

—cancer lines—

—in this edition—

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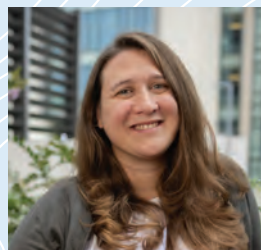
Remembering beloved colleague, physician and scientist Wendy R. Brewster, MD, PhD

Donald Rosenstein, MD, is focused on the emotional well-being of the patient and their family



3

4



The sky is the limit for Katie Hoadley, PhD, one of the most-cited cancer genomics researchers

Swim Across America makes a giant splash with a record fundraiser at UNC

8



CANCER PREVENTION RESEARCHERS MEET WITH WHITE HOUSE OFFICIALS

Faculty share insights on reducing cancer risks



Adam Goldstein, MD, right, and Kurt Ribisl, PhD, discussed prevention measures to reduce teen vaping and approaches UNC used during the COVID pandemic to keep tobacco cessation top of mind.

Following President Joe Biden's State of the Union Address earlier this year, the White House Chief Science and Technology Advisor Arati Prabhakar, MS, PhD, visited Chapel Hill to discuss the fight against cancer at the UNC Lineberger Comprehensive Cancer Center.

The White House officials sought out UNC Lineberger, which received Cancer Moonshot funding in 2017 and 2020, for its leadership in translational research and its high-impact work in cancer prevention, early detection, and outcomes-

based research, all of which receive National Cancer Institute funding.

UNC Lineberger Director Shelley Earp, MD, provided an overview of UNC Lineberger's role as North Carolina's public comprehensive cancer center to reduce the burden of cancer across the state, from basic scientific drug development to researching and providing promising immunotherapies for patients, before introducing three groups of researchers from across campus.

SEE RESEARCH, PAGE 7

director's message

H. Shelton Earp, MD

Today's best care and tomorrow's best hope.

More than a decade ago, my late friend and colleague Michael O'Malley made that astute observation about what made our cancer center so special. His assessment remains true today: At UNC Lineberger, we offer our patients the most advanced care possible while also conducting pioneering research designed to develop better, more effective care in the future.

Advancing cancer prevention, early detection and care through research is the foundation of our

commitment to the people of our state as North Carolina's only public comprehensive cancer center. Thanks to the donations and the grants we receive, we can provide our faculty with the state-of-the-art technology and facilities. But it is the investments we make in our people that make UNC Lineberger truly special.

People like Katie Hoadley and Don Rosenstein, who are featured in this issue, are national experts in their respective fields of cancer genetics and psychosocial oncology. Katie's research, and her leadership role with the National Cancer Institute's landmark The



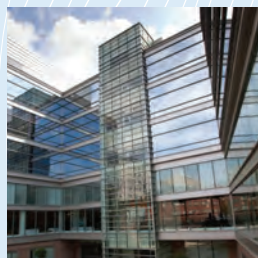
SEE DIRECTOR, PAGE 7

—honors & awards—



The University of North Carolina Board of Governors presented the Oliver Max Gardner Award, its highest faculty honor, to Shelley Earp, MD. “Dr. Earp has dedicated his life and work to battling one of the deadliest diseases known to humankind,” UNC System President Peter Hans said. “His passion for scientific research, combined with his commitment to the understanding, prevention and compassionate treatment of cancer, have made Dr. Earp an outstanding leader in his field.”

Charles M. Perou, PhD, was elected as a fellow to the American Association for Cancer Research Academy, an honor that recognizes the top contributors in the fields of cancer research and medicine.



UNC Hospitals has earned several honors for its cancer care program: US News & World Report ranked it among the country's top 50 cancer centers; Newsweek named it to its America's Best Cancer Hospitals 2023 list; and the American College of Surgeons' Commission on Cancer awarded it three-year accreditation.

The Pancreatic Cancer Action Network appointed Jen Jen Yeh, MD, to its scientific and medical advisory board, which is comprised of leading scientists, clinicians and health care professionals who specialize in pancreatic cancer from institutions across the United States.



The National Center for Advancing Translational Sciences awarded Saif Khairat, PhD, MPH, a five-year, \$3.73 million grant to establish the Center for Virtual Care Value and Equity, which will promote translational research in virtual care to advance the availability of quality health care.



The National Cancer Institute awarded Jennifer Lund, PhD, MSPH, and Louise Henderson, PhD, left to right, a five-year, \$1.76 million grant to study the real-world benefits and harms of lung cancer screening with low-dose computed tomography.

In Memoriam: Wendy R. Brewster, MD, PhD



Wendy R. Brewster, MD, PhD, a compassionate clinician-scientist who focused her career on caring for women with gynecologic cancer and studying at-risk populations and the disparate mechanisms leading to poor outcomes in

endometrial, ovarian and cervical cancers, died of pancreatic cancer on July 24. She passed surrounded and supported by her family in Houston, where her sister lived.

The beloved member of the UNC School of Medicine Department of Obstetrics and Gynecology and the UNC Lineberger Comprehensive Cancer Center held many prestigious academic and professional titles, but it's quite possible she was most proud of being known as a cherished colleague and mentor.

“Wendy was an incredibly talented clinician, and a keenly insightful researcher. She was unwavering in her commitment to eliminating disparities and inequities on all fronts, especially as it related to the delivery of health care,” said Shelley Earp, MD, director of UNC Lineberger. “Her desire to make a difference on all levels endeared her to patients and their families, as well as being a true friend and source of strength for her cancer center colleagues.”

Born in Newcastle upon Tyne, United Kingdom, and raised in Guyana, Brewster said she knew by the age of 6 that she would study and practice medicine.

Brewster earned her bachelor's degree in mathematics from Rutgers University, graduating Phi Beta Kappa, and her medical degree from the University of California, Los Angeles. She completed her residency training in obstetrics and gynecology at Harbor-UCLA Medical Center and a fellowship in gynecologic oncology and her PhD in epidemiology at the University of California, Irvine, where she was subsequently appointed to the faculty.

In 2008, she was recruited to UNC to direct the Center for Women's Health Research and to join the Department of Obstetrics and Gynecology's Division of Gynecologic Oncology and the cancer center.

Asked early in her career why she chose to specialize in gynecologic oncology – she had considered becoming a surgeon – Brewster said she wanted the opportunity to care for patients, whom she fondly called “her ladies,” through their full course of care.

“Being able to know and work with someone like Wendy, who consistently exuded positivity, hope, and kindness, has truly been a blessing. On many occasions I had the privilege of witnessing firsthand her deep generosity and innate ability to uplift those around her,” said Genevieve Neal-Perry, MD, PhD, Robert A. Ross Distinguished Professor and chair of the Department of Obstetrics and Gynecology at UNC School of Medicine.

In addition to being a compassionate and caring physician, Brewster is remembered for her warm and vivacious approach to living life to the fullest.

“We have lost a partner, a confidant, and an inspired source of learning, but most importantly a friend. We are all comforted by the fact that Wendy is at peace. As a gift, she entrusted many of us with her cherished orchid collection. Mine are already blooming,” said John Boggess, MD, professor of obstetrics and gynecology and co-director of the Division of Gynecologic Oncology at UNC School of Medicine.

While caring for her patients and their families, as well as her trainees and colleagues, was her *raison d'être*, Brewster was equally committed to furthering the field of gynecologic oncology. She was proud to be a member of the Society of Gynecologic Oncology. She was president-elect of the organization – her term was to start in 2024 – and she had served as secretary-treasurer, deputy editor of its journal *Gynecologic Oncology*, and program co-chair of its 2019 annual meeting. She generously championed the organization's career development initiatives. Earlier this year, she endowed a fund to support early-career investigators demonstrating a commitment to improving endometrial and cervical cancer outcomes. In honor of this gift and to celebrate her legacy, the SGO established the Wendy R. Brewster, MD, PhD, Young Investigator Award, which will be presented annually at the opening session of its annual meeting.

Brewster was also passionate about identifying and eliminating health care inequities.

From the start of her career, she investigated the populations at risk for disparate treatment and poor outcomes in cervical, colon, endometrial and ovarian cancers. One of the studies she led, which examined how the standard of medical care impacts outcomes of high-risk cervical patients, demonstrated that providing single-visit treatments produced better, more effective outcomes. More recently, she was collaborating on studies examining the relationship between distance and access to care for rural and urban cervical cancer patients, which is a significant issue in North Carolina.

SEE BREWSTER, PAGE 5

Wendy Brewster Distinguished Lectureship in Cancer Health Equity

To honor the life and legacy of Wendy Brewster, MD, PhD, UNC Lineberger established the Wendy Brewster Distinguished Lectureship in Cancer Health Equity.

The lectureship will feature an annual talk on cancer health equity by a distinguished scholar, who will also meet with UNC faculty, staff, students and trainees. The hope is this will remind and inspire others to continue Wendy's work to ensure that everyone is given the opportunity to receive the best and most effective cancer care, especially women diagnosed with cervical, endometrial or ovarian cancer.

Those interested in supporting the lectureship may donate online to the Wendy Brewster, MD, PhD, Distinguished Lectureship Fund, www.unchf.org/wendybrewster.

Rosenstein honored with lifetime achievement award



Donald Rosenstein, MD, third from the right, was celebrated by his colleagues, including with life-sized face cutouts, when he was presented with the Jimmie Holland Lifetime Achievement Award at the American Psychosocial Oncology Society annual meeting.

The American Psychosocial Oncology Society presented UNC Lineberger's Donald Rosenstein, MD, with its highest honor, the Jimmie Holland Lifetime Achievement Award, during its annual meeting this spring.

"To have been honored in this way was deeply meaningful and quite humbling," said Rosenstein, professor of psychiatry and hematology and director of UNC Lineberger's Comprehensive Cancer Support Program. "I knew Jimmie Holland well. She was a giant in our field. I just thought the world of her and that's why this award meant so much to me."

Attending to the emotional and physical needs of the patient and their family is central to providing comprehensive cancer care, Rosenstein said. "Psychosocial oncology speaks to the more personal, psychological, interactive, humanistic aspects of cancer care," he said. It includes addressing everything from anxiety and depression to post-traumatic stress disorders that are associated with cancer. "With a cancer diagnosis or its treatment, it's important to know how to talk with your children about having cancer, how to prepare yourself or your family members for perhaps the instability and death of a loved one who has cancer."

It was a range of family considerations that started Rosenstein on his journey to UNC Lineberger. He was serving as a clinical director at the National Institute of Mental Health and as chief of the National Institutes of Health psychiatry consultation-liaison service, when UNC Lineberger Director Shelley Earp, MD, contacted Rosenstein to gauge his interest in a new position at UNC.

Earp said recruiting Rosenstein to establish the Comprehensive Cancer Support Program was a top priority.

"Don is one of the most respected leaders in the field of psycho-oncology and we were so fortunate he accepted our offer to join our faculty in 2009 as we opened the N.C. Basnight Cancer Hospital," Earp said. "We wanted a visionary leader to establish our comprehensive cancer support program for all who came to us for care. His blend of innovation, humanity, and practicality led us in a spectacular fashion, from new ideas to improve the

well-being not only of the patient, but also the family, to growing a program that has quadrupled in size."

While Rosenstein was motivated to come to UNC for professional opportunities, he said there was another very important reason to move to North Carolina. "My wife and I have two children, a son who's now 31, and a daughter who's 29, and our son has really profound autism. In nearby Carrboro, there's a program that provides incomparable services for people like my son. So instead of a several hours' drive to visit him like we had in the D.C. area, he now lives five minutes from us in a group home and we see him pretty much every week for sleepovers. This has been a big deal for our family."

Like the care he has shown his own family, Rosenstein said ensuring the well-being of both the patient and their family is a guiding principle for the Comprehensive Cancer Support Program.

Case in point: when Rosenstein and his colleague Justin Yopp, PhD, could not find a program to support men with young children who were trying to balance the loss of their partner and their parental responsibilities, they established their own support program.

"Our widowed parent project grew directly out of our clinical work, and it's turned into an inspiring research program," Rosenstein said. "It started with weekly clinical rounds where we talk about new cases, especially challenging cases. There was one morning when we discussed a woman who had, sadly, died of breast cancer. Her husband was struggling mightily, and we looked for a support group but couldn't find anything that was appropriate as many such groups consisted of people in their 70s or 80s who didn't have young kids. Younger, widowed parents didn't feel like those groups fit their situations very well. So, we started our own support group."

The support group was more successful than either Rosenstein and Yopp anticipated, and the insights they gleaned from the support group motivated them to write a book. "The Group: Seven Widowed Fathers Reimagine Life," published in 2018, was written in collaboration with the support group members.

"Several years after the first group of men joined us, I thought, we need to tell more people about this, so we wrote a book. What's cool about our book is that the husbands are partners with us. They all wanted to somehow pay it forward to make it easier for guys coming after them. They have a lot of hard-earned wisdom about how to talk with patients and how to care for them when they're sick and are also trying to raise kids. It's about raising a family in an unexpected way."

UNC Lineberger now offers two support groups for widowed fathers and one for widowed mothers.

Another one of Rosenstein's major initiatives at UNC Lineberger has been helping patients deal with the financial toxicity of cancer care. Supported with a four-year, \$1.87 million National Cancer Institute grant, Rosenstein and his UNC Lineberger colleague Stephanie Wheeler, PhD, MPH, are studying the impact of implementing financial navigation services at five rural cancer centers in North Carolina to help patients cope with the financial burden related to cancer care.

"We are focused on assisting patients with financial navigation, which involves helping patients understand what financial support programs they qualify for and how to fill out applications, and identify resources in the community that people may not know are available to them," Rosenstein said. "We try to give patients more of a sense of control with respect to their bills. Short of a major change in how this country funds medical and cancer care, we have put in place practical assistance approaches to help people do a little bit better financially with what they're facing."

As for his personal pursuits, Rosenstein finds North Carolina to be an astonishingly beautiful state that he loves, from the mountains to the beaches. He also likes to play tennis. But his real passion is woodworking. "I have a wood shop in my basement. Most of what I do during the day has to do with thoughts, feelings, words and ideas — things that aren't really tangible. When I'm not occupied with my day job, I like to hold up a piece of wood that that I've worked on. It's quite tangible." 🪵

A fortunate path from biology to cancer genomics



Katie Hoadley, PhD, grew up around science, spending a lot of time as a young girl in the lab while her father worked toward his doctorate degree in toxicology.

“I wanted a PhD in genetics when I was 12,” said Hoadley, whose original plan was to become a plant biologist. She worked summers in high school and college at a U.S. Department of Agriculture research facility near her home in West Virginia, exploring methods to make fruit more resistant to frost and to prevent mold growth, and earned undergraduate degrees in biology and chemistry from West Virginia Wesleyan College.

It was in graduate school at UNC when she turned her focus to cancer after joining the lab of UNC Lineberger’s Chuck Perou, PhD, a pioneer in breast cancer research who discovered and classified distinct tumor subtypes that responded differently to treatment. For Hoadley, this change in career path was a matter of being in what ended up being the right place at the right time.

Hoadley worked in Perou’s lab from 2001–2006 before going to Amsterdam for a yearlong postdoctoral research fellowship at the Netherlands Cancer Institute. In 2007, she came back to UNC for her postdoctoral work, again in Perou’s lab. UNC had recently been designated as a key research hub for The Cancer Genome Atlas (TCGA), a groundbreaking cancer genetics consortium backed by the National Cancer Institute and the National Human Genome Research Institute that, as one of the field’s earliest large-scale team-science projects, brought together researchers from different disciplines and institutions across the globe.

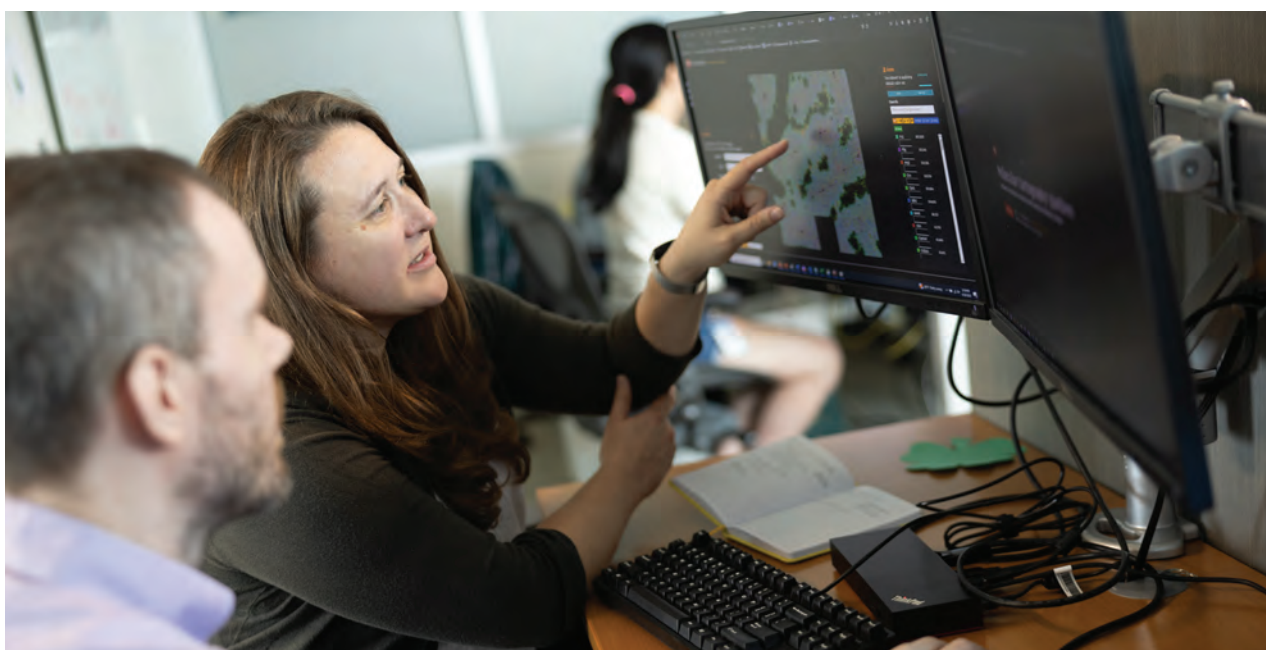
Hoadley quickly assumed a leadership role in the massive project. In its first couple of years, TCGA transitioned into next-generation sequencing. Over the next decade, TCGA characterized more than 10,000 tumor samples of 33 types of cancer, generating millions of data points and providing new insights that have changed the way doctors diagnose and treat cancer.

TCGA had more than 40 papers and the PanCancer Atlas project generated another 28 research papers showcasing major findings. Perou said Hoadley was actively involved in almost every single one, including being the first author and leader of a landmark TCGA study that landed on the cover of *Cell*, one of the most prestigious journals in the field of cancer research. While working on TCGA, Hoadley joined the UNC faculty, became a UNC Lineberger member and established her own research lab, and is on the path to become a tenured associate professor.

“Katie made a name for herself in TCGA and really excels in the team science environment,” Perou said. “When she first came to UNC she was a biologist, but when she came back and worked on TCGA she changed from being a bench scientist to a computer scientist – and she really ran with it. To lead a genomics consortium of 100 people and have your paper make

Grants and donations have become a key resource for Hoadley and her colleagues at UNC Lineberger, especially as federal funding has not risen significantly over the past two decades even though equipment and technology costs have. “The funding is super important because it allows us to support novel and intriguing types of research that are more on the cutting edge. Many of these new technologies are incredibly expensive,” she said. “Funding also allows us to work with larger sample sets. And the more samples we analyze, the better chance we have to make discoveries that can move the field forward and improve clinical care.”

Outside of the lab, Hoadley enjoys playing trivia weekly, going to concerts and paddleboarding on Jordan Lake. She also dedicates a lot of her personal time volunteering with organizations that focus on making life better for both cancer patients and on supporting



Katie Hoadley, PhD, has distinguished herself as one of the world’s most-cited cancer genomics researchers.

the cover of *Cell* is what any cancer researcher dreams about. It’s sort of the science equivalent of winning the NCAA title, and she did that.”

Now one of the most-cited cancer genomics researchers in the world, Hoadley has received numerous awards for her work. Her area of expertise is integrative genomics and computational research – that is, using computers to analyze millions of genetic and biological data points in tumor samples, looking for signals and patterns that may point to clues about the growth and spread of disease across both time and space. She and her eight-person lab team focus mostly on ribonucleic acid (RNA), a molecule whose expression and levels regulate cell function, influencing the growth and development of cancer.

Her national prominence continues to grow. Recently, NASA contacted her and asked her to help investigate the effects of space flight on RNA expression.

cancer advocacy. She’s been involved with the Susan G. Komen Foundation since graduate school and now chairs the Survivor Tent during Komen’s annual Race for the Cure; she also works with survivors as part of the American Cancer Society’s Making Strides Against Breast Cancer event. “Over the last 20 years, I’ve gotten to know a lot of men and women who had breast cancer in our community, so that’s been a huge motivating factor in my work,” she said.

Hoadley also finds inspiration from her late friend, who lost her battle with metastatic breast cancer in 2019. “It was devastating to lose someone you knew very well and who had the disease you study, and you aren’t able to make a change that could influence her life,” Hoadley said. “We definitely hope the research we are doing will make an impact in the future and prevent other folks from dying from disease. It motivates what we do every day.”

‘Live Like Libby’ drives research seed grant funding



For Jay Dalton and his brother-in-law Vernon Averett, the space of a few weeks changed their lives forever. Elizabeth Dalton Averett, or Libby as she was fondly known, was a sister, a wife and a mother of two daughters, who survived breast cancer only to succumb to an undiagnosed heart issue, all in a painfully short amount of time.

“It was tragic and very sudden. [Our daughters] Jansen was 10, and Lindsay was 6 when they lost their mom,” Averett said. “She recovered from breast cancer, went in and got a clean report on the breast cancer, no sign of anything, and 12 days later, she died, no warning no nothing. She had dilated cardiomyopathy and was only 37. I’m 11 years older, and we’d talked about if something happened to me, but we hadn’t thought something would happen to her.”

Sadly, this wasn’t the first tragedy to befall Dalton’s family.

“Another sister and my dad had all died early, and it was a tough thing all around,” Dalton said. “When [Libby] died, I said, ‘That’s enough of this, we’ve lost enough, we’re going to do something.’”

That something was the establishment of the Elizabeth Dalton Averett Foundation and a seed grant fund at UNC Lineberger in Libby Averett’s memory. Dalton’s work in research at Duke University meant he knew how valuable seed grant funds are to researchers with big ideas. And he knew that big ideas could lead to bigger breakthroughs.

“We’re going to take it year by year, raise as much as we can for as long as we can. We want the seed grant to be as big as possible, with enough to be able to always fund smaller projects,” Dalton said. “New ideas are always coming, and even small studies can cost \$10,000, \$15,000 or \$20,000. I know that funding can be important, and I thought we could make a bigger difference there.”

The UNC Lineberger Seed Grant Program provides researchers with funding to pose big questions about cancer care and research. This type of early-stage research typically doesn’t attract federal



Left: Libby Averett with her husband, Vernon, and their daughters Lindsay, left, and Jansen, right. Above: Jay Dalton, right, with his daughter on his boat, dedicated to his late sister Elizabeth “Libby” Dalton Averett.

funding because the researchers often have no or only limited data to support their grant application. Being able to discuss studies, data or experience pertinent to the application greatly improves the proposed projects’ likelihood of success, especially for young cancer investigators.

The families decided to hold a golf tournament to raise awareness, bring in money for the seed grant fund and foundation, and to honor Libby.

Both men said Libby Averett was always in a good mood and full of life. Dalton even has a boat with the phrase “Live Like Libby” painted on it. The tournament started in 1996, a year after Libby Averett’s death, and despite a pause in 2020 due to COVID-19, they’ve held it for nearly 30 years.

“I never dreamed I’d start a nonprofit and have a golf tournament every year, and now I can’t imagine not doing it,” Dalton said. With funds

from the tournament and contributions from larger local donors, the seed grant fund recently reached \$100,000.

“UNC Lineberger does great things,” Vernon Averett said. “When I was on the [Board of Visitors], I was so impressed with the people and the things they were doing, the research they were doing. I’d like to see the money go to a cure for breast cancer, and to help alleviate some of the issues, pain and all that’s involved with cancer. Somewhere down the line there will be a cure, and if we can help just a little bit to get to that point, we’d love it.”

Both families are dedicated to “live like Libby” and Vernon Averett said he loves that his daughters are supportive of the event and the foundation, too, and knows his late wife would be delighted to see what he and Dalton have done. “She would be thrilled, just to know in her memory that someone else would be helped because of what we are providing.”

Brewster *Continued from page 2*

Prior to her passing, UNC Lineberger established the Wendy R. Brewster Distinguished Lectureship in Cancer Health Equity to honor her legacy and to encourage others to continue and expand on her work. The lectureship will feature an annual talk on cancer health equity by a distinguished scholar, who will also meet with UNC faculty, staff, students, and trainees.

Brewster also dedicated herself to building a workplace and a cancer program that was diverse and inclusive and achieved excellence in care and outcomes for everyone. She served on the cancer center’s senior administration as the associate director of diversity,

equity and inclusion, and she was co-chair of the UNC Lineberger’s Equity Council.

“Wendy was always sensitive to the needs of patients, colleagues, friends and staff. She was always available, supportive and deeply insightful,” said Samuel Cykert, MD, professor of medicine, who served with Brewster as co-chair of the UNC Lineberger Equity Council.

Brewster is survived by her sister and brother, Abenaa Brewster, MD, MHS, and Rod Brewster, their families, and members of her extended family, as well as her colleagues at UNC and nationally, whom she treated like family.

— research briefs —

HPV-ASSOCIATED HEAD AND NECK CANCER SUBTYPES PREDICT OUTCOMES



Yarbrough

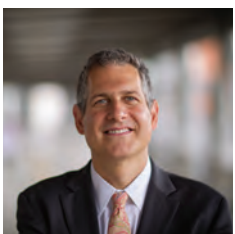
Cases of human papillomavirus-associated cancers of the head and neck, known as head and neck squamous cell carcinoma (HNSCC), are rapidly increasing throughout the United

States. Unfortunately, relatively little is known about the factors that contribute to these tumors and what makes some tumors more aggressive and treatment-resistant than others.

New research by **Wendell Yarbrough, MD, MMHC, FACS**, and colleagues published in the Proceedings of the National Academy of Sciences has generated insights on why some patients respond better to radiation therapy than others. They report that HPV+ head and neck cancers can be divided into two distinct subtypes that determine how well patients will respond to therapy, with one subtype being more responsive to radiation therapy. Researchers also discovered a new mechanism of HPV carcinogenesis through the study which enhances growing efforts to personalize treatment for patients with HPV+ HNSCC.

“We’re the first ones to describe these two subtypes,” Yarbrough said. “Using this research, we can firmly identify two groups of patients and are able to associate their tumor subtype with treatment outcomes.”

STUDY PROVIDES GUIDANCE ON RECTAL CANCER TREATMENT CHOICES



Basch

A multi-institutional study that compared two treatment options for locally advanced rectal cancer while collecting patient-reported treatment side effects has generated insights patients can use to make more

informed quality-of-life treatment choices in consultation with their doctors.

The researchers evaluated whether patients receiving treatment for localized rectal cancer can receive chemotherapy alone instead of the current standard approach of radiation therapy with some chemotherapy prior to surgery.

“During the treatment itself, multiple symptoms were worse with chemotherapy, but a year after treatment ended, those symptoms resolved and the pattern flipped so that patients who received radiation exhibited lingering symptoms,” said lead author **Ethan Basch, MD, MSc**. “Patients ideally will understand the potential impact of treatments

on how they feel and function when making choices, so as oncologists we need to talk with our patients about their options and the consequences of those options.”

Patients and clinicians sometimes use decision-making tools to aid choices, such as interactive videos or surveys showing the tradeoffs between treatments, but Basch said these tools can only be effective if they have reliable data in them. “This study is about empowering patients and clinicians with the information they need to make informed decisions about treatment.”

MAILED TESTING KITS DOUBLE CERVICAL CANCER SCREENING



Smith

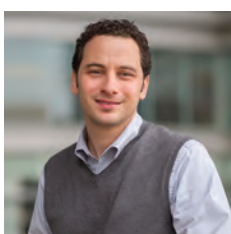
Jennifer Smith, PhD, MPH, and **Noel Brewer, PhD**, have published a study that found mailing human papillomavirus (HPV) self-collection tests and offering assistance to book in-clinic screening appointments to

under-screened, low-income women improved cervical cancer screening nearly two-fold compared to scheduling assistance alone.

An estimated 14,000 women in the United States will be diagnosed with cervical cancer this year, and the cancer will lead to more than 4,300 deaths. Cervical cancer disproportionately affects Black and Hispanic women, with Hispanic women having the highest incidence rates, and Black women having the highest mortality rates for the disease in North Carolina and in the United States. Most cervical cancers occur among under-screened women. The Centers for Disease Control and Prevention estimate 22% of eligible adults in the U.S. are overdue for screening.

“My hope going into this study was that mailing kits for home-based collection might increase cervical cancer screening, but we were thrilled to find a nearly two-fold increase in screening uptake,” Smith said.

YOUTH HAVE MISPERCEPTIONS ABOUT SYNTHETIC NICOTINE IN E-CIGARETTES

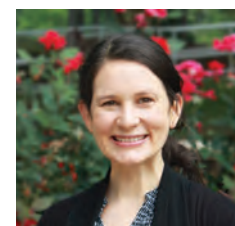


Noar

The FDA reports that more than 2 million high school students use e-cigarettes, or vape. Recently, manufacturers have started to advertise and sell e-cigarettes with synthetic nicotine,

which is made in a lab rather than derived from tobacco plants.

A study by **Seth Noar, PhD, Sarah Kowitt, PhD, MPH**, and colleagues found that youth have widespread uncertainty and misperceptions about the sources of nicotine in e-cigarettes. In addition, language used to describe the products on packaging impacts perceptions of these products among youth. Specifically, the study revealed that among youth who use e-cigarettes, describing synthetic nicotine as “tobacco-free nicotine” increased intentions to purchase e-cigarettes.



Kowitt

“The industry has increasingly used the term ‘tobacco-free nicotine’ to describe synthetic nicotine products, and our data strongly suggest that this term may be misleading to youth in ways that increase the appeal of these addictive products,” Noar said.

USING AI TO IMPROVE BREAST TUMOR REMOVAL ACCURACY



Gallagher

Kristalyn Gallagher, DO, and her colleagues at UNC Lineberger, the UNC Department of Surgery and the Joint UNC-NCSU Department of Biomedical Engineering report they have developed an artificial

intelligence (AI) model that can predict whether cancerous tissue has been fully removed during breast cancer surgery. Their findings were published in the Annals of Surgical Oncology.

“Some cancers you can feel and see, but we can’t see microscopic cancer cells that may be present at the edge of the tissue removed,” Gallagher said. “This AI tool would allow us to more accurately analyze tumors removed surgically in real-time and increase the chance that all of the cancer cells are removed during the surgery. This would prevent the need to bring patients back for a second or third surgery.”

The researchers had to “teach” their AI model what positive and negative margins look like. They used hundreds of specimen mammogram images, matched with the final specimen reports from pathologists. They also gathered patient demographic data, such as age, race, tumor type, and tumor size.

After calculating the model’s accuracy in predicting pathologic margins, researchers compared that data to the typical accuracy of human interpretation and discovered that the AI model performed as well as humans, if not better.

Research

Continued from page 1

The Moonshot-initiated tobacco cessation and prevention programs

Adam Goldstein, MD, MPH, director of the UNC Tobacco Intervention Program and professor of family medicine; and Kurt Ribisl, PhD, co-lead of the UNC Lineberger Cancer Prevention & Control Program, and professor and chair of behavioral health at UNC Gillings School of Global Public Health. They discussed how telehealth was used during the COVID pandemic to keep tobacco cessation top of mind and outlined prevention measures to reduce teen vaping.

The Moonshot-initiated cancer screening efforts

Stephanie Wheeler, PhD, MPH, associate director of UNC Lineberger Community Outreach & Engagement, and professor of health policy and management at UNC Gillings; and Daniel Reuland, MD, MPH, co-director of the Carolina Cancer Screening Initiative and professor of medicine at UNC School of Medicine. They spoke on the success of the Carolina Cancer Screening Initiative in Roanoke Rapids, North Carolina.

Cancer, nutrition & obesity, endometrial cancer as a focus

Victoria Bae-Jump, MD, PhD, director of the UNC Lineberger Endometrial Cancer Center of Excellence and professor of gynecologic oncology at UNC School of Medicine; and Marissa Hall, PhD, assistant professor of health behavior at UNC Gillings. They explained their research that showed food warning labels could reduce the purchase of less healthy foods.

Prabhakar engaged each researcher with pertinent questions about the cancer-related problems challenging the United States, and how to best address these issues through better access to tobacco cessation programs, better ways to reduce obesity to decrease endometrial cancers, and how to leverage population health data and technology to reduce cancer rates.

“Working on solutions to cancer is one of the most important things we can do, and these solutions are so

important to the President and First Lady,” she said. “They have the conviction to tackle this, and that’s one of the reasons I took this job.”

She added, “I’m heartened by the progress you’ve made, and we all know we need to do more. It was just such a pleasure to dig in and see quality of work and commitment you bring to this work.”

The half day of meetings led White House officials to invite Goldstein to attend the Cancer Moonshot Smoking Cessation Forum in Washington in June. The meeting highlighted the Biden Administration’s commitment to tackling the single biggest driver of cancer deaths in this country—smoking—and efforts underway across sectors to equitably expand access to effective smoking cessation support.

This was the first White House forum on smoking cessation. Leaders from the federal government, community coalitions, and academic health organizations participated in discussions on the Cancer Moonshot Initiative’s upcoming cessation plan.

Goldstein represented a consortium of 14 academic health and cancer centers that formulated “MATTCH – Medicare Access to Tobacco Treatment for Cessation and Health,” a proposal that underpins a planned new Cancer Moonshot Cessation Initiative addressing payment reform for smoking cessation.

Prior to the forum, Goldstein met with Food and Drug Administration Commissioner Robert Califf, MD.

“I emphasized that what was missing was ‘how to pay for cessation,’ and that for the Cancer Moonshot Initiative’s cessation efforts to reach larger populations to provide intensive counseling and pharmacotherapy, payment reform must occur, or providers won’t have the ability to sustain the treatment,” Goldstein said. 🗣️



Cancer center leaders, including Lisa Carey, MD, FASCO, left, hosted White House Chief Science and Technology Advisor Arati Prabhakar, MS, PhD, who came to UNC to learn more about cancer prevention research initiatives at UNC Lineberger.

Director

Continued from page 1

Cancer Genome Atlas project, has expanded our understanding of the biology of cancer. Don has established a patient support program at UNC that provides a wide array of services that today serves as a national model, and he and his colleagues are now investigating how the high cost – or financial toxicity – of cancer care adversely affects patients and their families.

Speaking of national leaders, White House Chief Science and Technology Advisor Arati Prabhakar traveled to UNC Lineberger earlier this year to provide an update on the White House’s Cancer Moonshot program. She also had roundtable discussions with Victoria Bae-Jump, Adam Goldstein, Marissa Hall, Dan Reuland, Kurt Ribisl, and Stephanie Wheeler to learn about our cancer prevention research programs. This wonderful exchange of ideas led to Adam being invited to participate in the White House Cancer Moonshot Smoking Cessation Forum in June.

Our ability to be to be part of national conversations on cancer, to lead innovative trials, and to offer care not readily available elsewhere is due in part to the investments you and others make in our cancer center. The big ideas that lead to new treatments often start with a premise and limited funding. But it takes vision, like that shown by the Dalton and Averett families, whom you’ll read about in this issue, who established a cancer research fund to support early-stage research. You might be surprised by how researchers can leverage these smaller donations to attract large federal grants to continue their work toward new discoveries or better care and outcomes for cancer patients.

While we have had much to celebrate this year, we also experienced a great loss this summer when our beloved faculty member, Wendy Brewster, died of pancreatic cancer. She was exceptionally talented, compassionate and committed to caring for women with gynecologic cancer as well as studying the factors that contribute to poor outcomes in endometrial, ovarian and cervical cancers. Her desire to make a difference on all levels endeared her to patients and their families and her cancer center colleagues.

Lastly, I will close with some personal news. A few weeks ago, I announced I will be stepping down as cancer center director, effective June 30, 2024. Ned Sharpless, who served as director of the National Cancer Institute and interim commissioner of the FDA, as well as director of UNC Lineberger between my two leadership stints, is leading the national search for a new director. UNC Lineberger is an extraordinary cancer center with a wonderful faculty and staff as well as generous and steadfast donors. I am confident our search will produce a deep list of wonderful candidates and, ultimately, a new director who’ll help lead the cancer center to even greater achievements in the years ahead. And as I return to the faculty, I hope to continue to be of service to this remarkable center and university. 🗣️

events



1

She ROCKS Triad

1: She ROCKS Triad held its 6th annual dinner and silent auction in September at Summerfield Farm in Summerfield, North Carolina, in support of UNC Lineberger's ovarian cancer research program. Christy Graves of Chapel Hill Toffee and Dina's Dynasty was the event's keynote speaker.

Swim Across America

2-5 The 2nd Annual Swim Across America team relay swim at UNC's Koury Natatorium in Chapel Hill in September raised a record \$139,757. The event supports cancer research at UNC Lineberger.



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