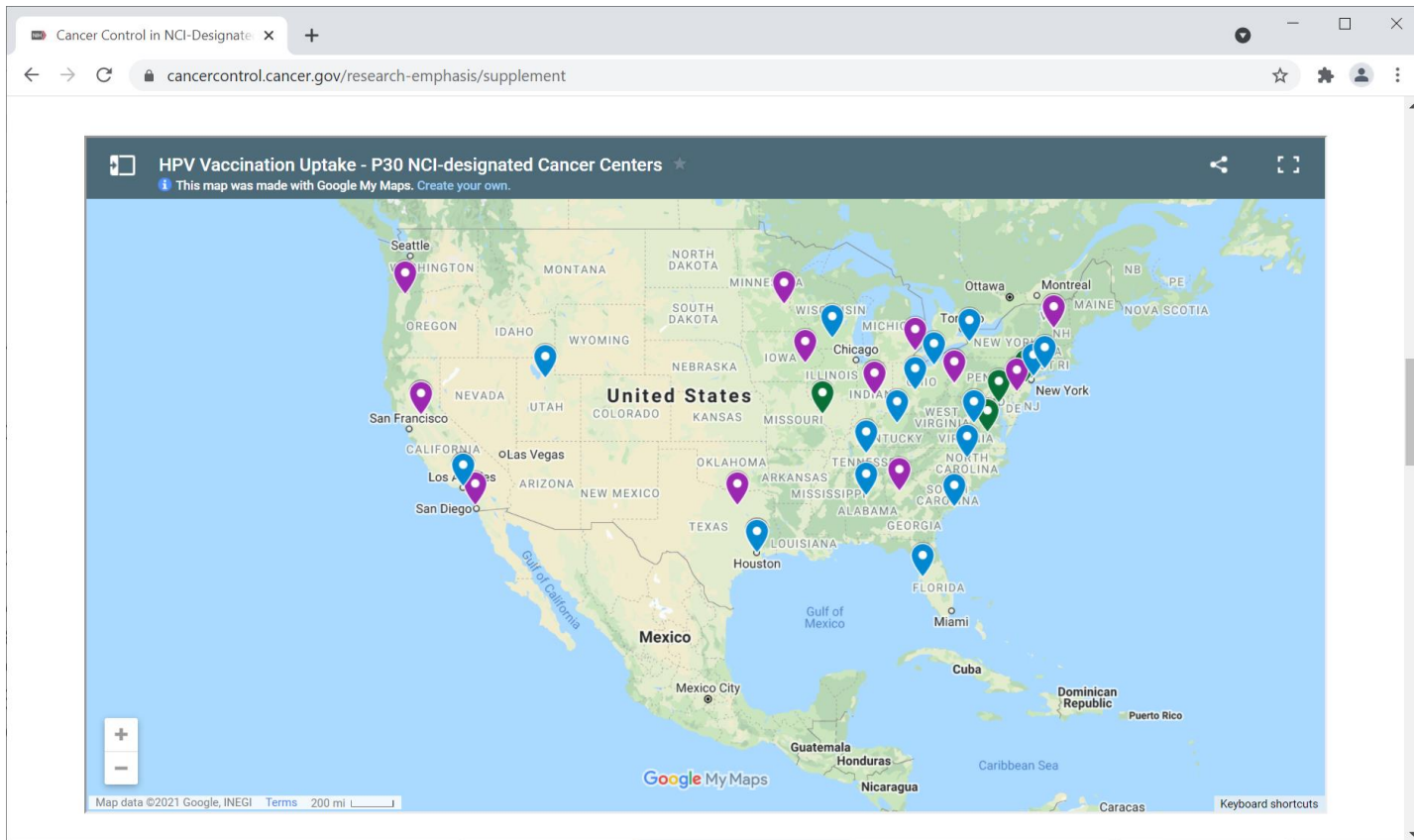
# DCCPS's CCSG Supplements History

- From FY 2014 – FY 2021
- HPV Vaccination Uptake, Catchment Area Analyses, Tobacco Cessation, Rural & AI/AN, Aging, Cannabis Use, NCCR, COE, Financial Hardship, Childhood Cancer Survivors, Persistent Poverty.

The screenshot displays the National Cancer Institute (NIH) website for the Division of Cancer Control & Population Sciences. The page title is "Cancer Control in NCI-Designated Cancer Centers". A navigation menu includes Home, Program Areas, Research Portfolios, Funding Opportunities, Publications & Data, Research Emphasis, and About DCCPS. A search bar is located in the top right corner. The main content area features a "SECTION MENU" on the left with options: Health Disparities, Cancer Control in NCI-Designated Cancer Centers (selected), and Cancer Moonshot. The main text states: "DCCPS supports NCI-designated P30 Cancer Centers in developing new ways to prevent, diagnose, and treat cancer. Through several recent initiatives focused on cancer control, the cancer centers have expanded their capacity to conduct research, plan strategy, facilitate professional collaborations, and implement efforts to improve health care. Current initiatives address the following:" Below this text is a grid of 11 buttons representing various research initiatives: Cancer and Aging, Patterns of Cannabis use Among Cancer Patients, Community Outreach and Engagement (COE) Activities Across the Translational Research Continuum, Population Health Assessment in Cancer Center Catchment Areas, Financial Hardship During Cancer Treatment, Rural Cancer Control, HPV Vaccination Uptake, Tobacco Cessation, National Childhood Cancer Registry, Persistent Poverty, and Childhood Cancer Survivors.

# HPV Vaccination Uptake

FY14	FY17	FY20
40 applications, 18 awards (45% success rate)	29 applications, 12 awards (41% success rate)	52 applications, 11 awards (21% success rate)
\$2.6M	\$2.1M	\$2.2M



# HPV Vaccination Uptake and HPV Vaccine Hesitancy

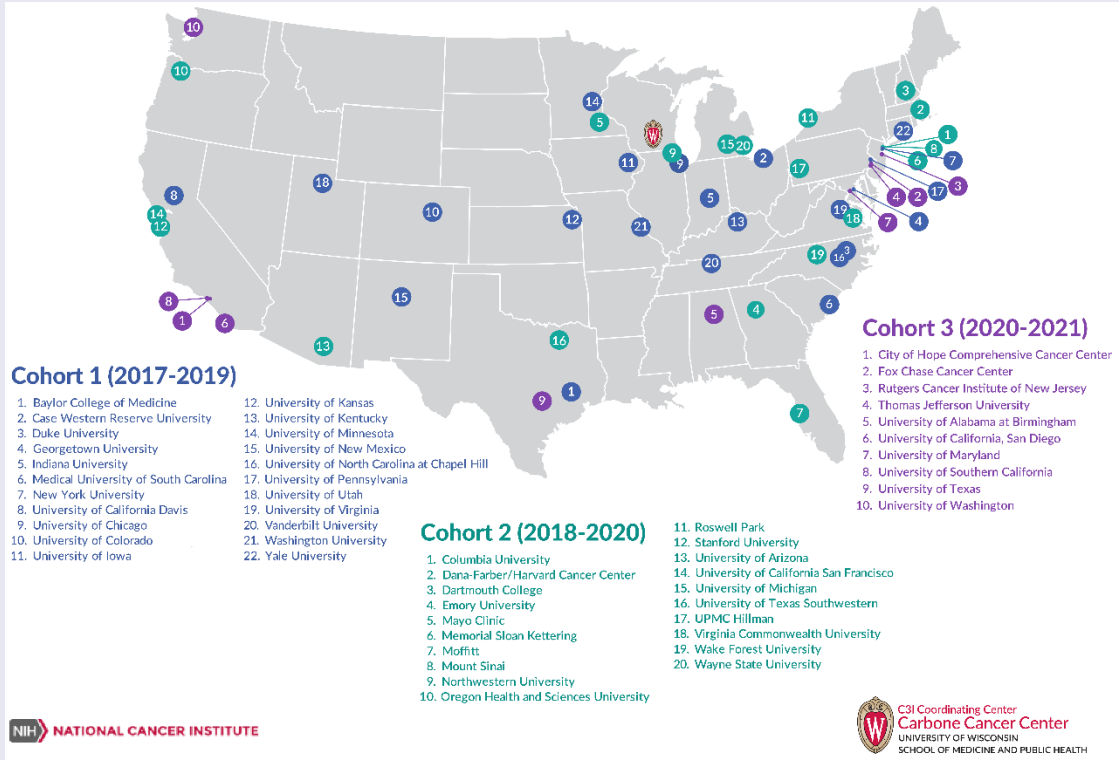
- ❖ **Long-term goal:** Develop/expand applied research to increase HPV vaccine uptake.
- ❖ **41 supplements issued to 36 Cancer Centers:**
  - **2014 & 2017: identify low-uptake areas & conduct environmental scans** to identify local barriers, facilitators, and implementation strategies related to HPV vaccination (n=30)
  - **2020: understand characteristics of vaccine-hesitant communities & identify promising and innovative approaches to reducing hesitancy** and other barriers (n=11)
- ❖ **1<sup>st</sup> ever NCI-Designated Cancer Center joint consensus statement issued** January 2016 calling for specific actions to increase HPV vaccine uptake
  - 2 additional statements issued (2017 and 2019)

- ❖ **HPV Consortium led by supplement grantees.** Open to all Cancer Centers (including non-NCI designated)

Date	Host Cancer Center
January 2015	Moffitt Cancer Center
November 2015	MD Anderson Cancer Center
June 2016	The Ohio State University James Cancer Hospital & Solove Research Institute
May 2017	Medical University of South Carolina Hollings Cancer Center
June 2018	University of Utah Huntsman Cancer Institute
November 2019	The University of Texas Southwestern Harold C. Simmons Comprehensive Cancer Center

- ❖ **Community partnerships** created with numerous state and local stakeholders
- ❖ **29 papers** published on environmental scan results.
- ❖ Grantees received **32 grants** to continue work (NIH, ACS, CDC, institutional awards)

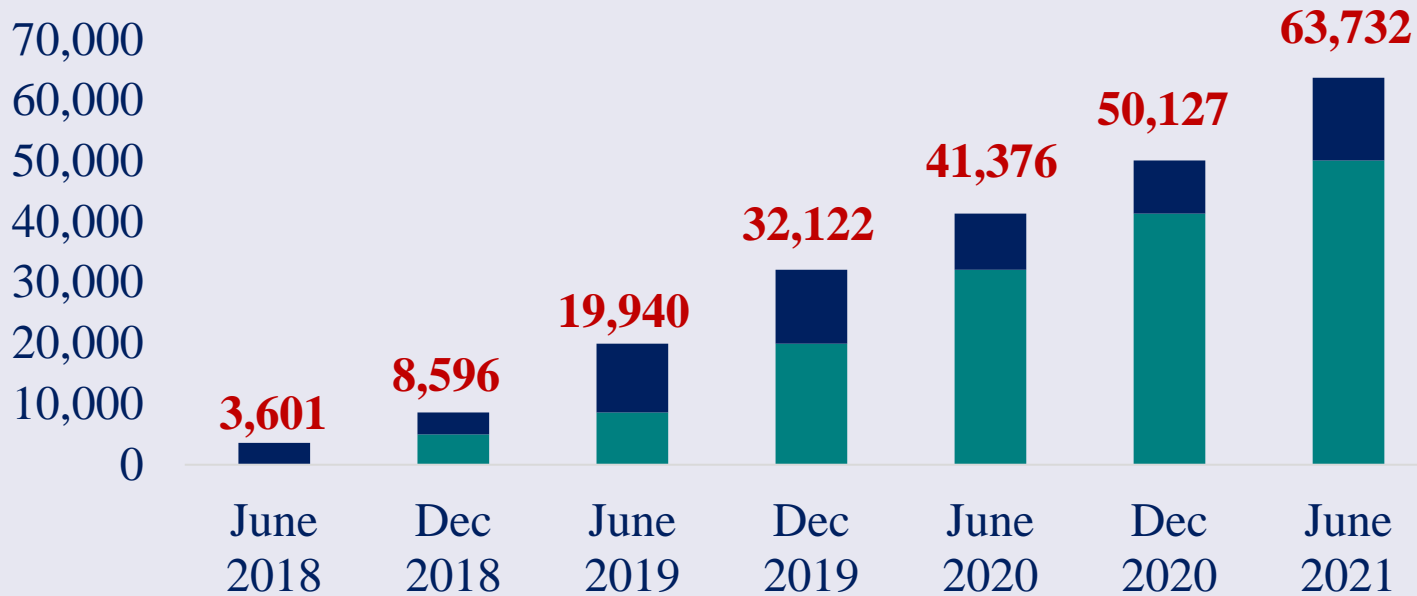
# Cancer Center Cessation Initiative Funded Centers





# Over 63,000 Oncology Patients Reached by a C3I Tobacco Treatment Programs since 2018

- Cumulative patients reached
- New patients reached during prior 6-month reporting period
- Patients reached during all prior reporting periods



Includes data submitted to the Coordinating Center as of September 3, 2021

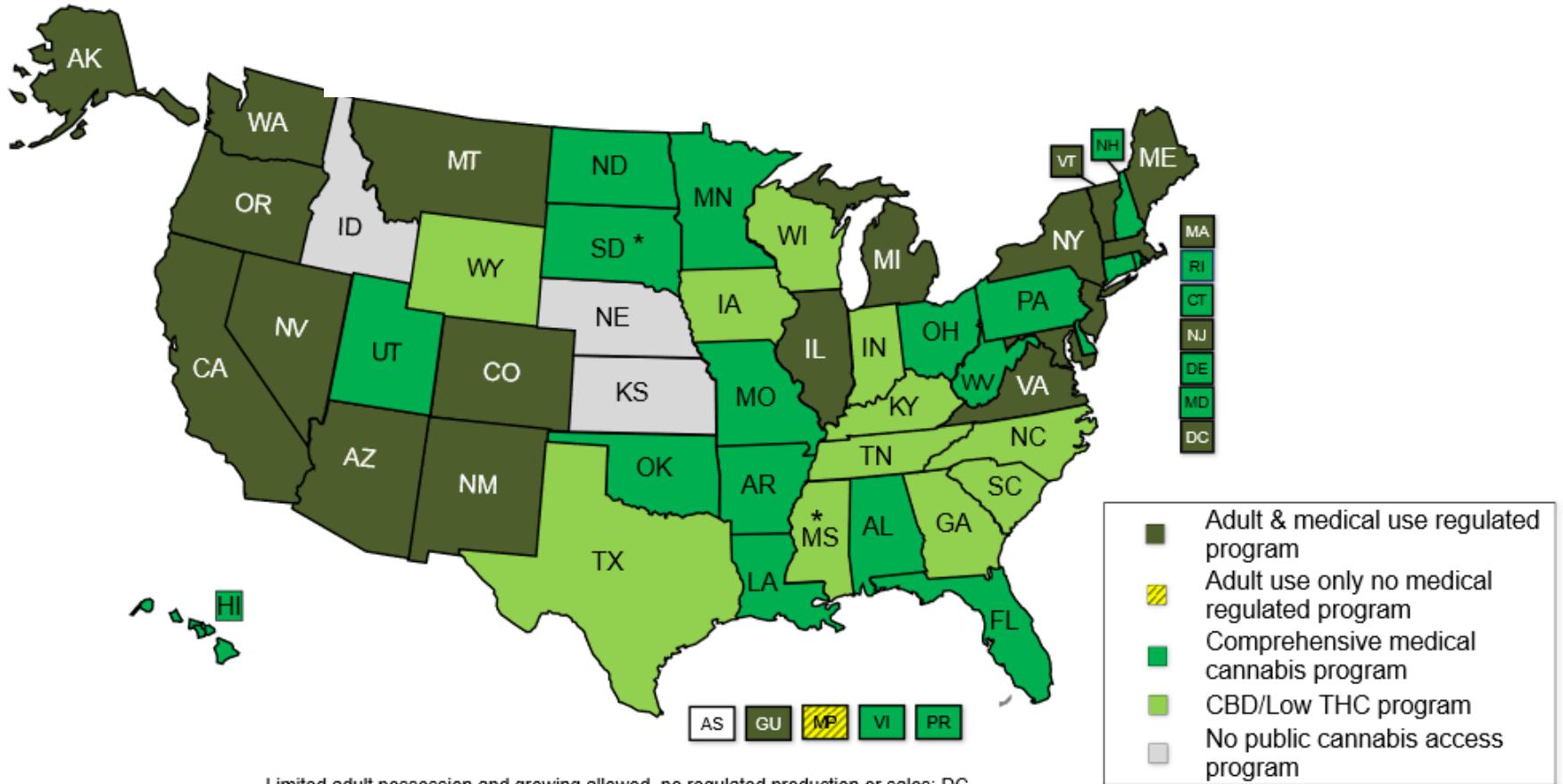


# Cancer Center Cessation Initiative (C3I)

- ▶ Enhanced capacity of centers to address tobacco use with all patients who smoke
- ▶ 2017-2021: more than doubled % smokers reached across C3I
- ▶ Coordinating Center (U. Wisconsin) collecting reach and effectiveness data biannually
- ▶ >100 total publications and presentations
  - ▶ 40 journal articles published
  - ▶ JNCCN special issue Fall 2021: manuscripts by each C3I cross-center working group & Coordinating Center
- ▶ Challenge: how to ensure sustained institutional support?
- ▶ Should tobacco use assessment and treatment be a cancer quality of care metric?

OUR LEAST-DISCUSSED,  
LEAST-STUDIED CHALLENGE:  
CANNABIS

# State Regulated Cannabis Programs



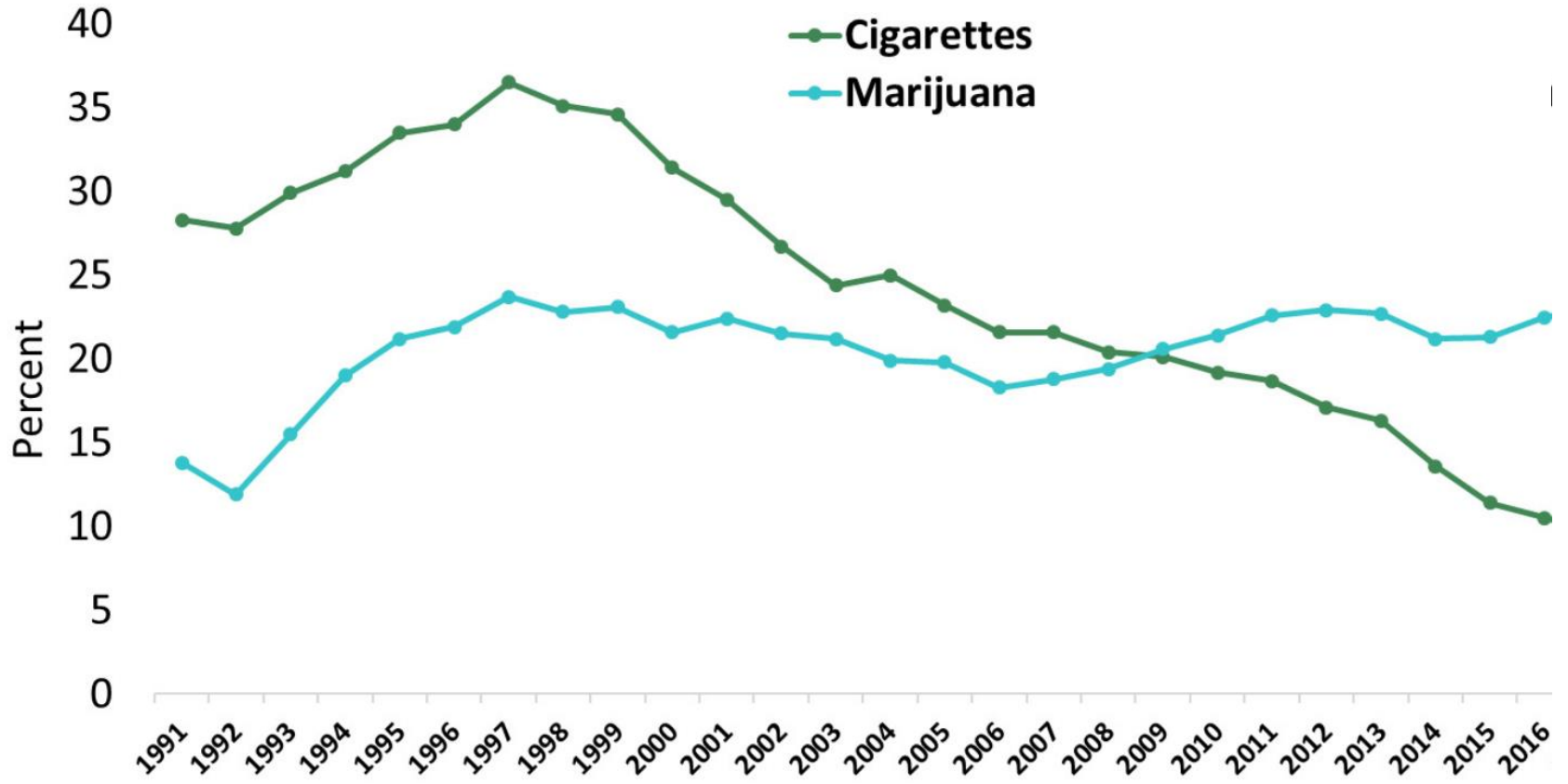
Limited adult possession and growing allowed, no regulated production or sales: DC

May 2021

\*2020 measures in Mississippi for medical use and South Dakota for adult use were overturned in 2021.

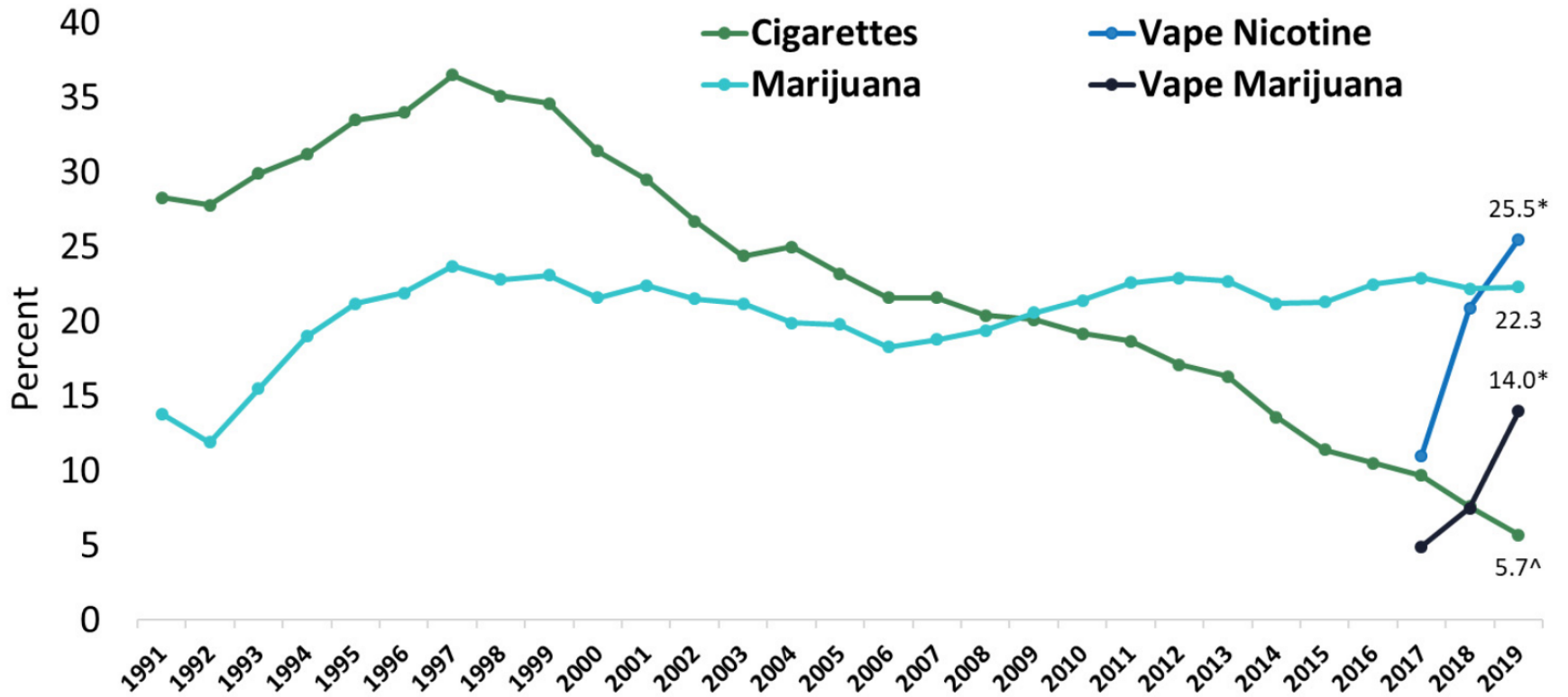
Source: <https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx>

# Prevalence of Past-month Use, 12th Grade



Monitoring the Future Survey, 2019

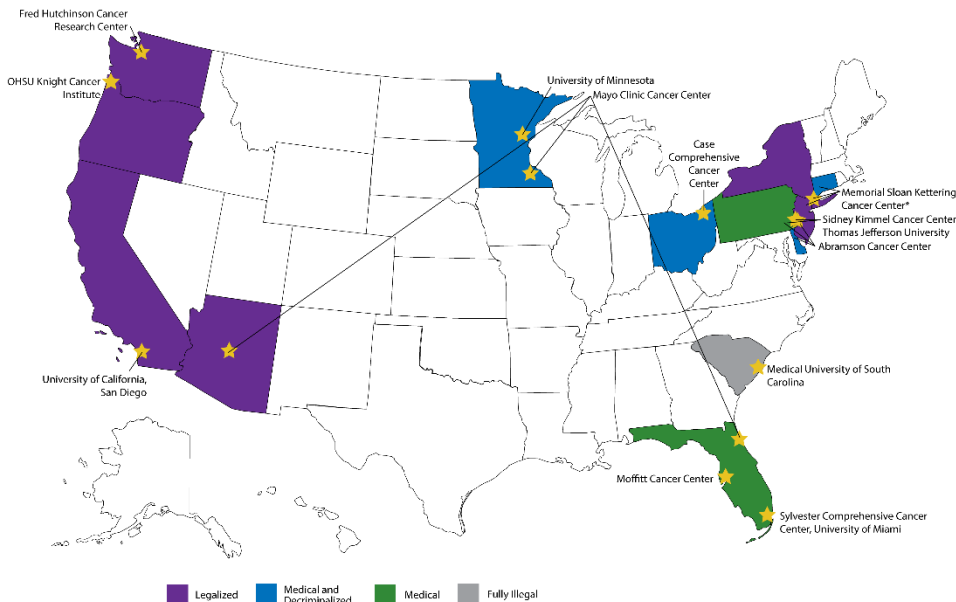
# Prevalence of Past-month Use, 12th Grade



Monitoring the Future Survey, 2019

# Patterns of Cannabis Use Among Cancer Patients

- **Goal: Expand information on patterns of use, beliefs and attitudes, and perception of benefits and risks among cancer patients**



\* In early 2021, New York legalized marijuana for recreational use. However, since implementation lags, the legalization status change will not affect this survey.

- ▶ **12 cancer centers funded to survey 12,000+ patients across a varied legal landscape**
- ▶ **All centers fielded a set of standardized core measures:**
  - Current and past use of cannabis
  - Frequency, duration, and mode(s) of use
  - Therapeutic reasons for use
  - Perception of benefit or harm
  - Discussion of use with clinical providers
  - Recommended use by clinical provider
  - Age (current and at dx); tumor type, current and past treatment, demographic data
- ▶ **Surveys exiting the field this fall; data cleaning in process**

## Strategies

- Ramp Up Cannabis Research:
  - NCI workshop follow-up
  - Expand cancer center supplements in FY22?
  - Concept development by trans-NCI workgroup
  - Continue and enhance trans-NIH and interagency collaborations





## The Greatest Challenge:

### DEA Drug Scheduling: the Controlled Substances Act of 1971

- a key barrier to research and NIH research funding

- Schedule I

Drugs with no currently accepted medical use and a high potential for abuse. Some examples of schedule I drugs are

- Heroin, LSD, **marijuana (cannabis)**, ecstasy, methaqualone, peyote

- Schedule II

Drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence. Some examples of Schedule II drugs are

- Cocaine, methamphetamine, oxycodone, fentanyl

August 30, 2021: Federal appeals court dismisses latest DEA marijuana rescheduling case

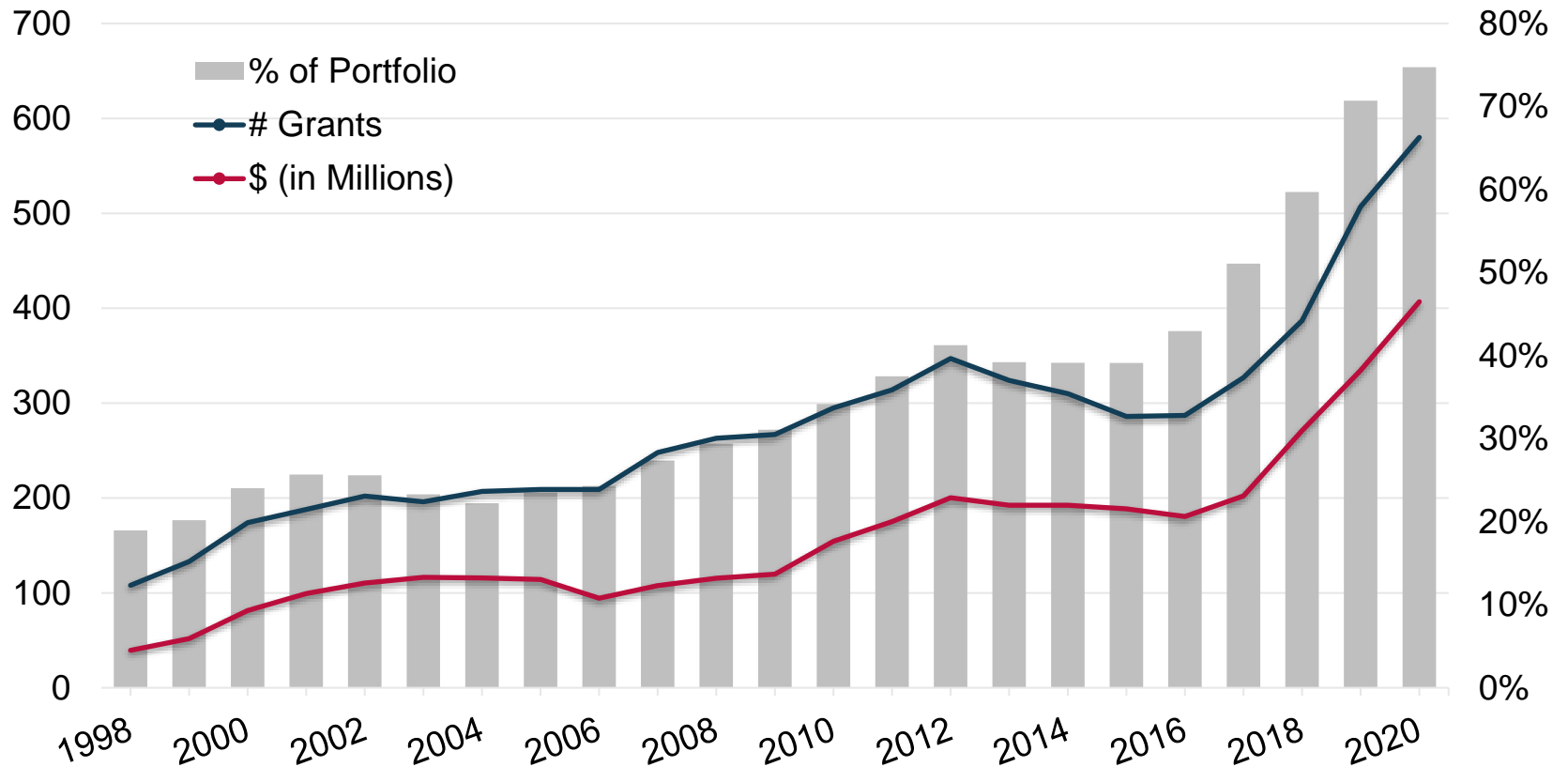
Current Debate: Rescheduling (to Schedule II or III)  
or  
De-Scheduling (now supported by Sen. Schumer)

# HEALTH DISPARITIES

# DCCPS HD Portfolio Trends, FY 1998 - FY 2020

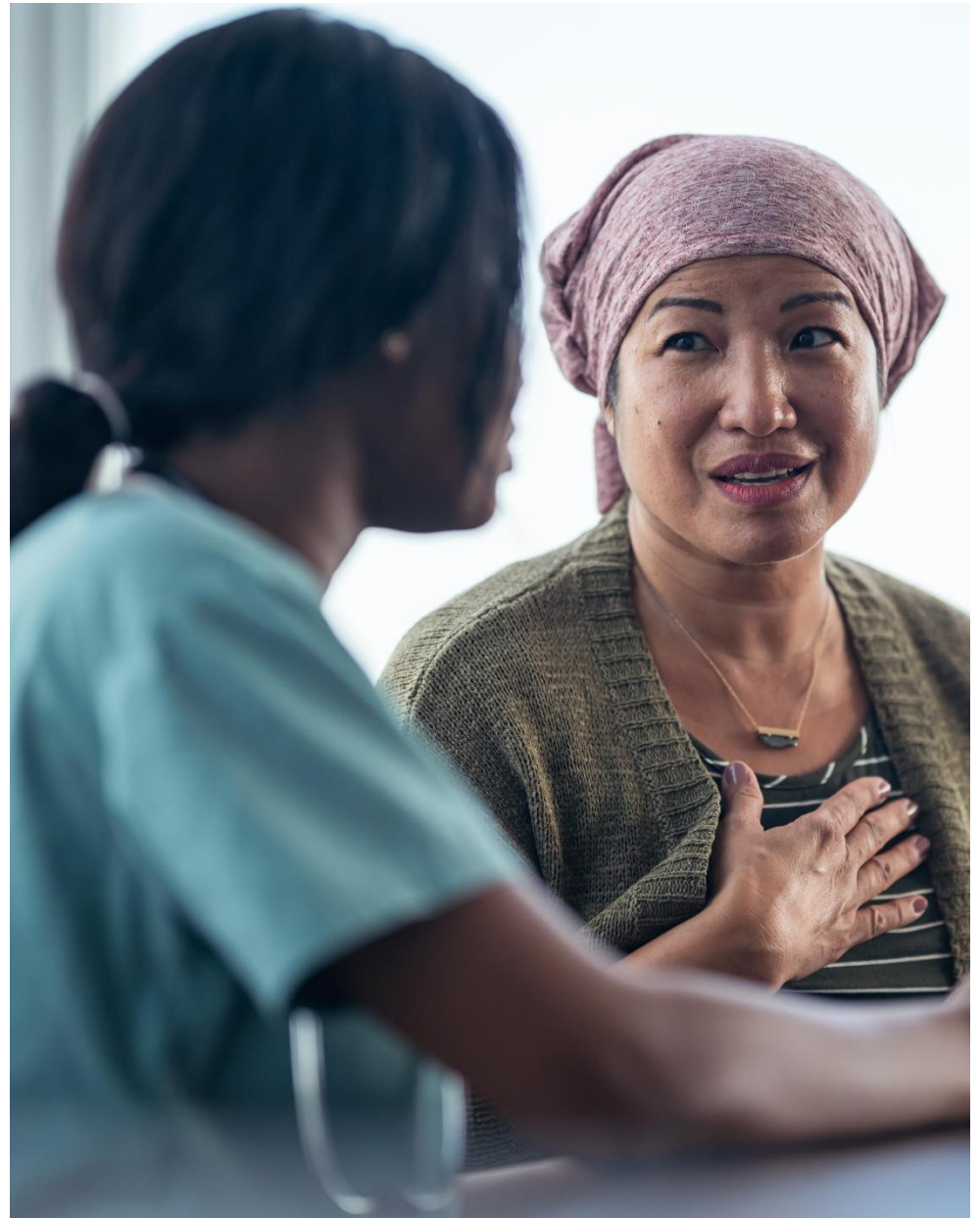
## FY20 HD Summary

Total HD Awards	Total DCCPS Awards	% HD	Dollars in Millions
580	767	75.6	\$407



## Future Opportunities

- AI/AN cancer control
- Sexual and gender minorities
- Regions in persistent poverty
  - P01 NOSI in NIH Guide
  - RFA Concept



## Collaboration Opportunities and Challenges

- ACS/CDC/NCI (e.g., lung cancer screening)
- NIEHS (co-funding NCI's new cohorts for environmental exposures and cancer risk)
- Trans-NIH (obesity, nutrition, and physical activity; behavioral prevention trials)
- International collaboration and data sharing in the GDPR era
- Private sector big data
- Cancer center community outreach and engagement



# A Bright Future: DCCPS Organizational Leadership

