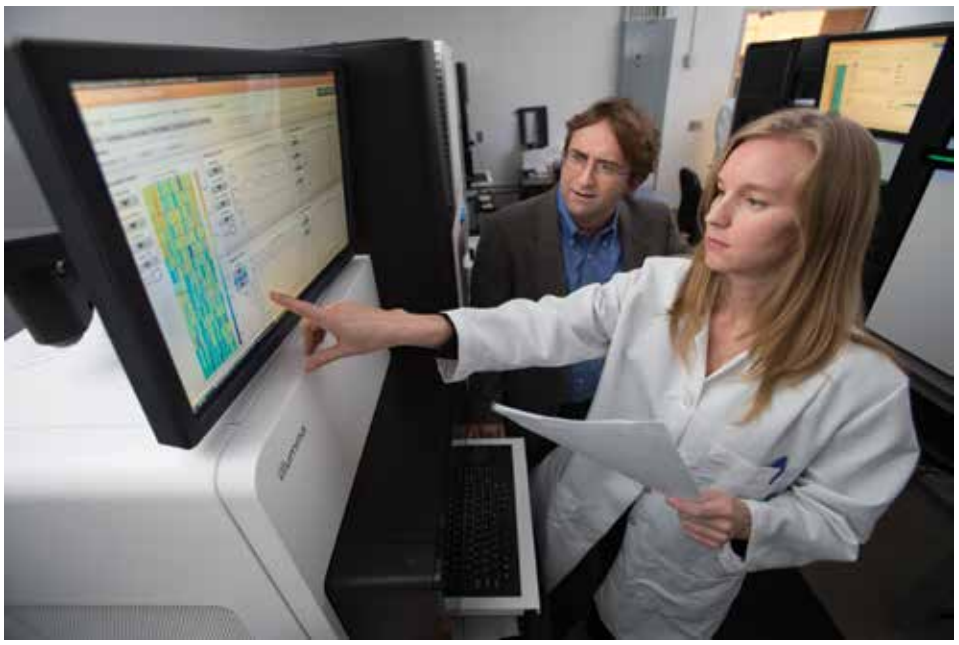
UNC Lineberger Comprehensive Cancer Center

Winter 2014

cancerlines

New year, next generation of cancer treatment



UNCseq provides high-throughput next generation sequencing through its translational core facilities.

What will 2014 hold for cancer treatment? At UNC Lineberger, researchers and physicians are focusing on one of the next generations of cancer treatment — cancer genetics. A better understanding of this rapidly changing field — how the presence and mutation of certain genes play a role in cancer diagnosis and treatment — will help UNC Lineberger develop highly targeted therapies for cancer patients.

With the creation of a new endeavor called UNCseq™, UNC Lineberger is now opening new doors into cancer genetics by creating a way to bring translational research to patient care faster than ever imagined.

"We needed to find a way to bring cutting edge research directly to our patients sooner, but still maintain the ethical, regulatory and safety needs surrounding patient care," said Neil Hayes, co-director of UNCseq and of the Data Analysis Sub-Group for The Cancer Genome Atlas (TCGA) Project at UNC. "UNCSeq allows us to do this on so many levels."

UNCseq is a new genetic sequencing protocol that analyzes tumor samples obtained from a biopsy or surgery using next generation sequencing, comparing them to normal tissue samples. This comparison allows researchers to pinpoint the genetic changes that may influence treatment.

Here's how it works. Think of a cancer cell's DNA as its instruction manual. This instruction manual determines how the cancer will behave and specifically determines if it will grow slowly or quickly, if it will respond to one type of therapy or another, and if it will be cured or come back. Being able to read this instruction manual is critical in treating the cancer.

"With UNCseq, our researchers are able to open that manual, read the instructions and better understand what's driving the tumor's behavior, as compared to the 'normal' DNA gathered," said Hayes. After sequencing, researchers are able to identify all of the mutations present in the cancer cell that aren't present in the normal DNA.

Once the list of mutations has been identified, a group of doctors constituting the Molecular Pathology Tumor Board meets weekly to review mutations found that week. While some mutations are innocent, others signal a certain prognosis or a new therapy for the patient. Once those mutations have been identified and confirmed, the patient's care may change. "If we

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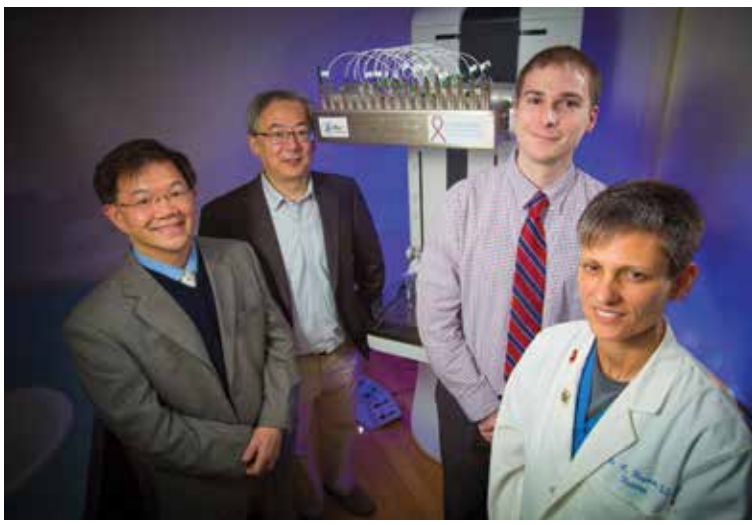
New X-ray technology developed at UNC could revolutionize breast cancer detection

A new X-ray technology developed with support from UNC Lineberger could shape the future of breast screening and has just entered the first clinical stage necessary to move it from the lab to the clinic.

The new mammography screening technology uses a first-of-its-kind stationary breast tomosynthesis mammography system developed by UNC Lineberger member Otto Zhou, PhD, and Jianping Lu, PhD, both professors of physics. This new technology could have two advantages; one, better images and higher resolution scans than what are currently available and two, exposing patients to a lower dose of radiation from the procedure. By using the new carbon nanotube x-ray source array technology invented by the same team at UNC, the device could translate into more accurate detection with fewer callbacks and reduced uncertainty for patients.

The device is currently being tested in clinical trial led by Drs. Yueh Lee, MD, PhD, and Cherie Kuzmiak, DO, Department of Radiology. The trial, a major step on the way to moving the device into clinical practice, will verify the device's ability to



Yueh Lee, MD, PhD, Otto Zhou, PhD, Research Assistant Andrew Tucker and Cherie Kuzmiak, MD

match or improve upon existing mammograms. This trial follows a successful study of the device's capacity

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director's message

Ned Sharpless, MD

With great excitement, I begin 2014 as the new director of the UNC Lineberger Comprehensive Cancer Center. For nearly 40 years, UNC Lineberger has enjoyed strong traditions of outstanding cancer research, clinical care and prevention under the visionary leadership of Drs. Joseph Pagano and Shelley Earp. I look forward to building on these traditions and pushing the boundaries of our work; expanding scientific discovery in the labs and applying those discoveries to clinical advances for our patients across North Carolina and beyond.

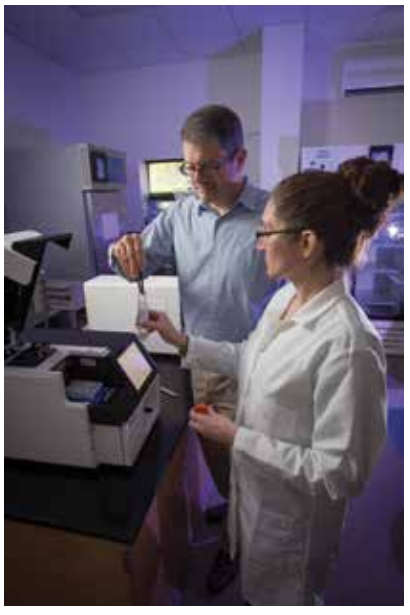
By way of introduction, I grew up in Greensboro, was a Morehead Scholar at UNC and am a graduate of the UNC School of Medicine. After medical school, I left Chapel Hill for 10 years to receive oncology training at Harvard Medical School and the Dana Farber Cancer Institute, but rejoined the UNC faculty in 2002. Since returning to UNC, I have published more than 100 papers on cancer biology, filed more than 10 patents describing new cancer therapies, founded two companies with the mission of developing better cancer care, cared for hundreds of patients on the inpatient cancer service, and all the while, tried to be a good husband and father of two teenagers. During that same period, several family and close friends have been diagnosed with cancer and treated for the disease with varying success. My sister is now a long-term survivor of triple negative breast cancer, while my father died of melanoma two summers ago. Because of this personal and professional history, I am passionate about cancer research and motivated daily to find better treatments for the disease.

We have seen amazing recent strides in our efforts to eradicate cancer suffering. Almost every week, we see new discoveries in cancer biology and clinical care. Last month, I cared for a young man with a form of blood cancer that was uniformly lethal 10 years ago. Instead, given recent progress against his tumor type, we gave him a non-toxic chemotherapy pill and sent him on his way to live a normal life, effectively cured of his disease. Coupled with significant advances in cancer prevention (e.g. smoking cessation), we have seen a 20 percent decline in cancer mortality since the early 1990s, translating into more than a million cancer deaths averted thanks to this progress. But there is more to be done, and we are entering the next phase in cancer research. A time where we are analyzing a person's individual DNA to better tailor treatment. A time where we are developing drugs that can attack a tumor with amazing accuracy. A time when we are harnessing the power of the body's own immune system to fight the cancer.

In this issue of *Cancer Lines*, you will read about our effort to leverage a greater understanding of cancer genetics to better tailor treatment for our patients. This effort — called UNCseq — will help us understand the role of cancer genetics in treatment and most importantly, help patients who may not have any other options. You will also read about two new exciting clinical trials now underway. The first trial, aimed at treating rectal cancer patients, is one of the only trials in the country to pair nanomedicine — a rapidly growing field — with standard care. The second trial is to test new breast screening technology that could replace traditional mammography. These are exciting times at UNC Lineberger.

In my new role, I look forward to personally meeting and thanking our many supporters. Without your support, we could not change the lives of our patients as we do. I look forward to what the future holds for UNC Lineberger, our research, and most of all, for our patients.

Next generation *continued from page 1*



Top: UNC Lineberger is one of the few places in the world with as much experience in using clinical samples for RNA sequencing.

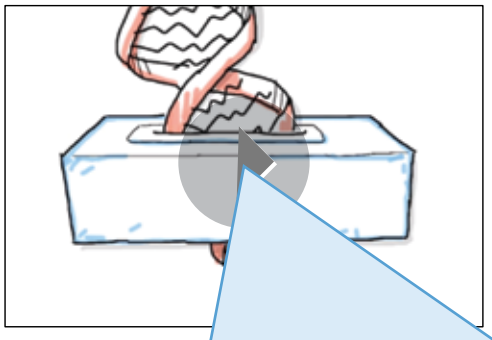
can identify the mutations, there may be a drug or clinical trial available that can address that mutation," said Hayes. To date, over 930 patients have been consented for UNCseq and that number grows every day.

Expanding beyond sequencing of DNA, UNCseq also allows researchers to analyze RNA, blood and other samples.

"With UNCseq, we now have the vehicle that enables us to significantly expand our work beyond DNA sequencing to more cutting edge sequencing work using RNA," said Hayes. "UNC Lineberger is one of the few, if any, places in the world with this much experience in using clinical samples for RNA sequencing."

UNCseq especially serves as a resource for patients with difficult to treat tumors, identifying and targeting the molecular weaknesses specific to the patient's cancer. Beyond the individual benefits to patients, UNCseq will help provide the genetic data needed to pursue new research into novel treatments and to test the effects of clinical therapies currently being investigated.

Looking forward, UNCseq aims to provide every patient with tumor analyses that will allow their physicians to prescribe targeted and efficient therapies on an individualized basis.



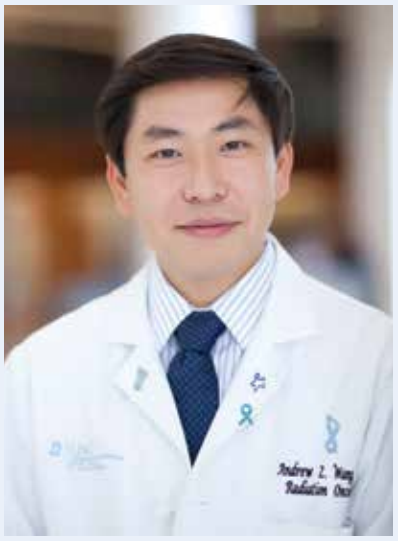
To watch a short video about UNCseq, please visit bit.ly/1n7sEdZ

Honoring excellence in nursing and clinical services

UNC Lineberger once again honored excellence in clinical services and nursing this year. Nurse navigator Melissa Holt and nurse practitioner Blaine Brower received the 2013 Nursing Excellence Awards, while radiation therapist Anne Camp and clinical pharmacist Aimee Faso received the 2013 Clinical Services Excellence Awards.

Single fathers support group member publishes book

After losing his wife Lisa to colon cancer in 2010 and faced with raising his three daughters alone, Bruce Ham turned to Single Fathers Due to Cancer, a support group developed by the UNC Comprehensive Cancer Support Program. Ham, one of the original members of the support group, has written a memoir, "Laughter, Tears and Braids," about his journey raising his daughters, learning how to braid hair and supporting his children after the death of their mother. To read Bruce's blog and find out more about his book, please visit therealfullhouse.wordpress.com.



UNC physician-scientist Andrew Wang, MD is leading the study

New clinical trial pairs 'magic bullet' drug delivery with radiotherapy to improve treatment for rectal cancer

UNC has launched a landmark clinical trial aimed at improving treatment for advanced rectal cancer by combining powerful nanotherapeutics with chemoradiotherapy, the current standard of care.

The study is a Phase Ib/II trial which will study the appropriate dosing and efficacy of CRLX101, a nanoparticle formulation of camptothecin, in combination with standard chemotherapy and radiation. The lead principal investigator is UNC physician-scientist Andrew Wang, MD. Dr. Wang's research has been focused on the clinical translation of nanotechnology to oncology, especially in chemoradiotherapy. His group has demonstrated in several pre-clinical studies that nanoparticle therapeutics has the potential to significantly improve chemoradiotherapy treatment for cancer. This trial is the first clinical evaluation of this approach.

"This trial is one of only a handful in the country that studies nanoparticle therapeutics for cancer treatment," said Wang.

Approximately 40,000 patients are newly diagnosed with rectal cancer in the U.S. each year, and approximately 22,000 patients in the U.S die from this disease annually. The majority of rectal cancer patients are diagnosed before the disease has spread distantly, making them candidates for pre-surgical chemoradiotherapy treatment. Combined chemoradiotherapy can completely eradicate the rectal cancer, but this only occurs in about 20% of rectal cancer patients.

"With this new targeted nanoparticle drug, we are hoping to see that number go up," said Wang.

The trial, which will be conducted at UNC and three other affiliated sites, plans to enroll over 60 patients in the study. The clinical trial is being conducted in collaboration with Cerulean Pharma Inc., a leader in nanopharmaceuticals.

For more information, please visit bit.ly/1aKQMAD

New X-ray technology *continued from page 1*

that used specimens collected from breast cancer patients.

"We are imaging patients prior to breast biopsy, so we already know they have a lesion that needs to be sampled or surgically removed. We don't know if it is cancerous or not cancerous. They are going to undergo conventional digital mammography and also compare it with the stationary breast tomosynthesis. This represents the first human clinical trial of a nanotechnology device that was invented at UNC over ten years ago," said Lee.

In current medical practice, digital breast tomosynthesis is used in combination with conventional 2D mammography. While this FDA approved procedure is shown to significantly reduce the callback rate, it exposes patient to a higher level of radiation and requires a longer breast compression time than 2D mammogram alone. The ultimate goal of the UNC team is to prove that the carbon nanotube-based technology can not only improve on existing tomosynthesis machines, but ultimately serve as a replacement for conventional mammograms.

"Digital breast tomosynthesis, when used in combination with conventional 2D mammography, has already been shown to reduce callback rates by around 40 percent," said Dr. Lee. "Unfortunately, digital breast tomosynthesis is limited in its evaluation of microcalcifications, which are often a cause of callbacks. Enhancing the evaluation of microcalcifications with the new carbon nanotube based x-ray technology could further reduce patient callbacks.

"Patients are most often called back for a finding on their screening mammogram and most of the time it is due to overlap of breast tissue. They get a letter asking them to return to for more pictures, and they really don't know what is going on. This obviously leads to more patient anxiety. The new technology could potentially further reduce that anxiety," said Lee.

The University Cancer Research Fund and the National Cancer Institute provided the funds to help build the first prototype of the device. Dr. Zhou and his team have licensed the technology to Xintek, a UNC startup company founded by Dr. Zhou. The prototype device used in this clinical trial was developed in collaboration with Hologic, one of the world's leading women's medical imaging companies.

"Cancer Maven" retires from UNC Lineberger

Funny. Professional. Kind. All of these words and more describe Michael O'Malley, who is retiring from UNC Lineberger Comprehensive Cancer Center after over 30 years of service with the State, most of it with the Center.

As associate director of UNC Lineberger, O'Malley's work has reached beyond campus to touch countless lives. Described as the "cancer maven" by a colleague, O'Malley's expertise in cancer research and prevention is enhanced by his complementary skills as an administrator, teacher and researcher.

Dr. O'Malley's background as a public health researcher was developed at UNC; that and his administrative skills made him a natural choice when Joe Pagano was looking for a new associate director in the early 1990s.

"Michael has helped shape the very core of UNC Lineberger," said Ned Sharpless, MD, director of UNC Lineberger. "While Michael might be retiring from the University, we look forward to a continued collaboration and his guidance on future grant opportunities."

Shelley Earp said, "Michael has been a friend, confidant and incredible colleague to both Jo Anne and me for 30 years. From his first big UNC Lineberger grant which helped build our new wing to yesterday's meeting to choose new cancer prevention fellows, he has been integral to UNC Lineberger's success. His skills as a teacher along with his humorous e-mails describing every type of issue has helped make UNC Lineberger what it is today. And what I know is that his passion for this place, its students, fellows and faculty won't let him really disengage. When we need him, he will be there."

O'Malley has also been an indispensable colleague for faculty, staff and students of the UNC Gillings School of Global Public Health, mentoring cancer control trainees who have gone on to illustrious careers.

"Michael has always been available to share his wise counsel, and his advice has been invaluable to me and others. I have appreciated so much Michael's interconnectedness to the North Carolina cancer control community and his generosity in linking people to one another," said Barbara K. Rimer, DrPH, Dean, Alumni Distinguished Professor, UNC Gillings School of Global Public Health.

Bhisham Chera — A "Good Catch" for Radiation Oncology

After graduating medical school in 2009, Dr. Bhisham Chera was looking for an academic environment with a leading Head and Neck Oncology program that would allow him to make an impact.

"UNC was the perfect fit," said Dr. Chera. Chera, an assistant professor in the Department of Radiation Oncology, also cites the tremendous need within North Carolina as a driving force for selecting UNC. "North Carolina has a disproportionate number of head and neck cancer patients, and UNC has one of the busiest clinics in the country. I knew I could make a difference."

As Dr. Chera settled in at UNC, another area piqued his interest. "Around 2009, issues surrounding patient safety and radiation were making national headlines," said Dr. Chera.

"The safety of our patients became a greater passion for me, and I looked for ways to improve our quality processes."

UNC's Department of Radiation Oncology took a proactive approach and, under the leadership of Department Chair Dr. Larry Marks, set out to implement quality improvement measures across the Department.

"Even if we know what care to deliver, how we deliver that care has a tremendous impact on outcomes," said Dr. Chera.

Dr. Marks appointed Dr. Chera as the Director of Patient Safety and Quality within the Department, tasking him with leading the initiative. Now, over 5 years into the initiative, the Department has made great strides. As Dr. Chera reflects, "It's really about changing our culture."

"We give every member of our team the ability to make suggestions, identify challenges and create change," said Dr. Chera. "It is critical that we continuously improve how we care for our patients and that everyone on our team feels they have a role in that."

When team members bring suggestions to light, it's called a "good catch." Once a month, team members are nominated for the best "good catch" and get the opportunity to sign the Radiation Oncology team basketball — a UNC basketball, of course.

"You know, we're a basketball school," said Dr. Chera.

Chera now travels internationally speaking about integrating quality systems in a health care setting. Most recently, Dr. Chera participated in an international quality and safety forum at the International Atomic Energy Agency in Vienna, Austria. He has also spoken about the UNC improvement activities at University of Chicago and Princess Margaret Hospital.

He and his colleagues have also published many research papers and reports about these initiatives. Dr. Chera also serves on the multi-disciplinary QA committee of the American Society for Radiation Oncology, the field's leading professional organization.

The improvement activities in radiation oncology reflect the dedicated efforts of many people who work closely with Dr. Chera, including Lukasz Mazur, PhD, Katharine Deschene, MS, Robert Adams, EdD, Lesley Hoyle CMD, Kinley Taylor, MS, John Rockwell, MBA, Gregg Tracton, PhD, and Prithima Mosaly, PhD. The UNC Department of Radiation Oncology is now sharing it's learnings across the UNC Health Care system, as well as additional departments at UNC.

Dr. Chera is married with four children and enjoys swimming and running.

Cancer survivors find healing by supporting others

For patients who have undergone hematopoietic stem cell transplant, also known as bone marrow transplant, the chance to help others about to undertake the same journey can bring healing benefits. Stem cell transplant is a highly taxing treatment for blood cancers. Its emotional and physical side effects can linger for years.

Christine Rini, PhD, research associate professor of health behavior at the UNC Gillings School of Global Public Health and member of the UNC Lineberger Comprehensive Cancer Center, gave patients who had survived a stem cell transplant the chance to explore their deepest thoughts and feelings about their treatment in writing (called expressive writing), after which they completed peer helping, which involved writing an account of their transplant experience meant to be shared with current patients about to undergo the procedure. Dr. Rini calls this two-part process expressive helping.

"We based expressive helping on the helper therapy principle, which is a principle that people are helped more by helping others than by receiving help," said Dr. Rini.

Previous research has shown that receiving support from peers can improve patients' emotional and physical health, but Dr. Rini's research is the first experimental study to show that patients who provide peer support also experience these benefits. In her study, patients were randomized into one of four groups. Those who engaged in expressive helping were compared with patients who did other writing exercises that included emotionally neutral descriptions of their treatment, expressive writing without the peer writing and writing for another patient without first doing expressive writing, Dr. Rini found that the combination of expressive writing followed by writing to provide help to peers provided the most benefits to patients.

"These survivors were very motivated to try to help other people going through this treatment, because they felt so isolated and scared going through their treatment. In fact, we often see people joining our studies mainly in an effort to help others. So peer helping is very meaningful to them. The important thing that we found is that survivors benefitted from having the chance to help their peers, but only after they had first done the expressive writing to reach a greater understanding of their transplant experience," said Dr. Rini.

Patients were evaluated after the writing for general levels of psychological distress, physical symptoms and health-related quality of life. Since the side effects of stem cell transplant leave lingering symptoms, the procedure can diminish long-term quality of life. The patients who completed expressive helping, which included expressive writing followed by peer helping, showed reduced levels of stress and improved physical symptoms. There was also a tendency for them to have better quality of life.

Dr. Rini's next steps are to find out more about why expressive helping provides these benefits and which patients benefit the most. Once more is known about the mechanisms behind expressive writing, Dr. Rini hopes that it could provide a powerful and cost effective tool to bring relief to cancer patients.

Studying the "Jolie Effect": How media coverage of celebrity cancer cases impacts public awareness and cancer screening

When celebrities battle cancer, their stories make headlines around the world. Whether announcing their prognosis, seeking treatment or losing their battle, celebrities faced with cancer have a profound impact on the public – one that leads to increased interest in cancer information and screening, according to research by Seth M. Noar, PhD, associate professor in the School of Journalism and Mass Communication and UNC Lineberger member.

Dr. Noar's research found that when a celebrity announces that they have cancer, the public rushes to find out more about the disease and often seeks screening and treatment from the medical community. The greater the celebrity's fame, Dr. Noar found, the greater the effect on the public.

"The effects were strong and immediate, but would typically wear off in a short period of time," said Dr. Noar.

As an example, Noar pointed to sharp rises in public interest in pancreatic cancer after the deaths of Apple CEO Steve Jobs and actor Patrick Swayze. For medical practitioners, a better understanding of this effect could help the medical community prepare for surges in patient interest and provide an opportunity for public education about diseases and screening.

"This kind of work is important because it can help us better understand the natural course of these events. By doing so, we can better anticipate and prepare for the next event," said Dr. Noar.

To read the full story, please visit bit.ly/1e2uTgg

ACTO recognizes Muss with 2013 Richard L. Schilsky Award

Hyman B. Muss, MD, director of the Geriatric Oncology Program at UNC Lineberger, was named as a 2013 winner of the Richard L. Schilsky Award by the Achievement Award by the Alliance for Clinical Trials in Oncology (ACTO) Foundation for his more than 30 years of membership and service to the organization. As part of his work for the group, he has served as co-chair of CALB's Cancer in the Elderly Working Group.

Dr. Muss, who works to improve cancer treatment for older patients, will receive $5,000 to support his research as part of the award. As a practicing physician and translational researcher, he is involved in the design and of both clinical trials that contain collaborative trials involving both laboratory and health services research.

To read the full story, please visit bit.ly/1clUDCB

Screening must balance harms and benefits

Screening for hidden medical conditions has become a routine part of modern medicine, but it can lead to negative complications and costs for patients, according to research by UNC Lineberger member Russell Harris, MD, MPH.

From the possibility of false positives leading to aggressive treatment to an unclear result leading to tests costing patients thousands of dollars, Harris cautioned that decisions to screen for conditions without thought to the downsides can harm patients. To minimize this risk, Harris said that physicians and policy makers need to develop ways to systematically balance the benefits and harms before recommending that patients be screened for a condition.

To help guide screening decisions, Harris has developed a framework to guide screening decisions based on evaluating the risks in four areas – physical harm, psychological harm, financial strain and missed opportunities. He also recommends that researchers began systematically collecting data to determine the effectiveness of existing screening practices.

"Besides being helpful to decision makers today, we hope this taxonomy gives researchers a direction for future research," said Harris.

To read the full story, please visit bit.ly/1aXXpgj

Dr. Lisa Carey presents at the 2013 San Antonio Breast Cancer Symposium Career Development Forum: A Networking Session for Young Investigators.
Photo Courtesy © SABCS/Todd Buchanan 2013

UNC Lineberger leadership offers insight at 2013 San Antonio Breast Cancer Symposium

Every year, the world's leading breast cancer researchers and physicians gather in San Antonio to present their newest findings and share the latest treatments and advances in treating patients. In 2013, UNC Lineberger's breast cancer faculty were chosen to share their insights as leading presenters and panelists at the San Antonio Breast Cancer Symposium.

Charles Perou, PhD, delivered one of the capstone messages, presenting an overview of the year's translational medicine highlights — the advances that have made the leap from the lab into the clinic. In 2013, one of Dr. Perou's own discoveries made its way into physician's hands when the FDA approved the PAM50 clinical test for breast cancer. The test is based on genomic insights into breast cancer produced by Dr. Perou's lab.

Lisa Carey, MD, participated in a panel on "Balancing Research and Clinical Practice" and discussed management of triple negative metastatic breast cancer as part of a session on "Metastatic Breast Cancer: An Update on Management and Supportive Care."

Carey Anders, MD, and Hyman B. Muss, MD, also were chosen to deliver talks to the attendees. Dr. Anders presented on "Breast Cancer in 2013: An Overview of Systemic and Local Therapies" and "How to Get the Most Out of Your Fellowship Years" while Dr. Muss delivered the lecture "Adjuvant Chemotherapy in the Elderly: Making the Right Decision.

To read the full story, please visit bit.ly/1fhSom2

$1 million research grant to investigate a novel target in melanoma

The Melanoma Research Alliance (MRA), and the Saban Family Foundation, a charitable foundation focused on improving education and healthcare in the U.S. and Israel, have jointly awarded a $1 million grant to a team from the Hebrew University of Jerusalem, UNC Lineberger and the University of Colorado. The grant will investigate a novel target in melanoma, MerTK, which was discovered in Dr. Shelley Earp's lab with a then-UNC medical student and doctoral candidate Doug Graham. Dr. Graham, now professor of pediatric oncology at the University of Colorado, and Dr. Earp have been collaborating on this project for over a decade and were joined five years ago by Stephen Frye, PhD and Xaiodong Wang, PhD, UNC Lineberger members in UNC's Eshelman School of Pharmacy, who have worked with the team to develop a drug that targets MerTK activity.

Their recent publication showed that MerTK is elevated in metastatic melanoma and that the team's prototype drug could slow the growth of melanoma cells both alone and even more effectively in combination with some of the newly approved melanoma drugs. Approximately half of the funds will be used by the UNC Lineberger/Colorado team to develop their small molecule drug, while the other half will be used by team members in Israel who will concentrate on understanding how MerTK is activated from outside the melanoma cell and how that might be blocked to enhance therapy.

To read the full story, please visit bit.ly/New15y

"To whom much is given, much is required"

Dr. Alice Garrett with her daughter Dr. Chaunte Garrett and Bobby's oncologist Dr. Neil Hayes at the 5th Annual Bobby F. Garrett Esophageal Cancer Benefit Concert

Five years ago, Dr. Alice Garrett lost the love of her life to cancer. Her husband Bobby was first diagnosed with a rare form of larynx cancer in 1997.

"The doctors said his cancer was the size of a ballpoint pen and had been dormant for 25 years," remembered Alice.

Bobby was no stranger to adversity. He was once hit by a car and paralyzed from the waist down. The doctors told him he would never walk again, but Bobby had something else in mind. After countless hours of rehabilitation, Bobby not only regained use of his legs, but also took a route for his job with the post office that required him to walk 11 miles every day.

Attacking his cancer with the same trademark determination, Bobby battled valiantly with the disease for more than a decade—always with Alice by his side. "Bobby was a man of astronomical faith," said Alice. "He would say: 'I'm going to stay with you all just as long as I can.'"

Both Bobby and Alice leaned heavily on the doctors and staff at UNC Lineberger. "We were so grateful for their warmth. They were the kind of people you wanted taking care of you," said Alice.

The Garretts developed an especially close bond with Bobby's oncologist, Dr. Neil Hayes. "Faith takes you through everything, and we always had complete faith in Dr. Hayes. He was always so sincere and honest, and we marveled at the way he was able to relay really difficult information for us to hear."

In December of 2008, Bobby lost his battle with cancer. Although the grief was at times overwhelming, Alice had a deep faith and strong support system. "After he passed, I was in such a state," she said. "A counselor recommended I find a project or do something to take my mind off the grief."

With the encouragement and help of her daughter Chaunte, Alice began planning a benefit concert in Bobby's memory. She received an outpouring of support from family and friends, and her reverend offered to host the concert at St. Matthew AME Church in Raleigh.

"I wanted to do something true to Bobby and raise money so I can give back to the kind of treatments we received. Only through research and prayer are we going to do anything about this disease that is devastating so many families," said Alice. "We invited groups that were meaningful to Bobby—people that knew him well and would love to be a part of it."

This year marked the 5th Annual Bobby F. Garrett Esophageal Cancer Benefit Concert, which has raised a total of $40,000 for head and neck cancer research at UNC Lineberger.

Dr. Hayes is one of the concert's most ardent supporters and devoted attendees. His relationship with Alice and her family has only grown stronger in the years since Bobby's death. "Dr. Hayes has meant everything to us," said Alice. "He's just part of the family now."

Bobby and Alice Garrett

In addition to raising funds, Alice works to promote cancer awareness through a variety of advocacy efforts throughout the year. She has shared her family's patient experience with the UNC Lineberger Board of Visitors, distributed literature on cancer prevention in her community and taken her concert on the road, traveling to churches in Duplin County where she grew up and Bobby's hometown in Laurens, SC.

To this day, Alice cannot speak of Bobby without tears welling up in her eyes. While the deep love and intense longing for her husband remains, volunteering has helped her to cope with the loss.

"My work with Lineberger is one of the most important things in my life. Bobby was always giving, and I feel the need to help—to know that it's going to help some family or person in some way."

Jeffrey and Margaret Dean — Fighting Cancer with all the Right Tools

When Margaret Dean first contacted UNC Lineberger in December to make a gift, she had done her homework. An employee with Quintiles, Margaret shared that she and her husband Jeffrey wished to contribute to triple negative breast cancer research, and they had come to learn Lineberger is a global leader in this area. What inspired this young couple with two small children to act was Margaret's mother and her experience with the disease. For the Deans, choosing Lineberger with science savvy leaders like Drs. Lisa Carey and Chuck Perou, was an easy decision.

At first, the Deans were not certain how they were going to structure their gift, but when they learned that an expendable fund would help provide much needed cash to speed up research efforts, they decided that was the way to go. They were delighted to discover they could name the fund for Margaret's mother who was treated in the northeast.

The Deans are already thinking creatively about how they can grow the The Elizabeth Whittet O'Conor Fund for Breast Cancer Research in years to come. They plan to ask friends to contribute and have initiated steps to secure matching funds from their respective employers. During a visit to the cancer hospital Margaret remarked, "We want to teach our two boys about philanthropy and about the real world impact of science. We also want to help enable others to learn more about the success and challenges in cancer research. One opportunity we see is for our children's birthdays to invite guests to contribute in lieu of gifts."

Margaret further reflects, "Sometimes people think breast cancer is not as bad as it used to be. That might be true for the majority of breast cancers, but breast cancer is not one disease, it is many diseases. Triple negative breast cancer affects a huge swath of women in the prime of their lives for whom there are no targeted therapies available. My mom's treatment, through a clinical trial, turned out to be beneficial and she is doing great almost 10 years later. For us this is wonderful, but the why and opportunity to positively impact many others still remains."

Jeffrey adds, "We need more tools in this fight. There is still so much to learn. My aunt, Peggy Heath Kravitz, passed away in 2009 after being diagnosed with a fairly common and treatable breast cancer case. We know that our investment is helping find answers that will enable consistent and positive outcomes. That's why our family will continue to find ways to support UNC Lineberger's research in years to come."

Jeffrey and Margaret Dean

Event host John Isner, UNC Lineberger's Eli Jordfald and Ben Calvo, MD, John's mother Karen Isner, and Andy Roddick

John Isner scores big for UNC Lineberger

"Those people at that hospital," Isner said from center court before the match, "well, they saved my mother's life."

John Isner was standing on the tennis court in his native Greensboro when he spoke, barely getting the words out before breaking down, lifting the collar of his sweatshirt to wipe tears from his eyes.

It was a touching moment in a day built around fun.

December 7th marked the Fourth Annual Ebix Charity Challenge benefiting UNC Lineberger and hosted by John, the No. 14 ranked player in the world. Joining him was retired former world No. 1 Andy Roddick and pro-turned-broadcaster Justin Gimelstob. The morning began with a sell-out youth clinic attended by 76 local boys and girls who got to hit tennis balls with Isner and Roddick. In the afternoon, Isner defeated Roddick 6-4, 6-3 in an exhibition match — equal parts banter and tennis — at UNCG's Fleming Gymnasium in front of more than 1,200 spectators.

The Charity Challenge raised more than $75,000 for UNC Lineberger where Isner's mother, Karen, was treated for colon cancer, beating a two-time battle with the disease. Karen's surgeon, Dr. Ben Calvo, spoke from courtside and thanked John and his family for serving as terrific ambassadors for the cancer center all over the world.

Shortly after the event, ATP World Tour announced that Isner and his cause, UNC Lineberger, was one of nine in the world to be selected as recipient of the prestigious ATP ACES for Charity Programme in 2014 and will receive a grant of $15,000.

Karen Isner, now cancer-free for seven years remarked, "All along, this annual event was John's idea. We're very blessed to have an opportunity to give back to UNC Lineberger in a big way. They're amazing people, and John's in a position to do so much good. I'm so proud of him. He's using what he's achieved to do a lot of good."

Corona Cares

"Corona Cares," the highly successful cornerstone initiative of Crown Import's corporate social responsibility program, raised $150,000 in North Carolina this year to benefit patient and family support programs at the UNC Lineberger Comprehensive Cancer Center. Over the past four years, "Corona Cares" has been led by UNC Lineberger Board member Rodney Long of Long Beverage and has generated more than $500,000 for these programs. "These donations mean so much to our program and the patients we serve," said Donald Rosenstein, MD, director of the UNC Comprehensive Cancer Support Program. "Private funds, like this generous support from the 'Corona Cares' program, allow us to reach more patients and their caregivers through cancer treatment, recovery and survivorship."

Calling all runners! Sign up now for the Tar Heel 10 Miler with proceeds benefiting UNC Lineberger

For the fourth consecutive year, UNC Lineberger will be a race charity partner for the Tar Heel 10 Miler and Fleet Feet Sports 4 Mile Run on April 26, 2014. As Chapel Hill's largest annual race, this event sold-out in 2013 and is already registering runners for the 2014 run!

To join the UNC Lineberger team, register online at www.tarheel10miler.com and select UNC Lineberger when choosing your team.

Don't forget that you can also fundraise for cancer research by creating an online account at www.tarheel10miler.kintera.org.

In honor of National Breast Cancer Awareness Month, international retailer Soccer.com contributed over $10,000 to UNC Lineberger by offering a special selection of pink items with 10 percent of proceeds going to the cancer center. Soccer fans around the world donned their pink gear on Facebook, Twitter and Instagram with the hashtag #SoccerPink.

Elizabeth Stewart (pictured) honors her daughter's memory with an annual hat drive for pediatric oncology patients and bone marrow transplant patients at UNC. In December 2013, the Charli Ramsey Hat Drive donated over 1,800 hats to the N.C. Cancer Hospital.

calendar of events

April

11th Spring Board of Visitors Meeting (Friday Center)

26th Tar Heel 10 Miler
www.tarheel10miler.com

Help Carolina beat Duke and NC State to win the Big Three 3-Point Challenge, courtesy of Blue Cross and Blue Shield of North Carolina. Just text UNC to 72579 once a day every day until March 7th, and you'll help support UNC Lineberger! To find out more, please visit www.livefearlessnc.com/big3.

To find out more about these events and other UNC Lineberger news, visit www.unclineberger.org, or follow us on

UNC LINEBERGER

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Together We Are Brave: Weekend retreat for families facing cancer

Thanks to generous support from UNC Lineberger Board of Visitors members Brent and Dana Jones of Danville, CA, the 2nd Annual Pediatric Oncology Retreat was held in November 2013. The theme of the weekend getaway for the entire family was *Together We are Brave* and was an amazing two-day getaway that families would not soon forget. The retreat offered a chance for family members to step out of the rush of daily routines, come together with parents, siblings and caregivers and meet others who are also facing cancer.

Activities included a superhero scavenger hunt with children donning "hero" capes, workshops for parents and siblings, a superhero obstacle course and photo booth, and a festive dinner complete with an "Our Hero" awards presentation.

Families left the weekend adventure with treat bags, hero capes and a photo album chock-full of good memories. But most importantly, they returned home with lifted spirits and a renewed sense of empowerment.