



**Abstracts**

**Rural Supplements to NCI-Designated Cancer Centers – FY19**

**August 22, 2019**

## **Background**

Rural communities face disadvantages compared with urban areas, including higher poverty, lower educational attainment, and lack of access to health services. Some of the higher incidence and mortality rates for cancer can be attributed to barriers in accessing health services in rural areas and among Native American (NA) populations. There are several areas where NCI can play a significant role in advancing rural cancer prevention and control research, despite rural health being a complex issue with rural population facing many competing challenges and comorbidities.

The primary aims of this supplement opportunity are to advance: (1) research collaborations with rural clinics (such as HRSA/IHS clinics, primary care clinics) to conduct studies in cancer prevention and control; 2) data integration or preliminary data collection that will inform future research and enhance understanding of the cancer burden in low-income and/or underserved rural and/or NA communities; and 3) development and study of cancer prevention and control research program implementation in rural clinics. These supplements are part of larger NCI efforts to increase the development and adoption of evidence-based cancer prevention (primary and secondary) and control interventions and the delivery of high-quality cancer care, as part of the larger rural cancer control research initiative.

The National Cancer Institute (NCI), Division of Cancer Control and Population Sciences (DCCPS), is funding 20 of the NCI designated Cancer Centers to develop research capacity and feasibility on rural cancer control, including but not limited to conducting studies in collaboration with clinics serving low-income and/or underserved rural populations and/or Native American (NA) populations. For the purposes of this supplement, Native Americans include the following populations: Alaska Native, American Indian, and Native Hawaiian. The term 'Native Hawaiian' means any individual any of whose ancestors were natives prior to 1778 of the area that now comprises the State of Hawaii.

For the purpose of the supplement, centers defined the rural population for proposed study based on the non-metropolitan 2013 Rural-Urban Continuum Codes (RUCC) codes as defined at this link: <https://www.ers.usda.gov/data-products/rural-urban-continuum-codes.aspx>. Special consideration was given to those centers that include highly rural populations in the RUCC categories 7, 8, and 9.

## List of funded Cancer Centers

	<b>Page</b>
1. Stephenson Cancer Center at The University of Oklahoma	4
2. Roswell Park Cancer Institute	5
3. UC Davis Comprehensive Cancer Center	6
4. University of Wisconsin Carbone Cancer Center	7
5. University of Kentucky	8
6. The Ohio State University Comprehensive Cancer Center	9
7. Norris Cotton Cancer Center at Dartmouth-Hitchcock	10
8. Huntsman Cancer Institute	11
9. Holden Comprehensive Cancer Center	12
10. UAB Comprehensive Cancer Center	13
11. UNC Lineberger Comprehensive Cancer Center	14
12. Vanderbilt-Ingram Cancer Center	15
13. Wake Forest Baptist Health	16
14. Alvin J. Siteman Cancer Center	17
15. USC Norris Comprehensive Cancer Center	18
16. Oregon Health Science University Knight Cancer Institute	19
17. University of Colorado Cancer Center-Denver	20
18. Fred Hutchinson Cancer Research Center	21
19. The University of Texas MD Anderson Cancer Center	22
20. University of Texas Southwestern	23

**Stephenson Cancer Center at The University of Oklahoma**  
**Grant Number: P30CA225520**  
**Project PI: Mark Doescher**

***Building Cancer Survivorship Research Capacity in Rural Oklahoma***

American Indian (AI) patients living face logistical, financial, and cultural barriers that impede access to survivorship care services provided through oncology practices. Many of these patients continue to receive local primary care services, but primary care providers (PCPs) report they frequently lack information from oncologists describing the survivorship care needs of their mutual patients. The overall goal of this project is to continue building cancer survivorship research capacity in partnership with the Choctaw Nation Health Services Administration (CNHSA), a tribal healthcare system located in rural southeastern Oklahoma. In the initial year, we conducted an environmental scan involving CNHSA primary care clinics, referral oncology practices and CNHSA patients, and we trained a CNHSA-employed nurse rural cancer care coordinator (RC3) whose role is to help CNHSA PCPs and patients receive timely, actionable survivorship information from oncologist practices. We have begun constructing a cancer survivor registry and mapping out healthcare workflows to guide RC3 processes. In the coming year, we will conduct a pre/post pilot evaluation of the RC3 approach to survivorship care. Specific aims are to: 1) Increase capacity to engage in cancer care coordination research, featuring a nurse RC3 embedded within the CNHSA healthcare system; 2) Refine the RC3 implementation through pilot testing; and 3) Conduct a process evaluation to determine factors that facilitate or hinder RC3 implementation. Project findings will enable the continued development of cancer control research in partnership with CNHSA to address rural health disparities affecting AI patients in rural southeastern Oklahoma.

**Roswell Park Cancer Institute**  
**Grant Number: P30CA016056**  
**Project PI: Rodney C. Haring**

**“Two-Row Collaboration: Indian Health Services, Rural Partnerships, and the Cancer Care Continuum.”**

Roswell Park Comprehensive Cancer Center is located in western New York State, serving tribal, urban populations, and remote rural areas with an immediate catchment area of 8 counties and 1.5 million people. Roswell Park has a national cancer-specific MoU with Indian Health Services (IHS) and extends this catchment area to NYS and beyond in regard to service to Native Americans. The objective of this supplement is to primarily focus on the cancer care continuum and cancer control research capacity among IHS clinics and secondarily their affiliated rural community clinic and hospital partner networks. Aim 1 focuses on conducting round-tables with IHS and adjacent rural, safety-net, clinics serving Native Americans. Exploratory round-tables with Canadian First Nations communities who are ancestrally related will also be conducted. Aim 2 as part of the benefit back to the tribes will mobilize a community-based collaboration in the form of a documentary-short that will effectively raise awareness of the cancer care continuum and related research capacity building strategies. The media will provide critical footage that will be useful for community dissemination. A documentary-short film, “A model of the Cancer Care Continuum and Capacity Building: Comprehensive Cancer Centers and the Indian Health Services” will be created and shared with Indigenous communities, regionally, nationally, and internationally who will be invited to facilitate panels, focus groups, or talking circle discussions to assist in identifying strategies for their respective communities. In sum, these activities will inform, build and support future Indigenous-based multilevel cancer care continuum practice, quality and care improvement, along with creating a framework for future research.

**UC Davis Comprehensive Cancer Center**  
**Grant Number: P30CA93373**  
**Project PI: Moon Chen**

***Enhancing Research Capacity for Rural Cancer Control for the Northern Valley Indian Health (NVIH) through Accelerating Uptake of the HPV Vaccine among Rural and Native American adolescents***

Specific aims:

1. Build research capacity at the Northern Valley Indian Health through a customized understanding and appreciation of the challenges of delivering cancer prevention and control in rural settings as in Willows.
2. Adapt educational sessions for NVIH's work force in topics that are jointly determined by NVIH and UCDCCC that addresses the opportunities and challenges of delivering evidence-based cancer prevention and control through a research lens.
3. Prepare the partnership to collect and compile the requisite data for an application for peer-reviewed funding.

Partners: UC Davis Comprehensive Cancer Center and Northern Valley Indian Health (NVIH)

Design: Collaborative Steering Committee comprised of equal representation by UCDCCC and NVIH, meeting monthly, to achieve Specific Aims.

**University of Wisconsin Carbone Cancer Center**  
**Grant Number: P30CA014520**  
**Project PI: Caprice Greenberg**

### **Building a Surgery Engagement and Measurement Network to Improve Rural Cancer Care Delivery**

Most cancer treatment plans require surgical intervention, yet one in three counties in the U.S. lack a surgeon and this shortage is expected to worsen given an aging workforce and increasing provider isolation and burnout. At the same time, surgical quality across hospitals, even for low-risk operations, varies widely and there is a documented volume-outcome relationship. Policy solutions have primarily focused on regionalization and selective referral, which increase travel burden for rural patients and threaten to increase rural-urban disparities, especially for vulnerable populations. Taken together, these factors threaten small, rural hospital viability. Interventions that increase quality across practice settings through measurement and surgeon engagement are urgently needed to ensure surgical care is available for rural patients with cancer. Using breast cancer as a model, we propose to build the infrastructure for measurement and engagement to ensure high quality surgical care for cancer patients, while at the same time ensuring cancer care delivery research (CCDR) includes rural communities. We chose breast cancer as it is common, costly, treated with surgery, cared for in almost all practice settings, and has high-level evidence not yet widely implemented. Of the 230,000 American women each year diagnosed with breast cancer, 79% will undergo breast conserving surgery. Of these, 20-25% (over 36,000) will require an additional operation to get adequate margins. Evidence-based practices exist that can decrease these avoidable operations; however they have not diffused broadly into surgical practice. Since its inception, the Surgical Collaborative of Wisconsin (SCW) has engaged 50% of Wisconsin hospitals, over half of which are in RUCC-defined rural areas. Through extensive engagement, rural providers and hospital quality leaders have identified the critical need for tailored, rural-specific quality initiatives. This has led to the development of the SCW Rural Task Force (RTF). The RTF will build on informal relationships that exist between rural hospitals within regions of the state to ensure deep engagement, feasibility, scalability and sustainability. This therefore represents a scalable infrastructure for dissemination and implementation and rural CCDR broadly. The overall objective of this NCI supplement is to implement a novel collaborative learning framework by 1) applying rural-focused data specifications to existing breast cancer quality measures to better inform rural providers of their performance and support improvement; 2) engaging rural surgeons and other stakeholders to identify barriers and facilitators of cancer surgical quality initiatives and prioritize and tailor interventions to rural settings; and 3) implementing a breast cancer focused collaborative learning program to guide rural network members through the cyclic process of performance evaluation and improvement. Completion of this supplement will build an infrastructure for cancer researchers interested in rural CCDR and yield critical data on how best to tailor initiatives to ensure high quality care for cancer patients in the rural setting.

**University of Kentucky**  
**Grant number: P30CA177558**  
**Project PI: Mark Dignan**

Based on national surveillance data (2014), Kentucky ranks first in both cancer incidence and cancer mortality for all cancer sites combined. Kentucky's elevated cancer rates are primarily attributable to disparities present in the 54-county region of Appalachian Kentucky, which is recognized as one of the most rural, economically disadvantaged, medically underserved, and disease-burdened areas in the nation. Appalachian Kentucky residents carry a disproportionate burden of cancer, including malignancies that are preventable and screenable, such as lung, colorectal, breast, and cervical cancer. In particular, Appalachian Kentucky faces a perfect storm of rurality – 82% of the region is classified as rural as defined by 2013 USDA Rural-Urban Continuum Codes (RUCC) 4-9 – and low socioeconomic status, as measured by education and income. Through this proposed P30 administrative supplement we have the opportunity to build on accomplishments and add value to MCC's existing cancer control efforts in Appalachian Kentucky. The overall goal of this supplement is to leverage a strong and nationally-recognized program of community outreach and engagement at the MCC and build capacity for developing, implementing, and sustaining cancer control research in collaboration with well-established clinical and community partners in rural, Appalachian Kentucky. In collaboration with the Northeast Kentucky Area Health Education Center, our specific aims are: 1) to build on a strong foundation of productive collaboration with rural clinics in Appalachian Kentucky and develop partnerships to conduct cancer prevention and control research; 2) to develop capacity in partners for data collection and compilation, analyses, and/or integration to facilitate research; 3) to collect preliminary data for research proposals and/or for pilot projects in cancer control; and 4) to enhance and study implementation of programs for research in cancer prevention and control in rural clinics. The intended outcomes of the supplement include increasing rural clinic capacity to participate in and conduct cancer control research. Accomplishment of these outcomes will lead to the development of partnerships that are actively engaged in addressing cancer disparities in Appalachian Kentucky.



**The Ohio State University Comprehensive Cancer Center**  
**Grant Number: P30CA016058**  
**Project PI: Electra Paskett**

### **Enhancing Cancer Control Research Capacity in Rural Ohio**

**Specific aims:** The overall goal of this Administrative Supplement is to continue building research capacity in rural counties in Ohio. We will do this by expanding our partnerships to conduct research to address the high rates of cancer promoting behaviors and high cancer burden in these counties. This goal will be achieved by completing two specific aims implemented in partnership with community members and FQHC providers and staff: 1) Conduct a Lung Cancer Prevention and Early detection pilot program within Hopewell health center in Vinton County (RUCC 8) to assist clinics in the Hopewell Health System to a) improve the ability and infrastructure of the clinics to provide lung cancer prevention and early detection services; and b) increase capacity for conducting cancer prevention and control research; and 2) Disseminate the Pilot program to the other Rural clinics within the Hopewell System (Ross, Meigs, and Athens County).

**Partners:** Hopewell System (Ross, Meigs, and Athens County) and Ohio Association of Community Health Centers (OACHC).

**Design:** *Pilot a Lung Cancer project in Vinton County (Hopewell Health Centers)* to increase delivery of Lung cancer prevention and control strategies in clinical practice. The Clinical Practice Guideline provides a set of recommendations for healthcare systems, providers, insurers, and smokers. The recommendations are for clinicians to document tobacco use, provide assistance for smokers trying to quit, and use motivational treatments as necessary. The three Clinical Practice Guideline recommendations that are the focus of this pilot project are based on the ***Ask, Advise, and Connect*** model. We will train the providers to: 1) Implement a tobacco user identification system at the clinic level (ASK about and document smoking); 2) ADVISE smokers to quit, assessing for readiness to quit; and 3) CONNECT patients to services to assist with quitting including lung cancer screenings using a mobile CT scan as appropriate. The OSUCCC has a mobile CT unit that will travel to the clinic to screen patients that are within screening guidelines - 55-77 years of age; No current history of lung cancer; Tobacco history of at least 30 pack years (one pack year = smoking one pack per day for one year; 1 pack = 20 cigarettes); Current smoker or one who has quit within the last 15 years Has not had a CT scan of the chest within the past 12 months. Patients in need of follow-up will be connected to an OSU physician via telehealth to eliminate the geographic barrier.

**Timeline:** During the first month of the project, we will be capacity building where we will formalize agreements with the identified pilot project FQHC's and start regular meetings with the staff from these clinics, including training them on research and CBPR. Between months two through three we will train staff on the pilot projects. In the final two months of the proposal, data analysis and reporting will occur.

**Norris Cotton Cancer Center at Dartmouth-Hitchcock**  
**Grant Number: P30CA023108**  
**Project PI: Tracy Onega**

The Dartmouth-Hitchcock Norris Cotton Cancer Center (NCCC) is one of the few NCI Cancer Centers that is predominantly rural, does not contain a major urban core, and has many counties classified as 7,8, or 9 (9/24) in the Rural Urban Continuum Codes (RUCCs). A majority of our primary care network of practices within NCCC's catchment (23/40) are located within RUCC 7,8,9 counties, and 83% of NCCC cancer patients are from rural areas. We will leverage our cooperative network of community-based primary care practices (COOP) and our community-based satellite cancer care facilities to address the challenges of care transition for cancer survivors in our rural counties. Capacity for cancer control research among our rural primary care partners is developing, as is our capacity with community-based oncology service providers. However, that capacity is still limited, and is largely developing in isolation from each other. We recognize the strong need to build bridged/integrated research capacity as patients transition from active treatment to surveillance and primary care. Implementing evidence-based models of care transition for cancer survivors requires an integrated research framework that reflects patients' actual care journeys, which have distinct challenges for rural survivors. The overarching objective is to expand and improve rural clinical research capacity in our catchment areas by bridging oncology and primary care, while identifying components of care transitions that may be effectively adapted for implementation in our rural communities. We will focus on elucidating the role(s) for telemedicine and other delivery models within our network. In addition to improving care transitions for survivors in our most rural communities, we will enhance our infrastructure for implementation studies that will serve future cancer control initiatives. We specifically aim to: 1) develop a collaboration between rural primary care clinical partners and both rural/non-rural oncology care partners for survivorship care transitions, which will serve as a model for expanded and integrated research capacity building in our catchment area; 2) conduct a multi-level environmental scan to identify the themes, data, metrics, and systems for transitional survivorship care that are most relevant to our rural catchment area population; 3) establish an infrastructure for transitional care implementation strategies in our catchment area using our expanded and integrated research network as a pilot case, with appropriate systems for measurement and evaluation.

Huntsman Cancer Institute  
Grant Number: P30CA042014  
Project PIs: Cornelia M. Ulrich

**Administrative supplement for P30 Cancer Center Support Grants to advance rural cancer control research capacity in clinic settings**

HCI is uniquely positioned to improve cancer prevention and control research among rural and underserved populations as the only NCI-designated Comprehensive Cancer Center in a vast five-state region that is largely rural and frontier. Outreach to, and research with, rural communities is a key institutional priority. Via this supplement, Deanna Kepka, PhD, and Mia Hashibe, PhD, will continue to lead a team that will work closely with rural primary health care settings in the Mountain West to build strong partnerships and capacity for collaborative cancer prevention and control initiatives. In partnership with HCI's community outreach team, we will leverage existing rural primary care partnerships to expand our rural cancer prevention and control research activities to include an assessment of the unique challenges experienced by rural gynecological and breast cancer patients and to improve HPV vaccination intervention research in rural primary care clinics.

We aim to improve HPV vaccination receipt among both rural adolescents and young adult populations to address these major public health concerns in rural Mountain West regions.

**We aim to:**

1. Strengthen and expand HCI's partnerships with rural primary care clinics in the Mountain West and work together to identify priority areas of research for rural breast and gynecologic cancer survivors.
2. Enhance HCI's partnerships with rural primary care clinics in the Mountain West and work together to adapt and expand evidence-based HPV vaccination intervention strategies.
3. Develop a needs assessment and implementation plan in rural health clinics for HPV vaccination catch-up by targeting 18-26 year old adults in rural areas who have not had HPV vaccination as an adolescent.

**Holden Comprehensive Cancer Center**  
**Grant Number: P30CA086862**  
**Project PI: Mary Charlton**

**Working with Critical Access Hospitals to Advance Cancer Control Research Capacity in Rural Communities**

Based on Year 1, we have learned that critical access hospitals (CAHs) have a need for cancer-related data, and plan to use the data that we have provided them in their community health needs assessments and health implementation plans. Hospital representatives expressed they would value more in-depth, locally relevant cancer surveillance data and input from community members to help establish cancer prevention and control related priorities. However, rural hospital representatives and other community partners indicated they have limited experience in implementing evidence-based interventions focused on cancer prevention and control. In order to help CAHs collect data to inform cancer prevention and control priorities, build capacity and ready partners for cancer research among CAHs, and create and expand a sustainable network of CAHs engaged in cancer research, we will pursue the following aims in Year 2: 1) Survey 1,000 community members residing in the counties of our six Round 1 CAHs to inform cancer research priorities; 2) Develop 'learning collaborative teams' in these same Round 1 CAHs that will participate in online workshops designed to expose rural health professionals to dissemination and implementation science research; and 3) Transition the rural health advisory board developed during Round 1 into a sustainable rural cancer research network. Our partners include six rural CAHs in Iowa, the Iowa Cancer Consortium, the Iowa Department of Public Health, the Iowa Cancer Registry, the RUPRI Center for Rural Health Policy Analysis, UI Prevention Research Center, and the Cancer Prevention and Control Research Network. Timeline: All 3 aims will be conducted concurrently so that they can be achieved within 12 months.

**UAB Comprehensive Cancer Center**  
**Grant Number: P30CA013148**  
**Project PI: Isabel C. Scarinci**

***Cancer Prevention & Control in Rural Alabama: Development of a Participatory & Integrated Action Plan 2.0***

Although it has been shown that rural residents are less likely to be diagnosed with cancer at localized stages and less likely to get screened for colorectal, breast, and cervical cancer than urban residents, it has been difficult to identify the specific needs of rural populations throughout the cancer care continuum, and consequently design interventions that meet their needs due to limited research capacity at the local level. Therefore, the overall goal of this supplement is to conduct a comprehensive assessment of clinical-community relationships using the Agency for Healthcare Research and Quality (AHRQ) framework that will inform care coordination for cancer prevention and control and engagement in cancer research with a primary focus on cancers that can be prevented and/or detected early (breast, cervical, colorectal, and lung cancer). Consistent with ongoing work in these counties, our goal will be accomplished utilizing principles of Community-Based Participatory Research, and will be guided by a multi-level approach addressing four target levels: policy makers, organizational systems, agents-of-change, and individuals. We will continue to engage the established working groups and state partners in all steps of this process. The next steps will consist of: (1) a population-based survey using a cluster sampling to better understand the population needs and wants with regard to cancer prevention and control such as engagement in preventive behaviors (e.g., tobacco use, healthy eating, physical activity, age-appropriate cancer screening, HPV vaccination), readiness to engage in preventive behaviors, health care access (barriers and facilitators), perceived susceptibility to preventable/early detectable cancers (e.g., breast, cervical, colorectal, lung cancer), access to technology (e.g., internet, texting), health literacy, willingness to participate in cancer research; (2) interviews with clinics, hospitals, and community-based organizations (including faith-based organizations) as well as clients utilizing these services to better understand the elements to be incorporated in care coordination based on the availability of resources. The results will be shared with the working groups and through town hall meetings in the community to obtain their input toward the development of a community-driven integrated plan for cancer prevention and control care coordination and engagement in cancer research. **The specific aims are:** (1) To strengthen the collaboration with rural clinics, hospitals, and community-based organizations in two rural counties in Alabama toward the development, implementation, and evaluation of community-driven coordinated care in cancer prevention and control and engagement in cancer research; and (2) To conduct a comprehensive and encompassing assessment among all involved stakeholders on the elements needed for coordinated care in cancer prevention/control and engagement in cancer research. **Timeline:** 12 months. **Partners:** Alabama Department of Public Health, American Cancer Society, Clay County Hospital, Clay County Health and Wellness, Quality of Life Health Services, Ashland Family Care, Fischer Family Medicine, Clay County Medical Clinic, Clay County Health Department, Clay County School System, Lineville Health and Rehabilitation, Ashland City Council, Alabama Cooperative Extension System, Choctaw General Hospital, Choctaw County Health Council, Choctaw County Health Department, Ohio Choctaw County Commission, City Council of Butler, City Council of Lisman, City Council of Pennington, Mayor of Butler, Mayor of Gilbertown and ACS Relay for Life- Choctaw County.

**UNC Lineberger Comprehensive Cancer Center**  
**Grant Number: P30CA016086**  
**Project PI: Alison Brenner**

***Developing and testing a state-level cancer screening registry to enhance cancer control research capacity in rural community health centers***

The state of North Carolina (NC) has many rural counties, with 21 of 100 NC counties classified as highly rural (Rural-Urban Continuum Code (RUCC) of 7 or higher).<sup>1</sup> In NC, some of these counties experience higher than normal rates of colorectal cancer (CRC) mortality. The Carolina Cancer Screening Initiative (CCSI) is a multi-disciplinary effort that leverages UNC Lineberger's expertise in development, testing, and implementation of data-driven interventions to improve cancer screening in practice. The larger CCSI team consists of experts in registries, interventions, implementation science, community engagement, and decision science.<sup>3</sup> As a member of the ACCSIS consortium (1UG3CA233251-01), CCSI is building a state-wide infrastructure that would allow us to test cancer screening interventions in CHC populations at scale. As a member of the ACCSIS consortium (1UG3CA233251-01), CCSI is building a state-wide infrastructure that would allow us to test cancer screening interventions in CHC populations at scale. We have developed a strong partnership with several CHCs, including the Roanoke Chowan CHC and Blue Ridge Community Health Services (Blue Ridge), both participants in the ACCSIS SCORE program. In building this infrastructure, we have learned that CHC electronic health records are often missing information indicating colonoscopy procedures, a data element that is essential for correctly identifying patients due for screening. These rural CHCs do not have the capacity to consistently track down colonoscopy reports. The NC HIE receives data from both the CHCs and the endoscopy providers, including colonoscopy procedure codes. In our first year of NCI-P30 supplemental funding, we developed a formal partnership with the NC HIE and have begun to characterize the types and structure of the data in the HIE across the CRC screening, follow-up, and referral to care continuum. Using year 2 NCI-P30 supplement funds, we will leverage our now formalized partnership with the HIE to develop and test a protocol for identifying colonoscopy procedures using the HIE. The ultimate goal is to build capacity to support future research aimed at reducing cancer burden in rural NC populations.

**Vanderbilt-Ingram Cancer Center**  
**Grant Number: P30CA068485**  
**Project PI: Debra Friedman**

National best practice guidelines have long recommended that cancer survivors receive survivorship care, which should center on transition from active oncology to follow-up care and includes disease surveillance, health promotion to prevent or ameliorate chronic health issues and risk for subsequent malignancies. Research is required on how to best implement guideline-based, locally accessible survivorship care to rural cancer survivors.

We seek to pilot test an innovative approach to implement survivorship care planning at two sites within our Vanderbilt Health Affiliated Network (VHAN) located in or adjacent to rural counties in our catchment area. Our goal is to improve long-term health outcomes for underserved rural cancer survivors by building capacity of rural health systems to deliver risk-adapted guideline-based care focused on the unique needs of cancer survivors.

We will address the following two aims: 1) Pilot test the implementation of guideline-based survivorship care planning using patient navigation plus telehealth among underserved rural cancer survivors; and 2) Identify the facilitators and barriers to future larger scale implementation of guideline-based survivorship care planning in rural settings to optimize the implementation strategies. We will establish the feasibility of a novel approach that combines two implementation strategies (a locally-based patient navigator program and telehealth-delivered survivorship care) for cancer survivors receiving care in rural health systems in the VHAN. Using a mixed method approach we will also address implementation research questions focused on “real world” implementation of the guideline-based intervention in rural areas, including barriers/facilitators and translation to other rural settings. The pilot will enroll 40 survivors across two VHAN sites. Patient navigators will undergo training during months 1 – 3 and then the implementation of survivorship care planning and assessment of barriers and facilitators will take place during months 4 – 12.

**Wake Forest Baptist Health**  
**Grant Number: P30CA012197**  
**Project PIs: Karen Winkfield; Kate Weaver**

### **Assessing Research Readiness in Rural Communities (ARRRC)**

The primary goal of this supplement is to enhance cancer survivorship care coordination and cancer care quality for residents of Alleghany, Ashe, Avery, Mitchell, Surry, Watauga, and Wilkes counties through intentional engagement of primary care practices. Through this supplement, we will gain insight into the challenges of care coordination in rural settings, assess the readiness for research at the systems and provider level, and build capacity for cancer control by utilizing an Action Planning process with regional primary care providers from 3 different types of rural practice settings: a Federally Qualified Health Center (FQHC), a community hospital, and a health care system.

The WFBCCC catchment area consists of predominantly rural and Appalachian counties in western North Carolina and is a region characterized by high rates of poverty and limited access to health care. Alleghany, Ashe, Avery, Mitchell, Surry, Watauga, and Wilkes counties, the Priority Counties in Northwest North Carolina (NWNK), are in the heart of the Appalachian Mountains and are characterized by a high prevalence of smoking and greater cancer incidence and mortality.

Care coordination between primary care and oncology specialists in rural settings may be an even greater challenge due to geography and the variability of practice settings in the region. There is tremendous opportunity to collaborate with rural healthcare providers to improve transitional care between oncology and primary care providers which will improve overall survivorship care for rural cancer survivors. Utilizing an action planning strategy that has been successfully applied in an NIH-funded lung screening study (5R01CA207158-03 PI: Foley), we will determine a conceptual framework for care coordination and develop tailored interventions and community site strategies based on evidence-based interventions that are feasible and sustainable for implementation.



**Alvin J. Siteman Cancer Center**  
**Grant Number: P30CA091842**  
**Project PI: Graham A. Colditz**

Increasing recognition that residents of rural areas face cancer health disparities requires that rurality be prioritized, alongside other factors, in addressing disparities. Rural areas tend to overlap with areas of low medical resources. Rural communities are often classified as medically underserved and rural residents may face additional barriers to follow-up such as long distances to care and limited access to medical services. Siteman Cancer Center (SCC) has addressed disparities through its Program for the Elimination of Cancer Disparities – with institutional and NCI funding addressing access to mammography and colorectal cancer screening, to name a few. The SCC catchment area includes 82 counties in Missouri and Illinois that count for more than 85% of new patients treated at Siteman. Over one-quarter (26%) live in a Medically Underserved Area, while 12.8% of the patients live in a rural zip code. Of the patients who live in rural areas, 60.5% live in Illinois and 35.9% in Missouri. In this supplement, we will engage rural health clinics in rural mid-Missouri and southeastern Illinois to better understand cancer prevention and control needs and challenges in these remote clinics. We will assess needs and adapt materials to the needs of primary care providers and community, and work with clinic IT systems to implement improved systems for cancer screening appointment reminders and follow-up of positive screening tests. Finally, through our Community Research Fellows Training program, we will build capacity by training community partners (medical and non-medical) to engage in research to address cancer disparities.

**USC Norris Comprehensive Cancer Center**  
**University of Southern California**  
**Grant number: P30CA014089**  
**Project PI: Claradina Soto**

This application from the Norris Comprehensive Cancer Center (NCCC) at the University of Southern California (USC) responds to the NCI request for “Administrative supplements for P30 Cancer Center Support Grants to advance rural cancer control research capacity in clinic settings”. Specifically, we propose to conduct rural cancer control research in partnership with the American Indian and Alaska Native (AIAN) communities in California. The AIAN population in the United States (US) are disproportionately affected by cancer. They not only experience the worst cancer outcomes for almost all types of cancer among racial subpopulations in the US, their cancer incidence rates keep rising while others continue to decline or stabilize.<sup>1-3</sup> There are many challenges for cancer control research among the highly heterogeneous AIAN communities (with 573 federally recognized Tribes and many more unrecognized at the federal and state level), ranging from high prevalence of tobacco use, poverty, to numerous barriers to healthcare access and cancer prevention participation.<sup>4-6</sup> The heterogeneity is also reflected in the different cancer risk patterns across AIAN populations living in different regions.<sup>1,6</sup> Lack of information on completeness of cancer surveillance data for AIANs and lack of regional AIAN-specific cancer statistics also have hindered the understanding of cancer burden among AIANs. A history of broken treaties and broken promises has made trust an important issue and deterred participation of AIANs in cancer prevention and research. With this supplement, we will partner with the Toiyabe Indian Health Project, Inc. (TIHP) that is a Tribal nonprofit organization serving the medical, dental, optical, behavioral health (substance abuse prevention/treatment, mental health), pharmacy and dialysis care needs of 6,500+ AIANs in the remote, geographically isolated, and rural Inyo- Mono county region of central California. TIHP is a Federally Qualified Health Center and Indian Health Service (IHS) California Health Program with 3 clinics (located in Bishop, Coville, and Lone Pine) <sup>7</sup> that are classified as category 7 (Nonmetro - Urban population of 2,500 to 19,999, not adjacent to a metro area) according to the 2013 Rural-Urban Continuum Codes (RUCC) and also designated as rural areas by this supplemental funding opportunity. The poverty rate among AIANs in these counties is as high as 22.7 percent, 55.5 percent higher than the national rate of 14.6 percent for general US population.<sup>9</sup> The TIHP clinics are the only 3 Tribal clinics in this region with one other non-Tribal clinic. Geographically, the best way to reach any of the 7 Tribes in the area with our proposed research is by the 3 TIHP clinics since they are centrally located to the Tribal communities.

NCCC and TIHP will partner to conduct high-impact research with scientific vigor, cultural sensitivity, and community support to identify and develop innovative strategies to reduce the cancer burden among the AIAN communities in this rural region.

**Oregon Health Science University Knight Cancer Institute**

**Grant Number: P30CA0695333**

**Project PIs: Jackilen Shannon**

Our overall goal is to leverage established Knight Community Outreach and Engagement (COE) and Knight Network programs to increase patients' access to and participation in cancer prevention and control trials in rural Oregon communities through capacity building and research strategy development. The specific aims are: **Aim 1.** Conduct formative evaluation to **identify the attitudes, barriers and facilitators to cancer prevention and control research** among community cancer oncologists and primary care clinical teams in rural Oregon. **Aim 2.** Leverage an established Community-Clinical Advisory Group to develop collaborative cancer research strategies for **increasing local rural cancer prevention and control research**, specific to each region. **Aim 3.** **Increase readiness** of patients to participate in cancer prevention and control trials through building the capacity of primary care clinical teams. **Aim 4.** Develop, implement and evaluate a pilot project to **assess the feasibility and acceptability** of the collaborative cancer research strategy (Aim 2) to successfully implement and sustain cancer prevention and control clinical trials. We will partner with two rural hospitals and primary care physicians located in the same area. We propose to address our aims through first using a qualitative approach (focus group followed by interviews) to identify barriers and facilitators for primary care clinicians and oncologists to participate in the implementation of clinical trials. Next, we will use a collaborative action process to establish and implement a team approach and process for reviewing open clinical trials, assuring leadership buy-in and support for patient recruitment to clinical trials, identifying local resources and gaps necessary for trial implementation, screening and recruiting eligible patients across community and oncology sites, and implementing trials. Finally, we will provide training to increase the readiness of rural community clinicians to encourage and support patient participation in cancer clinical trials, and test the feasibility of a cancer prevention and control pilot study.

**University of Colorado Cancer Center**  
**Grant number: P30CA046934**  
**Project PI: Evelinn Borrayo**

The University of Colorado Comprehensive Cancer Center (CU Cancer Center) will conduct a project that aims to develop successful research collaborations between the CU Cancer Center and rural healthcare clinics and safety-net providers in underserved counties in Colorado. A *Research Collaborative* will advance a sustainable cancer prevention and control research program to address cancer disparities suffered by rural populations in 26 counties with a high Cancer Disparity Index (index from cancer incidence, mortality, and late-stage disease rates). We seek to accomplish two specific aims: **Aim 1:** We will summarize cancer disparities and risk factors for the 26 rural counties in Colorado using a linked dataset from the All Payer Claims Database (APCD) and the Colorado Cancer Registry (CCR). We will then engage stakeholders to identify the top cancer priorities, assess their research capacity, and create a plan to conduct cancer prevention and control research in rural counties. Using the Community Readiness Model (CRM) methods we will assemble input from key community leaders to identify cancer priorities, research capacity, and readiness to conduct cancer prevention and control research. **Aim 2:** We will pilot test the feasibility of linking electronic health records data from Federally Qualified Health Centers (FQHC) to the APCD/CCR database and design a process for de-identified data collection from rural FQHCs that will establish an information network between them and the CU Cancer Center, thereby laying the groundwork for performing research on cancer prevention and control disparities in Colorado's rural counties. For this P30 supplement application, we will specifically collaborate with *High Plains Community Health Center* (High Plains) because we have ongoing project collaborations with this FQHC. High Plains is mainly selected as the pilot partner because it serves patients with significant cancer disparities. We estimate that we will complete Aim 1 within +/- 6-months and Aim 2 within another +/- 6 months.

**Fred Hutchinson Cancer Research Center**  
**Grant number: P30CA015704**  
**Project PI: Allison Cole; Rachel Ceballos**

Increasing Rural Primary Care Clinics' Capacity to Implement Evidence-based Colorectal Cancer Screening Programs

The U.S. Preventive Services Task Force (USPSTF) recommends routine screening for colorectal cancer (CRC) of adults age 50-75 to reduce CRC-related mortality. Rates of CRC screening among rural populations are lower, compared to non-rural populations. In Washington, more than 740,000 people, live in rural communities. Rural populations in Washington have lower per capita income and higher poverty rates compared to non-rural populations. Incidence and mortality rates for cancer are higher in rural areas of the FHCRC Catchment Area, compared to non-rural areas. Primary care providers and clinics play a critical role in promoting CRC screening; implementation of evidence-based interventions (EBI) in primary care settings increases rates of CRC screening. **The overall objective of this proposal is to increase rural primary care practices' capacity to implement Proactive Colorectal Cancer Screen (ProCRCScreen) a multi-component CRC screening program.** We will achieve this objective by using a Community Engaged Research (CEnR) approach to engage four rural primary care clinics in Washington. We will assess clinic readiness to implement ProCRCScreen, a multi-component CRC screening program, and provide each clinic with a tailored implementation plan to address potential implementation barriers. We will measure clinics' readiness to implement ProCRCScreen before and after receipt of the tailored implementation plan. We expect that participating clinics will increase capacity to implement the ProCRCScreen program. We will use results to inform future efforts to scale-up the ProCRCScreen program in rural primary care clinics across the region.

**The University of Texas MD Anderson Cancer Center**  
**Grant Number: P30CA16672**  
**Project PI: Lorna McNeill**

### **Building Research Capacity to Address Tobacco Disparities in Rural Northeast Texas**

MD Anderson Cancer Center serves the people across the state of Texas, its catchment area, and fulfills its mission through research, patient care, education, and cancer control actions. This supplement proposes the development of a collaborative research program to address cancer prevention and control in rural Northeast Texas, with a focus on tobacco. Northeast Texas has a population of just over 1.5 million, over 50% of whom live in rural counties (compared to 16% of the Texas population). The region ranks lower than the state on several socioeconomic indicators, including percentage of those living below the poverty level, educational attainment, and food insecurity and has higher rates of tobacco use and mortality for lung and colorectal cancers. Combining the rich resources of MD Anderson and in collaboration with rural health system partners -The University of Texas Health Sciences Center-Tyler (UTHSCT) and UTHealth East Texas System, the aims of this supplement are to: 1) Develop a collaborative partnership between UTHSCT, UTHealth East Texas, and MD Anderson with the goal of conducting research in cancer prevention and control; 2) Integrate existing data resources and conduct data collection activities to inform the development of a research agenda focused on the implementation and evaluation of tobacco cessation interventions; and 3) Partner with two primary care clinic sites on preliminary activities to support future piloting of a clinic-based tobacco cessation intervention. Data collection to support our efforts will include surveys, interviews, and clinic observations. We will focus on partnership development and analysis of existing data in the first quarter, data collection activities in the second and third quarters, and preliminary pilot work and setting a research agenda in the last quarter.

**UT Southwestern Simmons Comprehensive Cancer Center**  
**Grant Number: P30CA142543**  
**Project PI: Simon Craddock Lee**

Our specific aims are to: (1) Characterize capacity of referral pathways for diagnosis and treatment between clinics and community organizations that offer cancer prevention or screening to under-, uninsured or undocumented persons along the Texas-Mexico border. We will use mixed methods (surveys [n=80], interviews [n=60], and structured observation among clinicians, clinic administrators and staff) to develop a process map depicting how clinics link patients to care within South Texas and bi-nationally. (2) Validate and synthesize data to generate a tailored, Referral-to-Treatment model of linkage to care, using evidence-based, multi-modal stakeholder engagement techniques. We will invite academic partners and community clinic stakeholders (n=30) to a one-day workshop to synthesize our mixed-method findings (Aim 1), solicit stakeholder feedback, identify quality improvement targets, and identify test sites for research opportunities. We will utilize established approaches including structured ranking or voting processes such as Delphi and engagement/solicitation procedures endorsed by Evidence-Based Practice Centers. Partners include: UTHealth School of Public Health San Antonio, Brownsville, El Paso; Mexico Consulates; UT San Antonio ReACH-affiliated FQHCs; South Texas Ambulatory Research Network (STARNet). With this one year supplement, we will be well-positioned to design and test a hybrid implementation-effectiveness study to strengthen practice capacity to optimize result reporting, diagnosis and referral to treatment for underserved, rural-residing individuals who screen positive for liver and cervical cancer and seek care in the South Texas US-Mexico border.