

2022 OVERVIEW AND HIGHLIGHTS

NEW
REFLECTIONS
on **CANCER**
CONTROL



NATIONAL CANCER INSTITUTE
Division of Cancer Control & Population Sciences





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MESSAGE FROM THE DIRECTOR





It is my honor to introduce this year's Division of Cancer Control and Population Sciences Overview and Highlights, which outlines the progress our division has made in the past year, as well as our key aims for the future. This report illustrates our multifaceted approach toward our goal to advance knowledge to reduce the consequences of cancer and its treatment in all populations. We have symbolized this multifaceted approach through the motif of a prism, which refracts a single stream of light into a rainbow of color. The prism also represents how important the diversity of perspectives, backgrounds, disciplines, and approaches is to our history and to our future.

As we marked the division's 25th anniversary in 2022, we began a formal process of planning how we are going to build on the progress of the past 25 years. The report theme—"new reflections on cancer control"—captures both our reflection on the current state of cancer control science and the opportunity to consider what we'd like to see reflected in the future.

In this scientific planning process, which included broad input from across the cancer control community, we identified six key future directions for research: health equity, data strategies, evidence-based policies, digital health, modifiable risk factors, and climate change. These areas are already facets of the research that we currently support. However, we and the cancer control community have identified them as directions where immediate and intensified focus will accelerate scientific progress and increase the impact of DCCPS-sponsored research. In addition to this strengthened focus, we will continue to support the full spectrum of research within our domain.

As I conclude my first year as director, I am grateful to our investigator community as well as colleagues and partners in and outside of NCI who have contributed to our planning efforts. You inspire me daily with your commitment to doing meaningful work that advances cancer control for the benefit of all. Thank you for what you do, and I look forward to a bright future that includes advances in each of these areas.

A handwritten signature in black ink that reads "Kat Goddard". The signature is fluid and cursive.

KATRINA A. B. GODDARD, PHD

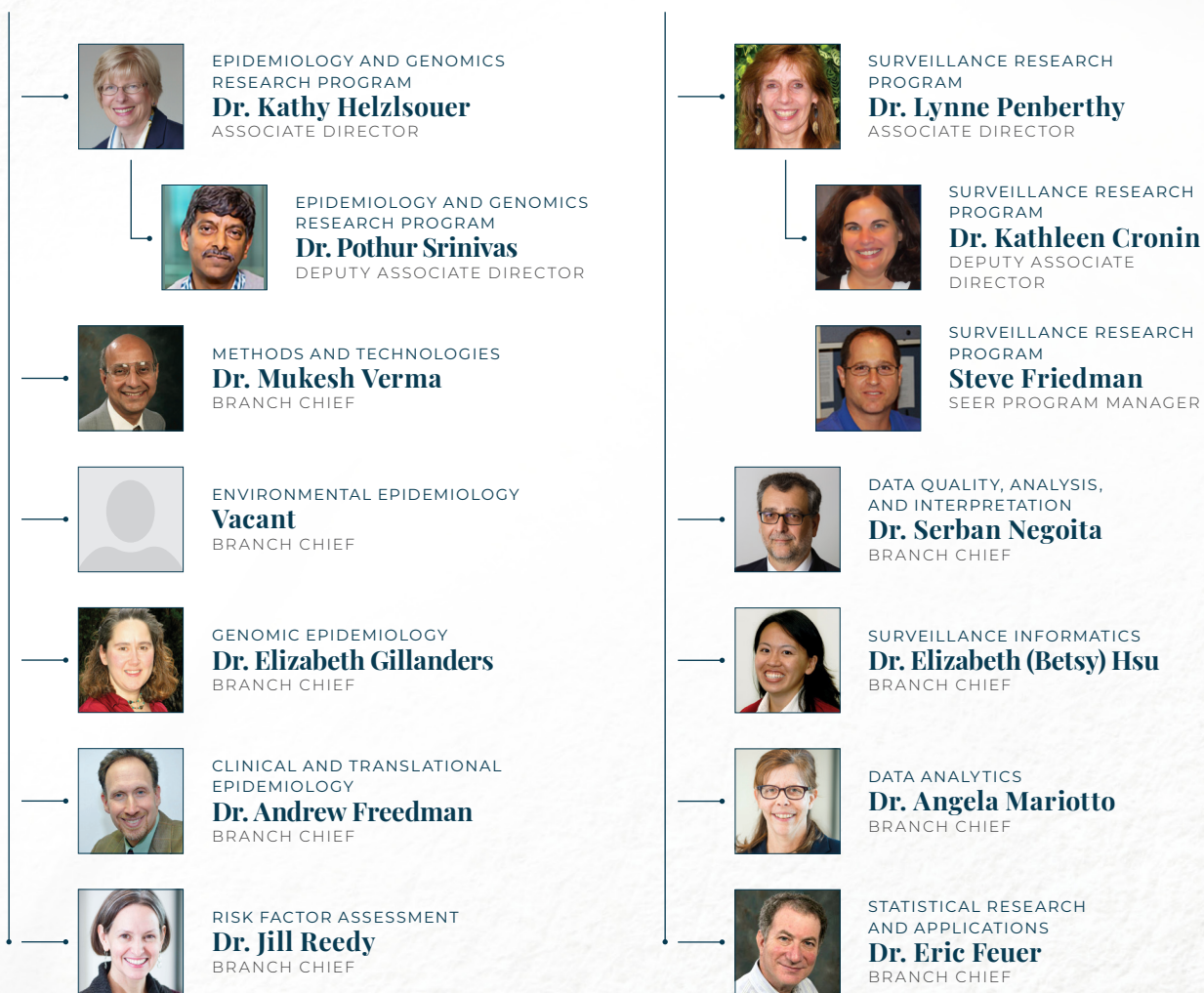
Director, Division of Cancer Control and Population Sciences
National Cancer Institute

LEADERSHIP AT A GLANCE



OFFICE OF THE DIRECTOR
Dr. Katrina Goddard
DIRECTOR OF DIVISION OF CANCER CONTROL AND POPULATION SCIENCES

4 RESEARCH PROGRAMS





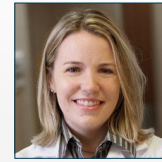
OFFICE OF THE DIRECTOR
Dr. Gary Ellison
DEPUTY DIRECTOR



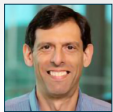
OFFICE OF THE DIRECTOR
Dr. David Chambers
DEPUTY DIRECTOR FOR
IMPLEMENTATION SCIENCE



OFFICE OF THE DIRECTOR
Dr. Shobha Srinivasan
SENIOR ADVISOR FOR
HEALTH DISPARITIES



OFFICE OF CANCER SURVIVORSHIP
Dr. Emily Tonorezos
DIRECTOR



BEHAVIORAL RESEARCH
PROGRAM
Dr. William Klein
ASSOCIATE DIRECTOR



BEHAVIORAL RESEARCH
PROGRAM
Dr. Linda Nebeling
DEPUTY ASSOCIATE DIRECTOR



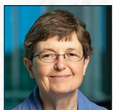
BASIC BIOBEHAVIORAL AND
PSYCHOLOGICAL SCIENCES
Dr. Paige Green
BRANCH CHIEF



HEALTH BEHAVIORS RESEARCH
Dr. Susan Czajkowski
BRANCH CHIEF



HEALTH COMMUNICATION AND
INFORMATICS RESEARCH
Dr. Robin Vanderpool
BRANCH CHIEF



TOBACCO CONTROL RESEARCH
Dr. Michele Bloch
BRANCH CHIEF



HEALTHCARE DELIVERY
RESEARCH PROGRAM
Dr. Paul Jacobsen
ASSOCIATE DIRECTOR



HEALTHCARE DELIVERY
RESEARCH PROGRAM
Dr. Janet de Moor
DEPUTY ASSOCIATE DIRECTOR



HEALTHCARE ASSESSMENT
RESEARCH
Dr. Paul Doria-Rose
BRANCH CHIEF



HEALTH SYSTEMS AND
INTERVENTIONS RESEARCH
Dr. Sarah Kobrin
BRANCH CHIEF



OUTCOMES RESEARCH
Dr. Ashley Wilder Smith
BRANCH CHIEF

FUTURE DIRECTIONS



HEALTH EQUITY

Promote cancer control research that leads to equitable and optimal health outcomes for all populations

Preventing and eliminating cancer disparities is fundamental to realizing optimal and equitable health for all populations. Our public health framework for ending cancer as we know it includes addressing avoidable and modifiable determinants of poor health and eliminating persistent injustices through research at the individual, social, institutional, structural, environmental, and policy levels.



DATA STRATEGIES

Develop innovative strategies to efficiently and ethically collect, analyze, share, and reuse data to fill information gaps and accelerate research that will reduce the cancer burden

Cancer control research will be accelerated through the enhancement, expansion, accessibility to, and use of new and existing data resources. This acceleration will be achieved by identifying and filling current data and infrastructure gaps, using innovative methods for data collection, linkage, harmonization, analysis, interpretation, sharing, and dissemination. Secondary data use will be optimized by making the data findable, accessible, interoperable, reusable, traceable, licensed, and connected (FAIR-TLC).

An immediate and intensified focus on these topics will accelerate scientific progress and increase the impact of DCCPS-sponsored research.



EVIDENCE-BASED CANCER CONTROL POLICY RESEARCH

Evaluate existing policies and inform future policies that impact optimal approaches for cancer prevention, control, care, and outcomes

Support research to inform policy development and to assess the impact of existing policies at the local, state, and federal government levels, and in the private sector (e.g., health systems). Support will be for research that is both proactive (to develop evidence that informs new cancer control policies) and reactive (to evaluate potential benefits and harms of existing cancer control policies). Evidence must include data generated in diverse populations and communities, especially underrepresented or disadvantaged groups.



DIGITAL HEALTH

Expand and enhance digital health research to develop and test the efficacy and effectiveness of technology-based interventions that support cancer prevention and control

Digital health encompasses health IT, mobile health, wearables, telehealth, and personalized medicine, as well as the infrastructure and ecosystem that enables integration and analysis of data from these technologies. Digital health approaches can advance the assessment, monitoring, and understanding of multilevel cancer risk factors and determinants; increase participant reach and engagement in clinical, behavioral, and epidemiological cancer research; and improve the delivery of cancer-related care. Peer-reviewed, non-proprietary evidence is needed to evaluate the validity and impact of these technologies and inform both practitioners and regulatory bodies concerning their use in diverse populations.



MODIFIABLE RISK FACTORS

Identify and intervene upon modifiable risk factors, alone and in combination, to prevent cancer across the life course, and among cancer survivors, to improve treatment response and health outcomes

Modifiable risk factors account for a large proportion of cancer incidence and mortality, yet the role of specific risk factors and how combinations of factors influence risk over time is unknown for some cancers. Novel strategies are needed to assess and influence the impact of modifiable risk factors across the life course; to effectively intervene at the individual and community level at critical timepoints; and to design dynamic, multilevel strategies to reduce risk.



CLIMATE CHANGE

Expand and enhance cancer research to understand and mitigate the effects of environmental risk factors and disruptions to care resulting from climate change

Climate change is the greatest environmental and public health threat facing humanity. Climate change-fueled events and long-term shifts in exposures increase cancer risk, impede health behaviors, and disrupt cancer care delivery. Populations disproportionately burdened by cancer are also those at greatest risk of harm from these changes. A multipronged research effort is urgently required to address the impact of climate change on cancer control.

GATHERING INPUT FROM THE COMMUNITY

In 2022, DCCPS gathered input from our research community, both within and outside NIH, as we undertook our scientific planning efforts. Our research community provides invaluable expertise and perspectives, and they were an integral part of our scientific planning work. We solicited ideas through a Request for Information (RFI), as well as focus groups, conferences, advisory board meetings, grantee workshops, and through our ongoing communications and partnerships.

In our RFI, [NOT-CA-22-053](#), we requested broad public input concerning directions that would accelerate scientific progress and increase the impact of DCCPS-sponsored research. The deadline to submit responses was March 25, 2022. Senior staff and branch chiefs considered these ideas alongside those from within DCCPS. Through a facilitated process, this group identified themes across submissions and coalesced around the six priorities: health equity, data strategies, evidence-based policies, digital health, modifiable risk factors, and climate change. DCCPS continues to refine the priorities, soliciting input from all DCCPS staff and incorporating ideas that were submitted to achieve significant progress in these priority areas. The priorities will serve both as complements and as means of accelerating and ramping up these six areas of scientific opportunity for greatest impact; they do not replace existing funded areas of research.

INPUT WAS RECEIVED ON THE SCIENTIFIC AREAS THROUGH THE FOLLOWING 7 SOURCES:



ADVISORY BOARD MEETINGS



CONFERENCES



CONSULTATION WITH PARTNERS



FOCUS GROUPS



GRANTEE WORKSHOPS



ONGOING COMMUNICATION WITH FUNDED INVESTIGATORS



REQUEST FOR INFORMATION (RFI)

1 RFI ▶ 38 RESPONSES

OPPORTUNITIES FOR RESEARCHERS

In addition to encouraging scientific ideas for researchers through investigator-initiated applications and omnibus solicitations, DCCPS develops and participates in NIH funding opportunities aimed at stimulating new directions in specific research to examine, discover, and test methodologies to improve public health. The following are examples of recent funding opportunity announcements to encourage research projects in emerging or priority areas and to support the next generation of cancer researchers.

FROM DCCPS

- Exploratory Grants in Cancer Control ([PAR-21-341](#))
- Modular R01s in Cancer Control and Population Sciences ([PAR-21-190](#))
- Cancer Epidemiology Cohorts: Building the Next Generation of Research Cohorts ([PAR-22-161](#))
- Research Opportunities in Established Cancer Epidemiology Cohort Studies ([PAR-22-162](#))
- Research to Understand and Address the Survivorship Needs of Individuals Living with Advanced Cancer ([RFA-CA-22-027](#))
- Addressing Cancer-Related Financial Hardship to Improve Patient Outcomes ([NOT-CA-22-045](#))
- Dissemination and Implementation Research in Health (Domestic and International Funding Opportunity) ([PAR-22-105](#), [PAR-22-106](#), [PAR-22-109](#))
- Innovative Approaches to Studying Cancer Communication in the New Information Ecosystem ([PAR-22-164](#), [PAR-22-165](#))
- Advancing Adolescent Tobacco Cessation Intervention Research ([RFA-CA-22-042](#), [RFA-CA-22-043](#))

FROM NCI

- [Early Investigator Advancement Program \(EIAP\)](#)
- [NCI Opportunities for Early-Stage Investigators](#)
- [Research Specialist Award \(R50\)](#)
- Program Project (P01) ([PAR-20-077](#))
- [SBIR/STTR Small Business Funding](#)
 - Investigator-initiated
 - I-Corps at NIH ([PAR-22-073](#))
 - Investor Initiatives
 - Technical and Business Assistance Programs
 - Contract Opportunities (NCI-defined Topics)
- [Cancer Moonshot Scholars \(R01\)](#) ([RFA-CA-22-050](#))
- [NCI Outstanding Investigator Award \(R35\)](#) ([RFA-CA-22-045](#))

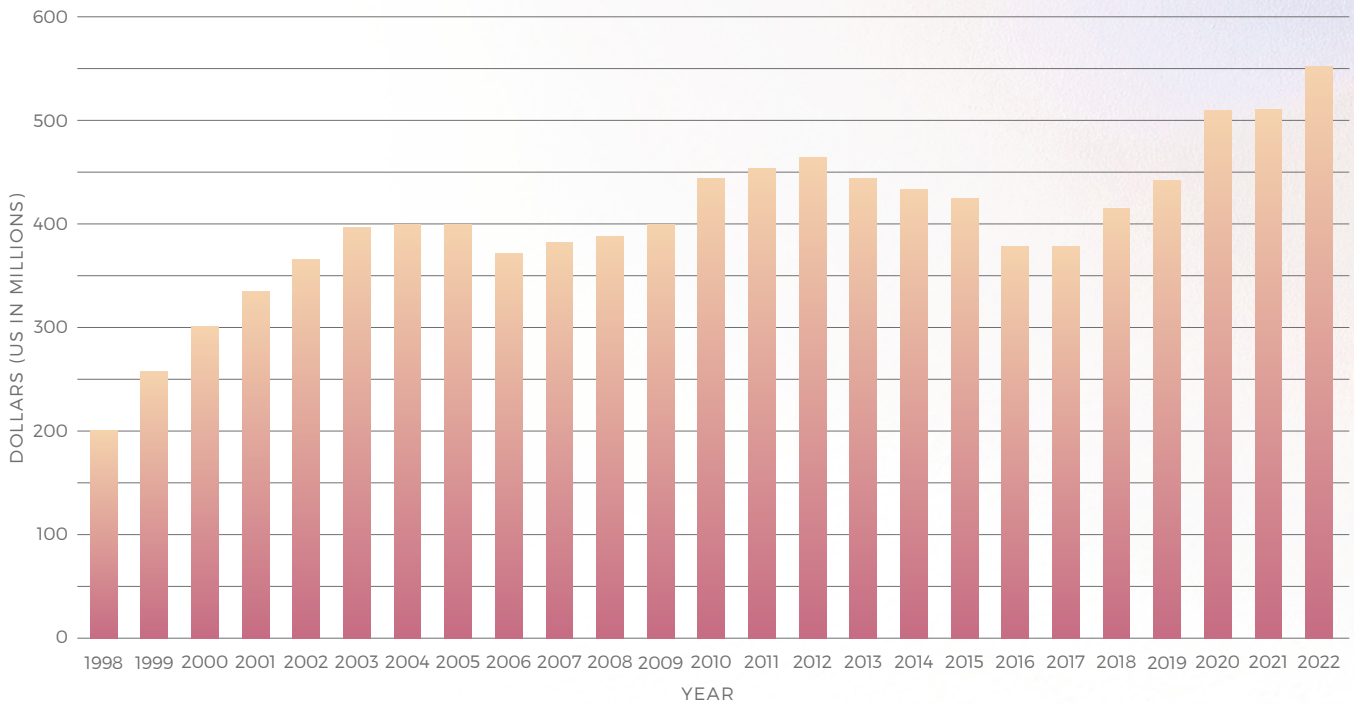
INVESTMENTS IN CANCER CONTROL RESEARCH

For 25 years, researchers funded by DCCPS have been advancing the science to improve public health. Major programmatic areas of research include epidemiology and genomics, behavioral health, health care delivery, surveillance, and cancer survivorship.

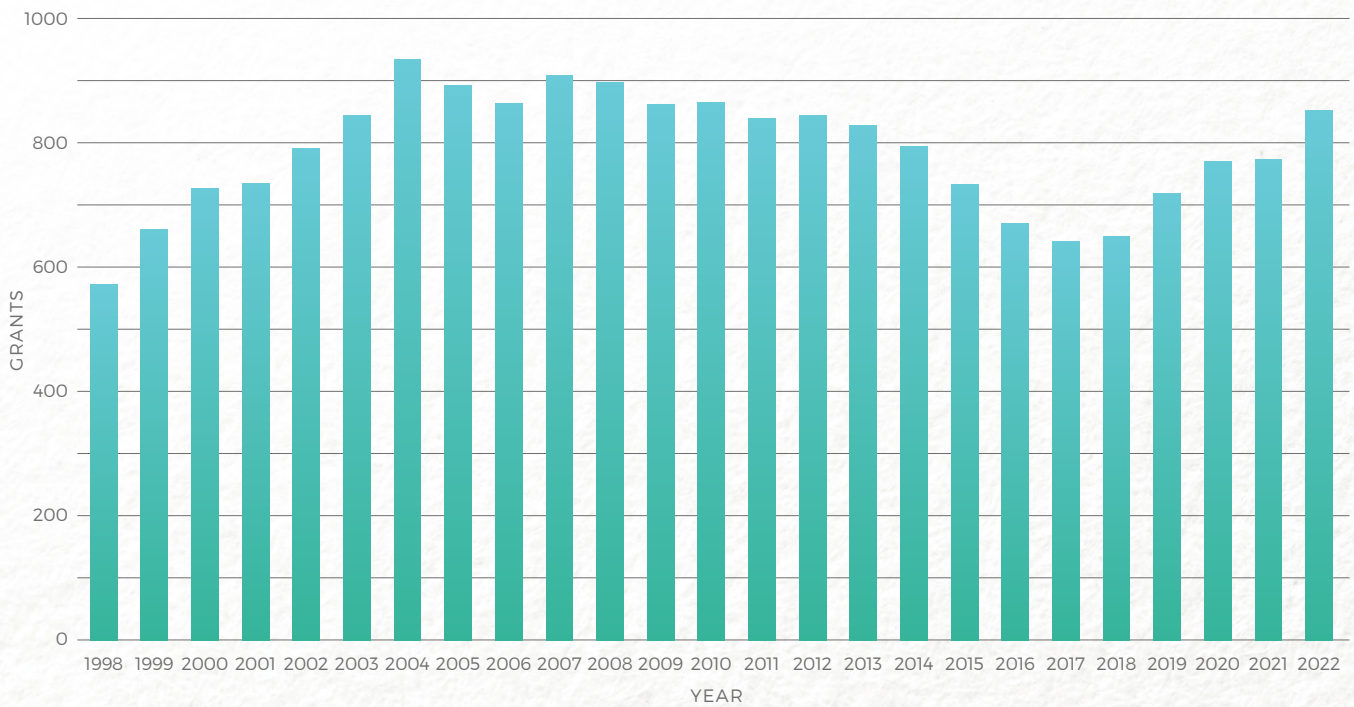
In fiscal year (FY) 2022, DCCPS funded 854 grants valued at more than \$558 million, supporting work in the US and internationally aimed to reduce risk, incidence, and deaths from cancer, and to enhance the quality of life for cancer survivors. In addition, the division funded \$99 million in contracts, which include the Surveillance, Epidemiology, and End Results (SEER) Program. While the majority of DCCPS funding is for investigator-initiated research project grants, the division also uses other strategies to support and stimulate research, such as multi-component specialized research centers, cancer epidemiology cohorts, and supplements to NCI-Designated Cancer Center support grants.

Learn more about the DCCPS grant portfolio and funding trends at maps.cancer.gov/overview/.

TOTAL DOLLARS (IN MILLIONS)



TOTAL NUMBER OF GRANTS



DCCPS BY THE NUMBERS

AS A WINDOW INTO THE MANY WAYS DCCPS PROVIDES RETURN ON INVESTMENT, WE HIGHLIGHT HERE SOME SNAPSHOTS OF PROGRESS OVER THE YEAR.



73%

In recent years, DCCPS has seen a tremendous increase in the number of health disparities and health equity grants within the division's overall portfolio. In FY 2022, **73% of the division's funded awards** included a health disparities component.



13

Thirteen administrative supplements were awarded to NCI-Designated Cancer Centers in FY 2022 to study the feasibility of implementing standardized sexual orientation and gender identity (SOGI) measures recommended by the National Academies of Sciences, Engineering, and Medicine (NASEM).



1,952

There are **1,952 publications** currently included in DCCPS's Native American Cancer Control Literature Database, a compilation of published scientific literature on cancer-related topics with Native American communities, including American Indian, Alaska Native, Native Hawaiian, and First Nations populations.



65,000

In FY 2022, more than **65,000 smoking and vaping quit plans** were created on Smokefree.gov's and Smokefree Teen's Build My Quit Plan pages. These interactive web-based tools help people create a personalized plan for quitting tobacco and connect them with digital and telephone smoking cessation resources.



12,500

More than **12,500 data users** have utilized the Health Information National Trends Survey® (HINTS), which monitors changes in the rapidly evolving fields of health communication and health information technology. As of September 2022, 728 publications in 266 peer-reviewed journals had used data from the publicly accessible resource.



60,000

Across 15 survey administrations, HINTS has **surveyed more than 60,000 American adults**, tracking shifts in the communication landscape and information support needs in the population.



\$23 MILLION

In August 2022, NCI launched its Cancer Moonshot Telehealth Research Centers of Excellence (TRACE) Program, focused on evaluating the use of telehealth in improving cancer-related care and outcomes across the cancer continuum. NCI is investing **\$23 million** over 5 years (2022–2027) to support four academic research institutions conducting research in the use of telehealth in real-world clinical settings.

 **1.2 MILLION**

From January to September 2022, the [National Collaborative on Childhood Obesity Research \(NCCOR\)](#) website received **1.2 million page views**. NCCOR is a collaboration among NIH and the Centers for Disease Control and Prevention, US Department of Agriculture (USDA), and Robert Wood Johnson Foundation to accelerate progress in reducing childhood obesity for all children, with particular attention to high-risk populations and communities.

 **44%**

The division is deeply committed to building a diverse health sciences workforce that maintains, fosters, and promotes an equitable, inclusive, accessible, and nurturing work environment. Of the current fellows in DCCPS, **44%** reported identifying from racially and ethnically diverse backgrounds.

 **23**

DCCPS published the **23rd volume** in the Tobacco Control Monograph series, titled [Treating Smoking in Cancer Patients: An Essential Component of Cancer Care](#). This monograph expands upon prior research to inform clinicians and their patients with cancer about the science and practice of quitting smoking. Since 1991, DCCPS has been producing monographs to provide comprehensive scientific reviews of tobacco use, treatment, and prevention topics to inform the work of researchers, clinicians, and public health practitioners and reduce cancer morbidity and mortality.

 **4,488**

The current [sample grant applications](#) published by the Epidemiology and Genomics Research Program (EGRP) were **downloaded more than 4,488 times** in FY 2022.

 **82**

The [database of Genotypes and Phenotypes \(dbGaP\)](#) at the National Center for Biotechnology Information (NCBI) archives datasets and makes them available to the scientific community. As of September 2022, **82 datasets** from DCCPS-funded studies can be accessed through dbGaP.

 **3,000**

The Cancer Epidemiology Descriptive Cohort Database ([CEDCD](#)) contains descriptive information from over 60 cohorts with participants from 20 different countries. CEDCD includes brief descriptions of the cohorts, contact information, questionnaires, types of data collected, enrollment numbers, number of cancer cases, and number of biospecimens collected. Its purpose is to foster collaboration and encourage cohort-based research. In the past year, CEDCD was **accessed more than 3,000 times**, with over 2,500 new users.

 **799,434**

Since the Automated Self-Administered 24-Hour ([ASA24[®]](#)) Dietary Assessment Tool was released in 2009, researchers have collected **799,434 dietary recalls or food records**.



600

On average, 76 new studies register to use [ASA24](#) every month. As of September 2022, there were **more than 600 peer-reviewed scientific studies published** that used ASA24 to collect diet data.



822

There were **822 attendees** in Healthcare Delivery Research Program (HDRP)-led webinars on addressing social risks in cancer care delivery.



7 MILLION

The [NCI Cohort Consortium](#) currently comprises 68 cancer etiology and cancer survivor cohorts located in North America, Europe, Asia, and Australia, representing approximately **7 million participants**. Over 70 collaborative projects have led to scientific discoveries about cancer risk factors and advances in epidemiologic methodologies.



43

Forty-three language translations have been validated—and 23 more are in development as of October 2022—for [the Patient-Reported Outcomes version of the Common Terminology Criteria for Adverse Events \(PRO-CTCAE™\)](#), a patient-reported outcome measurement system developed by NCI to capture symptomatic adverse events in patients on cancer clinical trials. A pediatric module for use with children and adolescents (or their caregivers if the child is unable to self-report) is also available. The pediatric module is currently available in English, Italian, and Simplified Chinese, and seven other languages are currently being tested, including Spanish, German, Korean, Danish, and French.



6,287

The [Healthy Eating Index \(HEI\)-2015](#) is a valuable tool for surveillance, epidemiology, and intervention research and has been cited in over 275 articles since its release in 2018. Scientists in DCCPS and USDA collaborated to create the HEI, a measure of diet quality that can be used to assess compliance with the Dietary Guidelines for Americans and to monitor diet quality across the life course. The HEI-2015 SAS code been **downloaded 6,287 times** since 2018.



1,000+

The [NCI Community Oncology Research Program \(NCORP\)](#) is a national network that brings cancer prevention, control, and cancer care delivery research studies to people in their communities. Seven research bases develop and coordinate clinical trials and cancer care delivery research for 14 minority or underserved community sites and 32 community sites to bring NCI-approved trials to patients in **1,000+ locations** in diverse, community-based hospitals, private practices, and other locations.



559,484

Over 559,000 SEER cases have been linked to Medicaid data. The [SEER-Medicaid data linkage](#) provides valuable information about Medicaid beneficiaries with cancer.

 **745**

There were **745 attendees** for [the short course “Cluster Randomized Trial Designs in Cancer Care Delivery Research,”](#) which provided training in the design, conduct, and analysis of cluster randomized trials.

 **12**

In FY 2022, there were **12 awards** issued to [Consortium for Cancer Implementation Science \(CCIS\)](#) participants for the development of implementation science public goods to advance implementation science in cancer control.

 **1.5 MILLION**

In FY 2022, **more than 1.5 million clients** were served by 912 innovation laboratory sites across seven [Implementation Science Centers in Cancer Control \(ISC³\)](#).

 **2,415**

The [NCI Office of Cancer Survivorship Director's Series](#) began in September 2021. There were **2,415 people** registered in FY 2022, the series' first full year.

 **2,000**

The [ISC³](#) trained **more than 2,000 participants** through 70 capacity-building workshops in FY 2022.

 **44**

From 2017 to 2021, DCCPS funded **44 early-stage investigators** for cancer survivorship research.

 **17**

The [Comprehensive Cancer Control National Partnership \(CCCNP\)](#) joins together **17 partner organizations**, including NCI. Through coordination and collaboration, the partnership assists comprehensive cancer control (CCC) coalitions in developing and sustaining implementation of CCC plans at the state, tribe, territory, US Pacific Island jurisdiction, and local levels.



