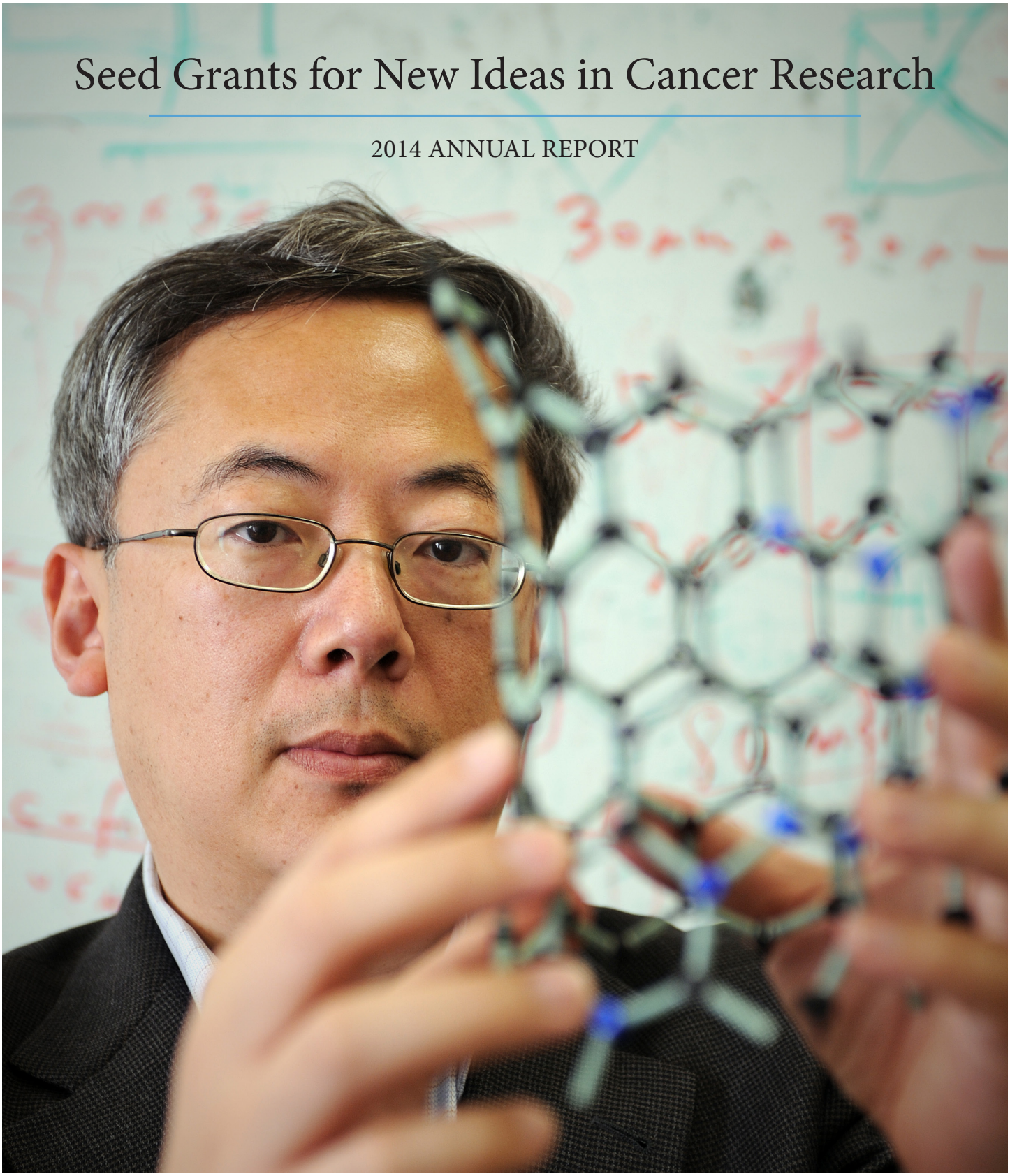
Seed Grants for New Ideas in Cancer Research

2014 ANNUAL REPORT



UNC LINEBERGER

"Seed grants give our faculty an advantage in a landscape that is getting more competitive by providing venture capital to gather preliminary data and develop the scientific justification underpinning new ideas and concepts. Investigators just cannot get funded without these kinds of data."

H. Shelton Earp, III, MD
Lineberger Professor and Director

A Catalyst for Great Ideas

The Seed Grant Program at UNC Lineberger Comprehensive Cancer Center gives skilled researchers the opportunity to find answers to some of cancer's biggest challenges and develop promising new ideas for cancer research, prevention and early detection. An increasingly competitive funding environment has magnified the need for and impact of investments in innovative, early-stage research.

While the number of applicants for grants from the National Institutes of Health (NIH) has increased by 30 percent since 1998, the number of awards has remained the same. In making funding decisions, the NIH evaluates the significance of the research, approach and level of innovation. These criteria, coupled with the competitive award process, favor applicants who can show experience and preliminary data. Being able to discuss preliminary studies, data or experience pertinent to the application greatly impacts the proposed project's likelihood of success—especially for young cancer investigators.

Seed grants give UNC Lineberger scientists an advantage in this competitive landscape. For the past 26 years, the program has maintained a steadfast focus on three guiding priorities:

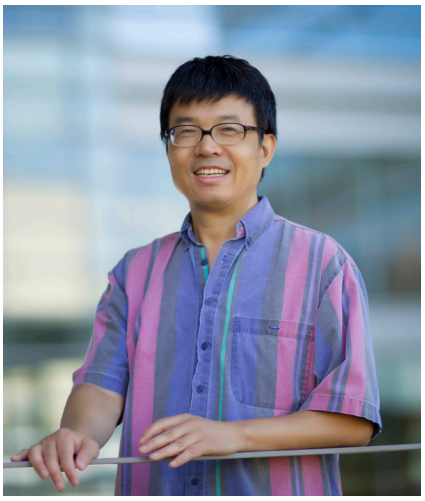
1. Accelerate cancer research by funding promising novel ideas with no other sources of aid
2. Provide venture capital to gather vital preliminary data to scientifically justify major external funding for program implementation, human trials and further research
3. Ensure young, bright cancer researchers have the opportunity to establish a history of success, keeping them engaged in cancer research and building a future

With award recipients from a wide variety of departments and disciplines, the Seed Grant Program reflects one of UNC Lineberger's greatest strengths—multidisciplinary depth. UNC Lineberger is the largest research entity at the University of North Carolina, with more than 335 scientists from 25 departments, including all five health affairs schools: Medicine, Public Health, Dentistry, Nursing and Pharmacy. The Seed Grant Program encourages collaboration across campus as our faculty members work to combat cancer from all directions.

Seed Grant Success Stories

Funded primarily by private donors, the Seed Grant Program has experienced exemplary successes and helped UNC become a top 10 institution for research funding. Seed grants have produced significant and surprising new knowledge in many areas of cancer research. Additionally, our researchers have successfully leveraged grant awards of between $25,000 and $50,000 into hundreds of thousands and, in a few cases, millions of dollars in federal research grants.

Here are a few examples:



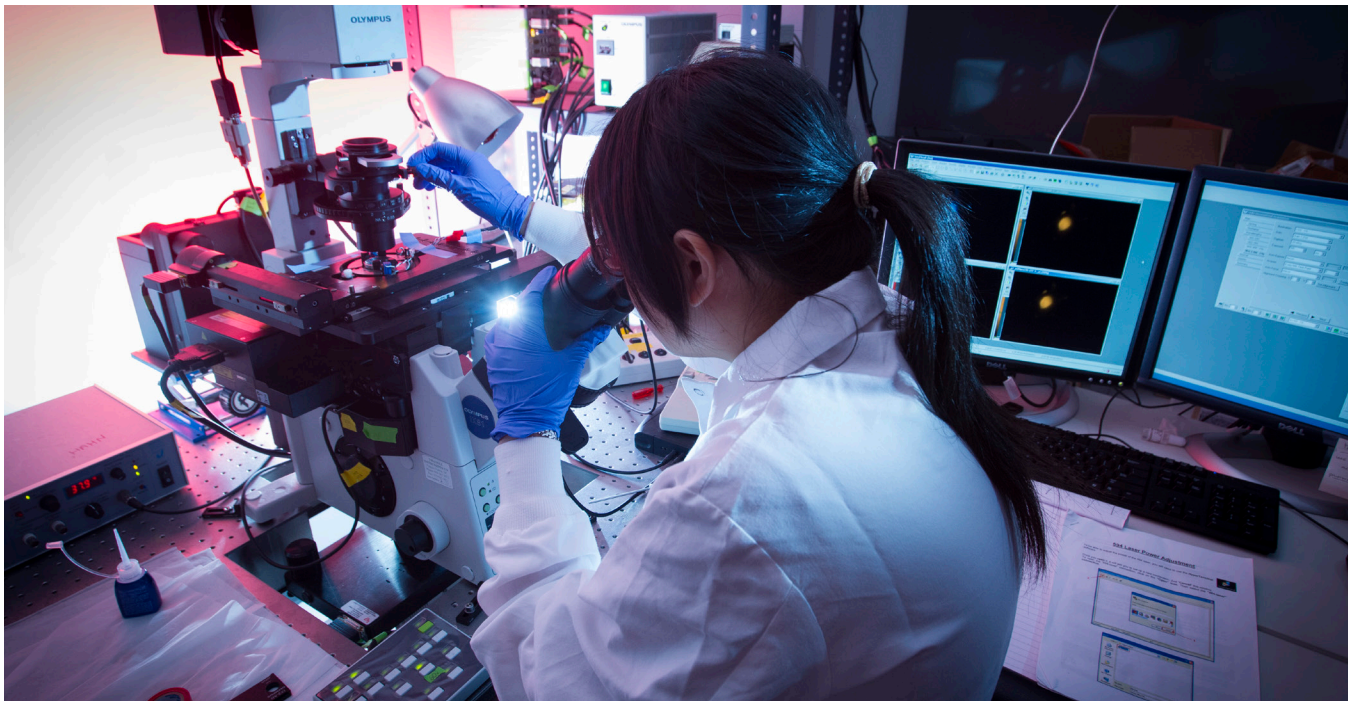
- A 2006 seed grant helped **Lishan Su, PhD,** (pictured right) develop a humanized mouse model to assist researchers studying the hepatitis B and hepatitis C viruses. Dr. Su was awarded a five-year, $2 million National Cancer Institute (NCI) grant. Moreover, other UNC researchers were awarded $770,000 in federal grants for hepatitis research using the mouse model developed by Dr. Su.
- **Ronald Chen, MD,** received a seed grant in 2011 supporting research into prostate cancer survivorship. Dr. Chen used the preliminary data from the seed grant to secure a $1.1 million NCI grant to monitor the recovery, mental well-being and quality of life of prostate cancer patients during the two years following treatment.
- A 2011 grant to **Jonathan Berg, MD, PhD,** for a next generation sequencing platform for hereditary cancer susceptibility contributed to a 5-year, $5 million grant from the Eunice Kennedy Shriver National Institute of Child Health and Human Development (NICHD) and the National Human Genome Research Institute (NHGRI) to explore the use of genetic testing on newborn infants. The grant will help physicians and researchers determine the best practices for how to use genomic sequencing in newborn screening tests.
- Tobacco use and cessation funding provided by seed grants, including a 2008 award to **Adam Goldstein, MD, MPH,** helped establish the expertise that attracted a $19.4 million, five-year grant from the U.S. Food and Drug Administration (FDA) and the National Institutes of Health (NIH) to fund the Center for Regulatory Research on Tobacco Communications. The center will study issues related to tobacco prevention, communication and regulation.
- **Stephanie Wheeler, PhD, MPH,** was awarded a $727,000 American Cancer Society grant to improve the use of guideline-recommended endocrine therapy among racially diverse breast cancer patients based on research supported by a 2011 seed grant.

These represent only a fraction of our seed grant success stories. After five years, more than 90 percent of seed grants have at least one research product and many have multiple National Cancer Institute or National Institutes of Health R01 (individual investigator) grants. This tremendous return on investment is driven by philanthropic support of the Seed Grant Program.

Private Support Fuels Progress

We are grateful to the generous donors who have helped UNC Lineberger pioneer new advances in cancer research by investing in the Seed Grant Program over the years. Since the program's inception in 1986, donors have contributed more than $6.5 million to support seed grant research and 279 seed grants have been awarded. UNC Lineberger currently has 33 permanently endowed, named seed grant funds:

Dr. and Mrs. Gerald Arney Fund for Liver Cancer Research
Elizabeth Dalton Averett Seed Grant for New ideas in Breast Cancer Research
Barnhill Family Cancer Endowment
The Helen Kalogndis Baucom Memorial Fund for Breast Cancer Research
The Bell Family Foundation Fund for New Ideas in Cancer Research
The Emily Bright Seed Grant Fund for New Ideas in Ovarian Cancer Research
The Rebecca L. Calderon Endowment Fund for New Ideas in Lung Cancer Research
Calvo and Rivera Endowed Seed Grant Fund for GI and Thoracic Oncology Research
Elizabeth Winter Cohen Endowment Fund
The Lovick Pierce Corn Endowment Fund for New Ideas in Cancer Research
Edward K. Crawford Cancer Research Fund
Clarence A. Griffin, Jr., Seed Grant for New Ideas in Prostate Cancer Research
The Lanier Swann Hodgson Kidney Cancer Research Fund
Laura T. Jensen & John V. Hyer Endowment Fund for Cancer Research
The Carolyn Christoph Johnston Endowment Fund for New Ideas in Ovarian Cancer Research
Christina B. Jones Endowment Fund for Gastrointestinal Cancer Research
C. H. Jack & Joyce Keller Endowment Fund for Breast Cancer Research
The Susan Hoke Lambeth Endowment Fund for New Ideas in Ovarian Cancer Research
The Kenneth and Frances Lee and Family Seed Grant for Melanoma Research
The Neil Maddux Miller Endowment Fund for Breast Cancer Research
Annie G. Muenzner Endowment Fund for New Ideas in Cancer Research
The Patrick F. and Carolyn B. Nash Seed Grant Endowment Fund
Marian Nottingham Rice Seed Grant
The Brian L. & Suzanne P. Pecheles Seed Grant Endowment for Cancer Research
Allen W. Post, Jr. Prostate Cancer Research Fund
Linda T. Postema Endowment Fund for New Ideas in Lung Cancer
The River Landing Golf Association for Ladies Fund for Breast Cancer Research
The Murphy and Nancy Sample Endowment Fund for Pancreatic Cancer Research
Nancy W. Stegman for New Ideas in Cancer Research Fund
Barbara Snipes Tate Endowment Fund
Dianne M. Toal Endowment Fund for Cancer Research
Gail Whisenant Towne Endowment Fund
The White Seed Grant Fund



2012-2013 Contributors to Seed Grants for New Ideas with Cancer Research

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2012-2013 Seed Grant Awards

Seed grants are significant—and highly competitive—awards for our faculty researchers. This year, we received 38 proposals requesting a total of $1,765,608 in funding. The program is administered by senior cancer center leaders who review and critique applications prior to approval. At least two peer scientific experts evaluate and score each proposal, and a scientific advisory board carefully screens all applications to identify the top priorities for funding. UNC Lineberger awarded 10 grants totaling $418,000, with individual awards ranging from $31,000 to $50,000.

Year	Applications	Total Requested	Grants Awarded	Value of Awards
2012-2013	38	$1,765,608	10	$418,000
2011-2012	21	$1,042,813	8	$355,000
2010-2011	16	$770,833	5	$200,000
2009-2010	23	$1,071,597	9	$363,700

UNC Lineberger awards seed grants in two programs: Clinical/Translational, which supports research that can translate basic science discovery into direct clinical application; and Population Sciences, which supports research in cancer prevention, early detection, health promotion, epidemiology and survivorship. Applicants may request up to $50,000 in support for one year.

Clinical/Translational Awards Summary

Primary Investigator	Project Title	Award Amount
David Chism, MD, MSc Hematology/Oncology Fellow, Department of Medicine	Bladder cancer in African-Americans, defining intrinsic biology and outcome	$50,000
Satish Gopal, MD, MPH Clinical Assistant Professor, Divisions of Hematology/ Oncology and Infectious Diseases	A pilot clinical trial of R-CHOP in Malawi	$50,000
Yueh Lee, MD, PhD Assistant Professor, Department of Radiology	Evaluation of the lung nodule sensitivity of stationary chest tomosynthesis versus chest radiographs in patients	$50,000
Hyman B. Muss, MD Professor of Medicine, Director of Geriatric Oncology Program	Feasibility of an evidence-based walking program in a sample of men aged 65 or older undergoing treatment for prostate cancer	$50,000
Noam VanderWalde, MD Chief Resident, PGY-IV	(FARAT GYN): Functional assessment and radiation adherence/toxicity in older and younger patients with cervical and endometrial cancer	$31,000

Population Science Awards Summary

Primary Investigator	Project Title	Award Amount
Seth D. Crockett, MD, MPH Assistant Professor, Department of Medicine	Feasibility study of serrated pathway CRC precursor lesions in a large multicenter colonoscopic screening study	$36,000
Kemi M. Doll, MD Clinical Fellow, Divison of Gynecologic Oncology	Perioperative surgical morbidity and health-related quality of life in gynecologic oncology	$34,000
Louise M. Henderson, PhD, MSPH Assistant Professor, Department of Radiology	A novel data linkage approach to examine disparities in breast cancer screening and outcomes	$50,000
Lixin Song, RN, PhD Assistant Professor, School of Nursing, Adult and Geriatric Health	Development of a couple-focused eHealth intervention for prostate cancer related symptom management	$35,000
Carmina G. Valle, PhD, MPH Postdoctoral Trainee in Health Behavior, Cancer Health Disparities Training Program	The use of smart scales for weight gain prevention in African-American breast cancer survivors	$31,000

2012-2013 Award Abstracts

Clinical/Translational Recipients

David Chism, MD, MSc
"Bladder cancer in African-Americans, defining intrinsic biology and outcome"

Bladder cancer is a devastating malignancy with an estimated 15,210 deaths for the year 2013. African-Americans [AAs] with bladder cancer are more likely to die of the disease compared to whites, even when matched for stage and grade. By examining the global gene expression of bladder tumors, we have identified two distinct subtypes of high-grade, muscle invasive bladder cancer: basal and luminal. These subtypes have distinct clinical outcomes with basal bladder cancer having a particularly poor overall survival. We hypothesize that tumor biology may in part explain the racial disparity in bladder cancer outcome and have preliminary evidence that AAs are enriched for the basal subtype.

In the proposed study, we will use NextGen sequencing to determine what gene expression changes and molecular pathways are different between AA and Caucasian bladder cancers. We will also determine if AA patients are truly more likely to have basal bladder tumors. Finally, we will develop an assay that will allow us to determine bladder cancer molecular subtype on archival (paraffin embedded) tumors. Examining whether inherent biological differences exist between AAs and whites may partially explain the inferior outcomes seen in AA patients with urologic cancer, but will also allow for the identification of unique therapeutic vulnerabilities within this patient population.

Satish Gopal, MD, MPH
"A pilot clinical trial of R-CHOP in Malawi"

Cancer causes more deaths than HIV, tuberculosis and malaria combined in low- and middle-income countries, and the cancer burden is rapidly increasing in sub-Saharan Africa. Non-Hodgkin lymphoma (NHL) is among the most rapidly increasing cancers in sub-Saharan Africa, where half of NHL patients are HIV-infected. Although curable, survival in settings like Malawi is typically less than one year. To date, there has been one clinical trial for adult NHL patients in the region, testing oral chemotherapy among 49 HIV-infected patients. Although the CHOP regimen serves as standard treatment, there are no prospective studies demonstrating its safety and efficacy in settings like Malawi. Moreover, the 'targeted' medicine rituximab added to CHOP may be ideal treatment for an environment where administering chemotherapy is difficult.

Rituximab has become standard treatment for NHL in resource-rich settings, but has never been studied in sub-Saharan Africa, where tumor biology, patient characteristics (including high HIV prevalence), limited supportive care and high infectious burden will result in very different safety and efficacy profiles compared to populations previously studied. Among all NHL, diffuse large B-cell (DLBCL) is most common among HIV-infected and HIV-uninfected individuals. The central hypothesis is that R-CHOP is feasible and safe among DLBCL patients in Malawi.

The award will be used to conduct a pilot clinical trial of R-CHOP, using the Indian generic biosimilar compound Reditux. We will enroll 20 patients (10 HIV-infected, 10 HIV-uninfected). Patients will be

followed to assess toxicity and progression-free survival. The study will provide essential preliminary data to support incorporating rituximab into clinical trial protocols in the multicenter AIDS Malignancy Consortium and Burkitt Lymphoma Trial Network. Rituximab is an intervention with high relevance to both scientific agendas, to improve outcomes for patients with HIV-associated NHL and Burkitt lymphoma, respectively. Preliminary data from this award can thus be used to support larger trials and a leadership role for UNC in these emerging African cancer networks. The proposed research can also help catalyze a paradigm shift away from cytotoxic treatment in settings where this is difficult, and provide momentum to increase access to essential cancer medicines globally.

Yueh Z. Lee, MD, PhD
"Evaluation of the lung nodule sensitivity of stationary chest tomosynthesis versus chest radiographs in patients"

The majority of cancer deaths are caused by lung cancer. Conventional chest x-rays are poor at detecting cancers when they are still small and easily treatable. Conventional computed tomography (CT or "CAT) scans can readily detect lung nodules as small as 3 mm, however, they require significantly higher radiation dose. Chest tomosynthesis creates 3-D images by moving the x-ray tube in an arc in front of the patient to obtain multiple views from multiple angles. These images can be transformed to create 3-D images similar to a chest CT, but at significantly lower dose than conventional CT. Chest tomosynthesis systems, however, require longer scanning time because of the required tube motion. Patients with lung diseases often have difficulty holding their breath, and thus would benefit from faster scan times. The goal of this study is to compare the sensitivity of a stationary chest tomosynthesis system based on the carbon nanotube (CNT) x-ray source versus conventional chest x-rays and chest CT in patients with known lung nodules. This study represents the first in-patient chest imaging with a CNT based device.

Hy Muss, MD
"Feasibility of an evidence-based walking program in a sample of men aged 65 or older undergoing treatment for prostate cancer"

Physical activity in cancer patients is associated with improved prospects for survival, quality of life and overall health and well-being. However, there are still important gaps in the evidence base, including the need for intervention studies (1) testing programs that are scalable under "real world" conditions and (2) specifically targeted at older cancer patients and survivors. This study tests the feasibility of a moderate-intensity physical activity program in a sample of men, age 65 or older, who are undergoing prostate cancer treatment—a woefully understudied group.

The program is Walk With Ease (WWE)—a self-directed physical activity program developed by the Arthritis Foundation that is evidence-based for reducing joint pain and fatigue among adults. A total sample of 32 men will be recruited, with various treatment regimens represented in the final sample: (1) surgery alone, (2) surgery plus radiation therapy, (3) surgery plus endocrine therapy, and (4) active surveillance. We will follow study participants over a period of three months, and are interested in outcomes pertaining to engagement in walking, fatigue, pain, quality of life and self-efficacy to manage fatigue and engage in physical activity.

Noam VanderWalde, MD
"(FARAT GYN): Functional assessment and radiation adherence/toxicity in older and younger patients with cervical and endometrial cancer"

Cancer incidence in the elderly is rising. In multiple studies of women with endometrial or cervical cancer, older age was found to predict for worse toxicity and worse outcomes from radiation therapy. It is not clear from those studies whether the increased toxicity was due to older chronologic age or from the decreased functional status that is often associated with age. The difference is important because doctors cannot change a patient's age, but may be able to intervene on a patient's baseline functional status to improve their ability to tolerate therapy.

We propose to study how functional status, as measured by a Comprehensive Geriatric Assessment (CGA), affects tolerance and toxicity from pelvic radiation therapy. Our major goals are the following: (1) to describe pre-treatment functional status among both older and younger patients with cervical or endometrial cancer receiving pelvic radiotherapy; and (2) to identify potential associations between pre-treatment functional status and tolerance to pelvic radiotherapy among older and younger women with endometrial or cervical cancer receiving pelvic radiotherapy.

This proposed pilot study aims to accrue 20 older (age ≥ 65) and 20 younger (age < 65) patients. We will collect pre-treatment functional assessments, pre-treatment blood work to test for a biomarker of aging (p16INK4a), patient and physician reported toxicities and measures of poor adherence to radiotherapy during treatment, and post-treatment assessments. We will use the data from our study to identify potential interventions to improve adherence and reduce toxicity from pelvic radiotherapy. The results from this study will be used in larger multi-institution cooperative group studies to test these interventions and validate the predictive ability of functional status variables. Our ultimate goal is to improve and optimize the care of older patients with cervical and endometrial cancer.

Population Science Recipients

Seth D. Crockett, MD, MPH
"Feasibility study of serrated pathway CRC precursor lesions in a large multicenter colonoscopic screening study"

Cancer of the large intestine (colorectal cancer or colloquially "colon cancer") is one of the most common cancers worldwide, and kills nearly 50,000 people in the US each year. Universal screening is recommended in the US after age 50, and colonoscopy is one of the main ways that we screen for colon cancer. It has been traditionally thought that all colon cancers grew from "adenomas," a certain kind of polyp or growth in the large intestine, and the practice of screening colonoscopy has been focused on identifying and removing these adenomas so they won't develop into cancer in the future.

In the last three decades, researchers have been able to identify many of the specific genes and mutations that cause an adenoma to form and develop into cancer. However, there is new research that shows that this pathway to colon cancer may not explain all colon cancers, and up to one third of colon cancers may grow from different types of polyps, called "serrated" or "hyperplastic polyps". These polyps have a saw-toothed appearance when seen under a microscope. Though doctors and researchers previously thought that all hyperplastic polyps were harmless, it is now thought that some of these polyps, such as "sessile serrated polyps", can develop into cancer.

Sessile serrated polyps are more common on the right side of the large intestine and are shaped differently than traditional adenomas. They are usually flat or raised only slightly compared to the rest of the intestinal lining, and therefore can be difficult to notice. Indeed, some studies have shown that doctors frequently miss these polyps during colonoscopy. Because of this, these types of polyps and the cancers they grow into may explain why people who have had colonoscopy are protected from cancers on the left side of their colons, but are not protected from cancer on the right side of the colon. Even though these new polyps are a serious problem, not much is known about who develops sessile serrated polyps and what causes them. We also don't know what happens to people after sessile serrated polyps are found and removed during colonoscopies. Do they have an increased risk of developing cancer or other worrisome polyps in the future? Should they be brought back sooner than other people for another colonoscopy? These are some of the questions we will try to answer with the proposed research project.

We plan to use information from a large study of colon cancer detection that is now occurring at sites across the US including UNC. Over 6,000 patients will eventually take part in this study. With the help of a pathologist who is an expert in this field, we plan to re-examine the glass pathology slides from polyps removed during this study in order to determine how many people had sessile serrated polyps. We will also see if the information that study participants have provided can be used to identify risk factors (e.g. smoking or obesity) that may lead to these types of polyps and the cancers they grow into.

The results of this study will help us better understand how best to treat patients who have this kind of polyp. Also, the experience will help Dr. Crockett plan a larger project in the future to further advance knowledge in this field. The ultimate goal is to reduce the burden of colon cancer in the US by studying this newly recognized pathway to colon cancer.

Kemi M. Doll, MD
"Perioperative surgical morbidity and health-related quality of life in gynecologic oncology"

The vast majority of women with gynecologic cancers will undergo a major surgical procedure as an essential component of their cancer care. These procedures are associated with complications occurring during or after the surgery in up to 30 percent of cases. The primary goal of these surgeries is to maximize the chance of cancer cure; however, temporary complications around the time of surgery may have unintended effects. The complications can both delay essential post-surgical treatments (chemotherapy or radiation) and can impact the patients' short and long-term quality of life. Other studies have evaluated patients and have found a connection between cancer patients' reported quality of life before the state of treatment (and after surgery) and their overall survival. These studies have not evaluated the role of surgical complications on quality of life. We hypothesize that the degree of changes in quality of life scores after major gynecological oncology surgeries are significantly impacted by the occurrence of complications around the time of surgery.

We propose a study to quantify the impact of surgical complications on quality of life in women with uterine, cervical and ovarian cancer. We will collect comprehensive data on gynecologic surgical patients before and after surgery, including asking women to complete questionnaires that measure quality of life. This will allow us to describe the impact of perioperative complications on women's lives. Our goal is to conduct a clinical trial designed to reduce these specific complications. A secondary goal will be the evaluation of scheduling, staffing and surgeon variables that impact perioperative morbidity. We expect results from this preliminary study will uncover specific complications that have the most impact on quality of life. This work has the potential to improve cancer surgery quality of care in gynecological oncology, and is likely to be applicable to other surgical oncology disciplines.

Louise M. Henderson, PhD, MSPH
"A novel data linkage approach to examine disparities in breast cancer screening and outcomes"

Breast cancer is the most common cancer among American women, except for skin cancers. Screening mammography helps to detect breast cancers early when the cancer is small and confined to one area of the breast. Despite the benefits of screening mammography, many women fail to be screened and some women with an abnormal screening mammogram do not receive recommended follow-up care. In particular, women of racial and ethnic minorities and those with lower incomes are less likely to receive regular mammograms and are more often diagnosed with advanced stage breast cancer. Understanding why these differences exist can be challenging, as individual research studies are often limited in scope.

We propose to study breast cancer disparities in North Carolina by combining existing data sources, namely the Carolina Mammography Registry (CMR) and the Integrated Cancer Information Surveillance System (ICISS). The CMR collects information on the mammography screening experiences of approximately 600,000 North Carolina women while the ICISS contains information from state and federal health plans as well as the state cancer registry. Combining these complimentary sources of data will enable the study of breast cancer screening disparities and subsequent health effects among a diverse group of women. Specifically, we will join these data to evaluate if low-income women enrolled in a federal breast cancer screening program continue to receive appropriate follow-up once they transition out of the program. We will also use the combined data to explore additional research questions related to breast cancer disparities across the state.

Lixin Song, RN, PhD
"Development of a couple-focused eHealth intervention for prostate cancer-related symptom management"

To help reduce the negative effects of prostate cancer related symptoms on men and their partners and improve couples' well-being, we recently developed a program—Prostate Cancer Education and Resources for Couples (PERC)—for couples. Using the latest internet technology, we translated an effective face-to-face program to meet couples' support and information needs for managing prostate cancer. PERC uses education and skills training to help both patients and their partners develop common understanding and skills for symptom management. PERC can provide self-care information about sensitive topics to more patients and partners at a lower cost than usual face-to-face programs of care, allowing couples to learn at a time and location that are convenient to them while preserving privacy. To evaluate the conversion of the in-person program to a web format, we plan to conduct a study in three steps to assess whether PERC is acceptable and practical. This study will help develop an easy-to-use internet program that can be used to improve well-being for more cancer patients and partners. This study will also help develop a future larger study to test whether PERC is effective. A strong team with researchers from different backgrounds will help achieve the aims.

Carmina G. Valle, PhD, MPH
"The use of smart scales for weight gain prevention in African-American breast cancer survivors"

Breast cancer is the most commonly diagnosed cancer among African-American (AA) women in the United States. In North Carolina, AA women are more likely to die from breast cancer compared to women of other races and ethnicities. Past research has shown that body weight and obesity may play a role in these survival differences, and helping people prevent weight gain after a breast cancer diagnosis is an important public health goal that may improve health and quality of life. However, little research has focused on the needs of AA breast cancer survivors and helping them prevent weight gain after treatment.

Losing weight can be particularly challenging and time-consuming, but previous research studies have shown that frequently weighing oneself is a simpler strategy that is effective for helping people lose weight or keep weight off. Providing electronic smart scales and exercise trackers may allow individuals to more easily monitor their weight and activity information online, help them make small changes in diet and physical activity and prevent weight gain. A previous research study showed that a self-weighing intervention with smart scales helped people lose weight. It is unknown whether these smart scales can help prevent post-treatment weight gain among AA breast cancer survivors. It is possible that prevention of post-treatment weight gain could be improved by providing a physical activity monitor in addition to a smart scale. Therefore, the purpose of this research study is to determine whether two weight gain prevention programs (self-weighing or self-weighing plus activity monitoring) are feasible and effective for preventing weight gain among AA breast cancer survivors. We will conduct a six-month study in 45 AA breast cancer survivors to compare whether a self-weighing intervention or a self-weighing plus activity monitoring intervention leads to less weight gain than a wait-listed control condition.

If you have questions or would like to learn more about the Seed Grant Program, please contact the UNC Lineberger Office of External Affairs at (919) 966-5905.

UNC Lineberger Comprehensive Cancer Center brings together some of the most exceptional physicians and scientists in the country to investigate and improve the prevention, early detection and treatment of cancer. One of only 41 NCI-designated comprehensive cancer centers in the nation, UNC Lineberger works to understand the causes of cancer at the genetic and environmental levels, conduct groundbreaking laboratory research and translate findings into pioneering and innovative clinical trials.

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