

Administrative Supplements for New Interdisciplinary Research on Cancer and
Aging to the NCI Designated Cancer Centers, 2020-2021

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Administrative Supplements for the NCI P30 Cancer Center Support Grants to Build New Interdisciplinary Research on Cancer and Aging

Contemporary improvements in early detection and diagnosis, cancer treatment, and the implementation of population-based cancer prevention and control strategies have contributed to a sustained decline in overall cancer mortality rates. Although this trend is promising, challenges at the nexus of cancer and aging are, in turn, becoming more prominent. Older adults (age 65 years and older) are the largest growing segment of the U.S. population, and aging into older adulthood is disproportionately associated with the incidence of common cancers. Many pediatric, adolescent and young adult cancer survivors can expect to live for decades after cancer treatment. However, evidence suggests some cancers and cancer treatments change the hallmarks of aging, shift aging trajectories, influence aging-associated outcomes like gait speed, frailty, and functional independence, and increase the risk of multimorbidity and subsequent malignancies. As cancer survivors age chronologically and biologically and experience adverse physical, psychosocial, and behavioral outcomes, interventions to prevent, ameliorate or rehabilitate aging-related consequences of cancer and its treatments are a priority.

Strategic investments in aging research will contribute to population health by preserving or promoting healthspan and ensuring equitable access to – and benefit from – advances in cancer prevention, control, and population science. In FY20, the National Cancer Institute (NCI), Division of Cancer Control and Population Sciences (DCCPS) provided one-year supplemental funding to NCI-designated Cancer Centers to support the development of interdisciplinary research infrastructure to address critical cancer and aging research questions or catchment area needs.

Contents

The Jackson Laboratory.....	4
Oregon Health & Science University Knight Cancer Institute.....	4
Robert H. Lurie Comprehensive Cancer Center of Northwestern University.....	4
Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins.....	5
Stephenson Cancer Center at The University of Oklahoma.....	5
University of Colorado Cancer Center.....	5
University of Michigan Rogel Cancer Center.....	6
University of Southern California, Norris Comprehensive Cancer Center.....	6

The Jackson Laboratory

Project Contacts: Karolina Palucka, MD, PhD and Susan Airhart

Project Title: Building research capacity at the intersection of cancer and aging.

Program Overview: The goal of this supplement is to accelerate our efforts to increase transdisciplinary research capacity and catalyze new, joint research programs between members of The Jackson Laboratory's (JAX) NCI-funded Cancer Center (CC) and NIA-funded Aging Center (AC). Specific activities that will be carried out under this supplement include: 1) Create a Cancer-Aging Task Force whose objective is to explore questions at the intersection of cancer and aging in order to identify areas of mutual interest and guide the development of a strategic plan; 2) promote AC and CC collaboration through the annual CC Retreat and CC-sponsored pilot funding; 3) engage external advisors, inviting them to present their work in JAX CC seminars, and to request their input on our programs and plans; 4) conduct working group meetings to further develop collaborative project concepts; and 5) undertake a strategic planning process that will result in formal recommendations, a budget for a 5-year recruitment plan, and a strategy for sustainable funding for the integrated cancer and aging program. Thus, this supplement enables our NIH-funded centers to exploit our conjoint expertise in advanced genetic model systems of disease, physical proximity, and spirit of collaboration, to thoroughly explore questions at the intersection of cancer and aging/geroscience and advance discovery across these disciplinary domains.

Oregon Health & Science University Knight Cancer Institute

Project Contacts: Kerri Winters-Stone, PhD and Jeffrey Kaye, MD

Project Title: Engaging Digital Technology to Investigate Aging in Cancer: A Collaboratory of KCI and ORCATECH

Program Overview: The purpose of this supplement is to develop a one-of-a-kind "Collaboratory" to integrate digital technology for novel and creative approaches to studying the intersection of aging and cancer. The Oregon Center for Aging and Technology (ORCATECH) is an innovative research center established at OHSU in 2004 that received inter-agency funding (including NIA and NCI) to develop and validate a technology infrastructure that uses rapidly evolving new technologies and big data to study aging in place. The Collaborative Aging Research using Technology (CART) initiative produced a technology-based platform for researchers built upon over 15 years of digital technology and aging development experience to understand how to ensure independent, healthy aging for a growing older population. The CART platform continuously and unobtrusively assesses daily life activities, such as mobility, cognition, sleep, body weight, medication use, and falls, providing millions of hours of real-world and real-time activity and health data. We are seeking supplemental funding to establish a new Collaboratory between the KCI and ORCATECH to establish novel collaborations involving digital technology to address urgent problems in cancer and aging. Over a one-year period we will address the following Specific Aims: 1) Engage a transdisciplinary group of investigators, clinicians, and stakeholders to establish a novel research Collaboratory focused on using digital technologies to advance understanding of cancer and aging; 2) Conduct a preliminary analysis comparing outputs from continuous passive monitoring between aging cancer survivors and aging peers without cancer using the existing CART database and 3) Conduct a demonstration project integrating the CART Community Life Lab into KCI clinical trials to generate novel research questions and approaches that advance knowledge in cancer and aging.

Robert H. Lurie Comprehensive Cancer Center of Northwestern University

Project Contacts: Bonnie Spring, PhD and Christine Rini, PhD, MA

Project Title: Sustainable Interdisciplinary Research Infrastructure to Address Challenges in Aging and Cancer

Program Overview:

The goals of this project are two-fold. First, we propose to establish a new consortium of Chicago-area basic, clinical, and population science experts in aging and cancer—the Consortium for Cancer and Aging Research (CCAR). We will deploy a novel IDEAS lab method to facilitate the emergence of new interdisciplinary research collaborations among them and will support their success in advancing innovative transdisciplinary research on aging and cancer at the Robert H. Lurie Comprehensive Cancer Center of Northwestern University (Lurie Cancer Center). Secondly, CCAR will initiate strategic planning and a proof of concept demonstration of the digital infrastructure that will identify indicators of functional

aging and allow investigators to intervene to reduce health risk in adult cancer survivors at the Lurie Cancer Center who are at high risk for accelerated aging.

[Sidney Kimmel Comprehensive Cancer Center at Johns Hopkins](#)

Project Contact: Elizabeth A. Platz, ScD, MPH

Project Title: SKCCC Agenda Setting and Engagement Activities to Promote Aging and Cancer Research

Program Overview: The goal of this supplement is to conduct a year-long coordinated effort to programmatically integrate aging/geroscience into the Sidney Kimmel Comprehensive Cancer Center's Cancer Prevention and Control Program as an explicitly stated theme crossing each Program aim. To accomplish this, we propose research agenda setting and engagement activities to advance interdisciplinary, population-focused intra- (CPC) and inter- (CPC plus other Programs) programmatic aging and cancer research. Our efforts are designed to: 1) stimulate new, innovative cancer prevention and control research at the nexus of aging and cancer and organize funding opportunities responses, 2) cultivate new population science investigators working at the aging-cancer interface, and 3) bring attention to clinical and public health needs for research and translation to practice for older adults at risk for cancer or living with or surviving cancer, including in the catchment area.

[Stephenson Cancer Center at The University of Oklahoma](#)

Project Contacts: Kathleen Moore, MD, Lori Jervis, PhD, and Arlan Richardson, PhD

Project Title: GeroOncology Program Development from Bench to Bedside to Community

Program Overview: Over the past 5 years, the cancer and aging programs at the University of Oklahoma have dramatically evolved. The primary goal of this supplement is to integrate our long-standing but independent research efforts into an integrative and translational GeroOncology Working Group. We will develop an interdisciplinary program to study the molecular underpinnings of the increased risk for cancer with age, investigate strategies to delay cancer development in the aging population, and improve care and outcomes for older patients with cancer. The three major themes are: 1) to identify, validate and modulate biological changes that drive carcinogenesis and treatment-related toxicities; 2) to balance cancer treatment efficacy and safety; and 3) to identify and address cancer-related concerns and priorities in Oklahoma communities. This program seeks to foster interactions between investigators through meetings and working groups, develop a GeroOncology Symposia, provide pilot funding for collaborative research, recruit new faculty with expertise in GeroOncology, and leverage the Stephenson Cancer Center Clinical Trials Office. The Stephenson Cancer Center has a strong record of patient participation in NCI-sponsored treatment trials (including those living in rural areas and tribal jurisdictions). Our long-range goal is to tailor prevention, treatments, and supportive care to the unique needs of Oklahoma's older populations. We will develop a strategic plan for a comprehensive and interdisciplinary GeroOncology program that integrates the concerns of those facing health disparities, with an emphasis on rural and tribal populations. The University of Oklahoma, the Stephenson Cancer Center, and the Nathan Shock Aging Center will invest significant matching contributions to build a sustainable program that serves Oklahoma and surrounding areas. The integration of these programs is expected to result in a premier GeroOncology program that improves the health of older people in Oklahoma.

[University of Colorado Cancer Center](#)

Project Contacts: Daniel Sherbenou, MD, PhD, Elizabeth Kessler, MD, and Sarah Roberts, MS, ACSM CET

Project Title: Infrastructure Development and Team-Building for a Statewide Approach to Address Cancer and Aging in Colorado

Program Overview: The goals of this supplement are to build infrastructure to promote scientific exchange, to disseminate frailty assessment to rural oncology and rural primary care practices, and build the capacity for patient-centered data collection on cancer and aging. The aged population is greatly expanding, but the role of age with respect to cancer risk and outcomes remains vastly understudied. An important part of this dilemma is that cancer clinical trial enrollment is heavily biased toward younger patients, yielding evidence that does not represent the group most heavily affected.

Importantly, people age very differently, and the concept of frailty is central to formulating a personalized cancer treatment approach to older persons. Our project aims are to organize aging-focused researchers and practitioners, understand stakeholder frailty tool preferences, build partnerships with rural clinics and implement brief patient-reported frailty assessments. Through this statewide pilot, we will assess usage and gauge decision-related outputs, including consults for comprehensive geriatric assessments, physical therapy, cancer screening, cancer prevention, cancer care and cancer survivorship. By reaching these aims, we will establish the foundation of a transdisciplinary team which can continue to support bidirectional activity between an academic cancer center and community practices serving patients within our catchment.

University of Michigan Rogel Cancer Center

Project Contacts: Katrina Ellis, MSW, MPH, PhD, Lindsay Kobayashi, PhD, MSc, David Lombard, MD, PhD, and Lauren Wallner, PhD, MPH

Project Title: The Cancer and Aging Initiative at the U-M Rogel Cancer Center

Program Overview: Our overall goal is to establish an interdisciplinary Rogel Cancer and Aging Initiative, by leveraging expertise and resources from NIH-funded aging studies and centers across the University of Michigan (U-M) to catalyze new sustainable research programs and support career development in cancer and aging. This is a Rogel Cancer Center priority, as we aim to address the needs of our aging local and national populations. To oversee the Cancer and Aging Initiative, we have assembled an interdisciplinary Cancer and Aging Steering Committee with expertise in aging and across the cancer control continuum. We are building infrastructure to support new research initiatives, with a focus on supporting early career investigators and trainees. We proposed two objectives. For Objective 1, we held a Cancer and Aging Retreat with collaborative workshop sessions to identify priority areas for institutional programming and new research initiatives. Following the retreat, we now have a monthly Cancer and Aging Working Group series to support research in progress. For Objective 2, we will facilitate use of the US Health and Retirement Study (HRS) and its biobank and linked Medicare claim data, as it is an underutilized population data resource for cancer and aging research. We will provide new research teams and Rogel Cancer Center investigators with resources for using HRS data, training for early career cancer center investigators to use the HRS data, data-use fees for linked Medicare data, and will facilitate access to research activities, pilot funds, conferences, and career development opportunities at the U-M Aging Centers for early career cancer center investigators. We are also collaborating with the HRS study team to inform the selection of cancer and aging biomarkers collected in their cohort. Ultimately, the proposed Rogel Cancer and Aging Initiative will create sustainable avenues for innovation by leveraging the unique depth of resources and expertise in both cancer and aging at U-M. New research programs expected to emerge from this work will address some of the most pressing challenges for cancer control posed by rapid population aging in the United States.

University of Southern California, Norris Comprehensive Cancer Center

Project Contact: Caryn Lerman, PhD, Mariana Stern, PhD, Sean Curran, PhD

Project Title: The Aging & Cancer Translational Group (ATCG) at the Norris Comprehensive Cancer Center

Program Overview: This collaborative effort between the USC Norris Comprehensive Cancer Center and the USC Davis School of Gerontology is designed to increase our understanding of the mechanistic links between aging and cancer to improve cancer outcomes among the diverse elderly patient population in Los Angeles County. We propose a multifaceted approach that will involve cancer patients, cancer survivors, advocates, providers, and researchers, with the common goal of improving the cancer care and survivorship of older cancer patients. We will foster new and convergent approaches to aging and cancer research through key initiatives that include: establishing internal and community advisory boards; conducting a comprehensive needs assessment of patients and providers; identifying strategic research priorities; soliciting and supporting novel collaborative research projects to seed submission of NCI grants; and disseminating our findings broadly. Our ultimate goal is to generate high impact research on cancer and aging to inform novel strategies to stratify patients for treatment, improve cancer outcomes, and reduce cancer disparities among older adults with cancer.