



ILLUMINATING THE POWER OF HOPE IN SCIENCE

UNIVERSITY OF CINCINNATI CANCER INSTITUTE
2018 REPORT TO THE COMMUNITY



OUR NORTH STAR

Everything that every one of us does on a daily basis directs us to our North Star — superb care for every patient that we have the privilege of seeing. It's extremely unifying that we are all bound by this higher mission. We get to be involved in such important work, surrounded by like-minded and talented individuals. This makes for the ultimate team. Everyone here contributes daily to very real, life-improving actions for patients and families. We're all getting better. Commitment, dedication to excellence, and the altruistic attitude shown here sets us apart. That everyone here respects each other for sharing this honorable mission contributes greatly to our unique atmosphere. We hope you enjoy this report and learn the many ways in which we not only serve our community but how we are impacting cancer care around the world.



William Barrett, MD
Director, UC Cancer Institute
Medical Director, Barrett Cancer Center
Professor & Chair, Department of Radiation Oncology



Dr. Barrett (left) shown with Dr. Thomas Herzog, MD, Deputy Director of UCCI, and Professor of Obstetrics and Gynecology at the UC College of Medicine.

PERFECT ATTENDANCE

Playing by the book catches prostate cancer

One of the benefits of a teaching hospital is residents. While not as experienced as the physicians who oversee them, they are thorough and by the book. And that's lucky for Jerry Iles, or Tiger, as he is better known.

Far north of 50, Iles describes himself as forever 25. Despite his age, the professional disc jockey and self-described "long-suffering" Bengals fan had never been screened for prostate cancer — the second leading cause of cancer deaths in men. In 2017, he was being seen by a resident at UC Health for bowel issues. Being thorough and by the book, the resident recommended the prostate screening, called a PSA blood test, not because it was related to his condition but because it was a screening that all men should at least discuss with their physician starting at age 50.

"The man upstairs must have been watching," Iles says.

His PSA was high, and it doubled when tested again. A high PSA can be an indication of prostate cancer.

On the advice of a friend of a friend, Iles turned to UC Cancer Institute for help. Doctors there performed a guided biopsy with MRI. UC Cancer Institute is a national leader in this procedure, and the test helps to precisely pinpoint the location and amount of cancer in the prostate. Iles' cancer was extremely aggressive, and the UCCI team presented him with several options, including surgery or radiation therapy.

KEEPING HIS RECORD INTACT

All it took was one meeting with William "Bill" Barrett, MD, UCCI's director and a radiation oncologist, for Iles to make his decision. "We talked for 20 minutes about music before the word 'cancer' was uttered," Iles says. "I was overwhelmed by Bill's down-to-earth approach. He's an amazing man and so is the whole team of people who work with him."

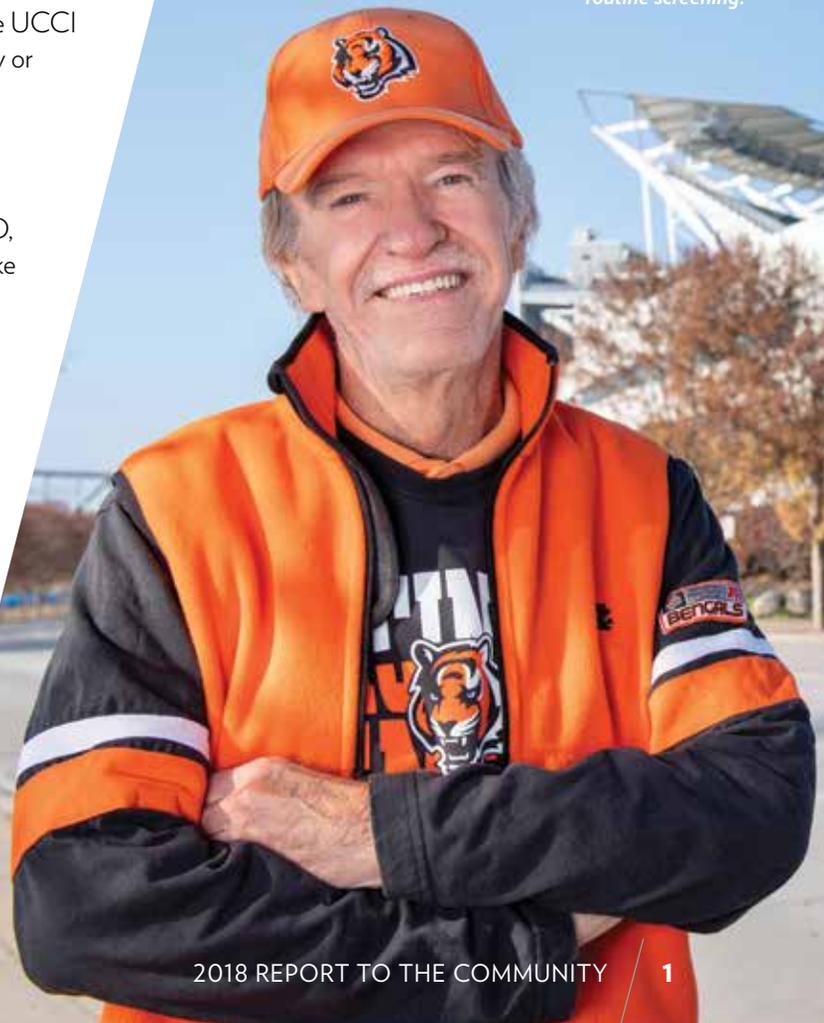
Iles' treatment wasn't easy. For eight weeks starting in late summer, he had radiation therapy five days a week, plus hormone shots. It was tiring and, at times, overwhelming. But he considers himself "one of the lucky ones." Despite the regimen, Iles was able to maintain his 40-year perfect attendance record at Bengals' home games.

"The radiation and hormone shots have taken a while to get out of my system, but I'm finally feeling 25 again," Iles says. "I can't stop smiling. I feel very blessed."



On average, 94% of oncology patients would highly recommend their provider at the UC Cancer Institute.

Jerry "Tiger" Iles was diagnosed with prostate cancer through a routine screening.



JOYFUL TIDINGS

World's first patient receives cancer-killing drug at UCCI

The day after Christmas is not typically a memory-making day for most families. But Dec. 26 was a day that won't soon be forgotten at the home of Bob Rulli.

On that day, Rulli, of Fort Thomas, received the results of his latest scan. Five years after his brain cancer diagnosis, Rulli was still cancer-free — in large part thanks to a new drug that is currently in clinical trials at the UC Cancer Institute.

Rulli was diagnosed in 2013 with glioblastoma, the same type of aggressive brain cancer that killed Senator John McCain in less than a year. At the time Rulli was diagnosed, the average life span for patients with this type of cancer was 17 months. Only 15 percent of patients live five years.

First diagnosed and treated successfully by a community physician, Rulli beat those odds with the help of surgery, chemotherapy, and radiation therapy. But in 2016, the cancer had returned and Rulli's physician was out of options. He suggested a Phase I clinical trial at UCCI, where a new cancer-killing drug called BXQ-350 was being tested.

Suddenly, Rulli became known as Patient No. 1. He was the first human to ever receive the infused drug.

"Anyone is nervous to be the first at anything," Rulli says. "But I knew it was a new drug and if it was successful, it might give me months or even years."

TOO GOOD TO BE TRUE

BXQ-350 is highly unusual in the world of chemotherapy because it kills only cancer cells, not other healthy cells. Traditional chemotherapy harms healthy cells, which can cause side effects and limit how much of the drug a patient can tolerate — sometimes at lower levels than needed to effectively kill the cancer.

Xiaoyang Qi, PhD, a UCCI researcher and professor of hematology oncology at UC College of Medicine, discovered BXQ-350 in 2002 while at Cincinnati Children's Hospital Medical Center. BXQ-350 was so



(From left) Rachel Vachon, Trisha Wise Draper, MD, PhD, and Sarah Palackdharry.



2,352 patients treated at UCCI in 2017



Bob Rulli (center) with his family for the holidays.



122 clinical trials open to patients in 2017



1 out of 3 UCCI patients referred from another system

remarkable that at first federal regulators didn't believe it possible. They demanded more research in animals before approving it for testing in humans. The drug was finally approved for a Phase I trial in September 2016, just in time for Rulli.

Phase I trials are meant to test the safety of a drug. Testing for efficacy comes later. Because safe dosages have not been established, Phase I trials are most often offered to patients with the most complex and severe cancers. "With this drug, we are demonstrating true translational research — the transition from animal models in the scientific laboratories at UC to a therapy being evaluated in patients," Dr. Qi says.

For Rulli, there was no guarantee the treatment would work. UCCI was one of only four sites in the nation offering this innovative trial.

Over the past two years, Rulli has received monthly infusions of BXQ-350 at UCCI under the care of Trisha Wise-Draper, MD, PhD, oncologist and assistant professor of medicine at UC College of Medicine, alongside his community physician.

"We are bridging the gap between the community and our academic center by bringing innovative research

in the form of clinical trials to the community. We also partner with community physicians to take care of the patients together.

We value their expertise and relationship with their patients," Dr. Wise-Draper says.

ONE DAY AT A TIME

Throughout his treatment, Rulli has managed to maintain life pretty much as normal, he says. At 66, he's enjoying retirement with his wife, two children, and three granddaughters, and — when the weather allows — a round of golf. "If it's not 48 degrees out, my buddies don't want to play," Rulli says, "but otherwise that's where you'll find me."

For now, while snow blankets the ground and the days are short, Rulli isn't anxiously awaiting warmer weather. He's not the type to wait on the future. For him, surviving five years with brain cancer has been about taking one day at a time.

And for now, UCCI researchers continue testing BXQ-350 with the hope that the science behind it will hold true and that it will someday help even more patients like Rulli.

MANAGING CANCER RISK

Identifying and counseling high-risk patients is goal of new program

One in eight U.S. women will develop breast cancer during a lifetime — a daunting statistic that may sound like every woman is at high risk for a breast cancer diagnosis.

However, the risk of breast cancer development for an average woman is less than one in 25 during a 10-year time frame, and experts now have identifiable risk factors and instruments that can identify women who are truly at moderately high or very high risk for cancer.

With this knowledge, the UC Cancer Institute's Breast Cancer Center in 2018 opened a Risk Assessment and Management Program to evaluate whether a patient is at high risk for the development of breast and ovarian cancers.

"The goals of the high-risk program are to promote awareness of levels of breast and ovarian cancer risk to patients, families, and health care providers; and to provide an expert evaluation for the management of high-risk patients," says Elyse Lower, MD, director of the center, professor at the UC College of Medicine, and a UC Health oncologist. "Based on individual risk assessment, patients will be offered appropriate counseling, testing, and primary prevention measures to reduce the likelihood of cancer development."

IDENTIFYING HIGH RISK

Those who are eligible for the high-risk clinic include people with:

- Strong family history of breast (male or female) and/or ovarian cancer
- Known personal or family genetic abnormality in a breast cancer-causing gene, like BRCA, CHEK2, or PALB2
- Prior breast biopsy showing atypical results
- Gail model breast cancer risk of greater than or equal to 1.67 percent over the next five years or greater than 20 percent lifetime risk
- History of chest wall radiation to treat Hodgkin's disease
- Dense breasts on imaging



Diana Sutherland, CNP, MSN, OCN, meets with a patient of the high-risk clinic.

REDUCING RISK

Risk-reduction strategies could include genetic testing, increased surveillance — diagnostic mammograms and breast MRIs — prophylactic surgeries, like preventive mastectomies or hysterectomies, or chemoprevention.

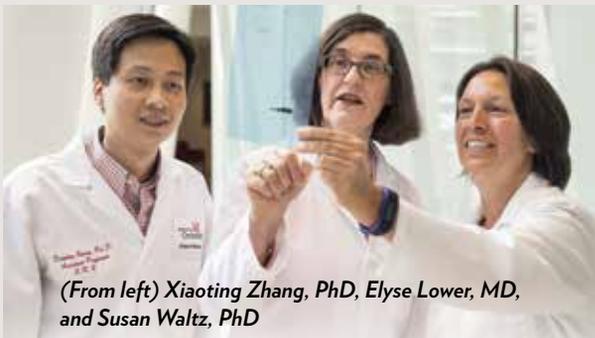
"A high-risk clinic like ours can provide data, which can foster research collaboration within the institution, region, and other academic centers, as well," says Dr. Lower. "This multidisciplinary approach to women's cancer risk assessment and management will involve our dedicated breast imaging team and genetics experts along with gynecologic oncology, surgical oncology, and medical oncology. Comprehensive assessment and management is an unmet need in our region, and we're so happy to provide this tool for individuals at risk."

RESEARCH

UC Researchers Find Protein Linked to Formation of Estrogen-Based Breast Cancer

Like healthy cells, cancer cells need particular factors, such as proteins, to tell them to grow. Identifying those factors has opened up vast new pathways for treatment. And this year, UC Cancer Institute researchers opened up one more in the fight to stop breast cancer.

Xiaoting Zhang, PhD, associate professor at the UC College of Medicine, led a UCCI research team that identified for the first time a protein that plays a critical role in the development of breast cancer that grows in response to estrogen, which accounts for about 75 percent of all breast cancers.



(From left) Xiaoting Zhang, PhD, Elyse Lower, MD, and Susan Waltz, PhD

The protein that was identified, MED1, is often present at abnormally high levels in about 50 percent of primary breast cancers and breast cancer cell lines. When MED1 is eliminated or functionally disrupted, the researchers found that cancer cell growth was stopped.

These findings, published in the journal *Cancer Research*, could lead to better, more effective treatments for aggressive and treatment-resistant breast cancers.

“The estrogen receptor (in breast cancer cells) specifically binds the MED1 protein in the regions known as the LxxLL motifs. We found that mutating MED1 in the LxxLL motifs disrupted its interaction with the estrogen receptor and significantly delayed tumor growth, spread, and cancer stemlike cell formation in this model,” says Dr. Zhang, associate professor in the Department of Cancer Biology and member of the Cincinnati Cancer Center and the UC Cancer Institute.

Dr. Zhang’s team is now conducting further studies on MED1 as a therapeutic target through the use of novel RNA nanotechnology.

SURVIVORSHIP

Helping Patients Thrive Beyond Treatment

With millions of patients surviving cancer, many are left wondering: What’s next? UC Cancer Institute’s Survivorship Program helps answer that question. And this year, it hit a milestone of providing more than half of all eligible patients with a survivorship care plan.

To maintain Commission on Cancer accreditation, cancer centers must meet the 50 percent mark — a hurdle most centers are challenged to meet. With UCCI’s dedicated Survivorship Program and a dedicated survivorship nurse navigator to assist patients, UCCI exceeded the 85 percent mark in December 2018 and has continued to see its numbers rise.

SCREENING

Genetic Counseling for Ovarian Cancer

In 2017, the UC Cancer Institute set a clinical goal to increase genetic counseling referrals for ovarian cancer patients. Amanda Jackson, MD, led this initiative as Commission on Cancer Committee chair, oncologist and assistant professor in the UC College of Medicine. While BRCA1/2 testing has become a more standardized approach for patients with ovarian cancer and their family members, it is still not fully adopted across oncology practices. “One in four women harbor the BRCA gene, but there are also many other hereditary genes that can affect a woman’s risk level,” Jackson says. “Through improved screening and documentation, we were able to increase our referrals in 2017.”



A total of 186 oncology patients were referred for genetic counseling in 2017.

BREAKING GROUND

Proton therapy delivers powerful punch

In the winter of 2017, Walter Theiss, 66, had his mind on retirement and the dream home he and his wife were building in Hilton Head, S.C. At the same time, he was having trouble swallowing and had lost 18 pounds in three weeks. He knew something was wrong.

He just never thought the problem would be cancer, a diagnosis he was given just a day after breaking ground on his new home.

“If you talk to 10 people, eight out of 10 of them are going to have some health problem — I just thought swallowing was going to be my problem,” he says.

A friend recommended Olugbenga Olowokure, MD (“Dr. Benga”), an oncologist and associate professor at the UC College of Medicine. “I then mentioned

Dr. Benga to my primary care physician, who told me that he was my best choice,” Theiss says.

Theiss would be one of the first adult esophageal cancer patients to undergo treatment at the Cincinnati Children’s/UC Health Proton Therapy Center.

Proton therapy is a form of radiation treatment used for certain types of cancers that can deliver powerful radiation to a tumor while sparing healthy tissue.

After completing five weeks of chemotherapy and five weeks of proton therapy radiation under the care of Jordan Kharofa, MD, radiation oncologist and assistant professor at the UC College of Medicine, Theiss had surgery to remove the tumor, which had shrunk substantially, and some remaining lymph nodes surrounding it. Despite a recurrence and additional treatment, Theiss was able to head south to Hilton Head, where his new home was waiting.

“It’s a nice way to truly complete this journey,” he says.



*John Breneman, MD,
Medical Director of the
Proton Therapy Center,
with a patient and
radiation therapist.*



UCCI’s Proton Therapy Center
is one of just 27 nationwide.

Protocol Reduces Costs, Narcotic Use

A protocol for managing patients before, during, and after colorectal surgery improved clinical outcomes and significantly reduced overall hospital costs, a UC-led study shows.

“The evidence is overwhelming that enhanced recovery pathways lead to a better recovery, get patients back to a normal lifestyle in a quicker manner, and minimize the amount of narcotics, which may help with the ongoing opioid epidemic. This study shows the pathways also lower hospital costs,” says study author Ian Paquette, MD, an associate professor of surgery at the UC College of Medicine.

The study, published in the *Journal of the American College of Surgeons*, found that the hospital length of stay was two days shorter for patients in the enhanced recovery group. The enhanced recovery patients discontinued pain medication quicker and used less narcotics (212 morphine equivalent units vs. 720). Total direct hospital costs were \$1,717 lower per patient in the enhanced recovery group.



Stephanie Poplin enjoys time in the garden with her husband after treatment for throat cancer mistaken as allergies.

HEAD AND NECK CANCER

Allergy Symptoms Mask Cancer

For Stephanie Poplin, spring allergies were nothing to sneeze at. After trying a number of allergy medications, Poplin wasn't getting any relief.

"I finally went to an allergist, who referred me to an ear, nose, and throat doctor for the lymph node," she says. "He gave me a CT scan, which showed I had cancer. I was shocked and devastated."

Poplin, 37, of Ashland, Ky., was referred to Yash Patil, MD, a head and neck surgeon and associate professor at the UC College of Medicine, who confirmed the throat cancer diagnosis via needle biopsy.

After a scope, a tissue biopsy, and a PET scan, doctors had some good news: The cancer had not spread. Better news: Her chances

were great, with a 75 to 95 percent cure rate.

Her UCCI team recommended chemotherapy and radiation. "I had my last treatment, and I'm doing great," Poplin says. "I can breathe through my nose and finally taste food. I'm just so thankful.

"We talk about the UC Cancer Institute constantly. Everything here has been so wonderful. The people are so helpful and friendly, the physicians are truly experts in their field, and everything is laid out for you here — there's no confusion about which physician you need to see or where you need to go. It's a true team of doctors who coordinate for the best care of the patient. I thank God we came to UC."

RESEARCH

Mouthwash Could Help Detect Recurrent Cancer

Researchers at the UC Cancer Institute are investigating whether certain molecular markers that can be collected from mouthwash samples can help identify throat and mouth cancers that have returned. Scott Langevin, PhD, assistant professor at the UC College of Medicine, was awarded \$782,000 from the American Cancer Society to continue his research.

"Outcomes for patients with mouth and throat cancer are relatively poor. About half of these patients will have cancer recurrence within two years of treatment," Dr. Langevin says. "Earlier detection of recurrent tumors is associated with better clinical outcomes, so there is a clear need for new tests that can help facilitate early detection."



Scott Langevin, PhD

Researchers in his lab previously identified a biomarker panel made up of 22 regions of DNA. Based on the amount of a certain molecule attached to these regions — a process called DNA methylation — scientists could identify the presence of mouth and throat cancer with a high level of accuracy by using noninvasive oral rinse (mouthwash) samples.

"We hope to evaluate the potential of this rinse as a clinical tool for early detection of cancer recurrence," he says.

UNEXPECTED CALL SAVES LIFE

After getting the all clear from UC Cancer Institute Lung Cancer Screening Program, Norman Taylor was surprised to get a call a year later reminding him to come in for a follow-up scan.

In a lung cancer screening, a low-dose CT scan is used to detect even the smallest abnormalities. It is the standard in lung cancer screening for eligible patients like Taylor — people between 55 and 80 years old who have smoked at least one pack of cigarettes a day for 30 years or the equivalent.

“When I got a call three days later from my primary care doctor, letting me know that I had cancer, I was taken aback to say the least,” says Taylor, 57. “I had no symptoms. If it weren’t for the screening, I would have never known until it was likely too late.”

Taylor sought the help of professors John Morris, MD, co-director of UCCI’s Lung Cancer Center, and Sandra Starnes, MD, a surgeon and also co-director of the center.

Initially, Taylor’s tumor was too large to remove, so he underwent chemotherapy. When a new scan showed that the tumor had shrunk, Taylor had surgery and what was found was the next surprise: nothing.

Apparently, the shadow detected on the scan was scar tissue. The tumor was gone.

“Now, I’m cancer- and smoke-free,” says Taylor. “I believe everything happens for a reason, and I was destined to be at UC Health. I can’t say enough good things about my team and the way they all worked together for my care. The communication among them was incredible — I learned they discuss all cases over a tumor board, with all experts in the room to talk about the best strategies for care. Working together is the way the right thing is done, and I could tell they were all working for me — Dr. Starnes and Dr. Morris were not afraid of cancer, and they were and are ready to fight for their patients, like me.”



Heroes to the Heroes

Erin Haynes, DrPH, associate professor at UC College of Medicine, and her environmental health team recently identified chemical exposure risks to firefighters. The work resulted in a new safety campaign by the Cincinnati Fire Department to reduce firefighter exposure, and it was the basis of Ohio’s Senate Bill 27 to provide compensation to firefighters with cancer. Fire stations across the country are now implementing the new safety practices. “My goal is that firefighters have a long and happy retirement.”



Sandra Starnes, MD

COMMITMENT TO EXCELLENCE

Patient Experience and Quality of Care Get Boost Through New Model

Harnessing electronic medical records and data can help providers offer more efficient and higher-quality care. This, in turn, helps improve the overall patient experience. UC Cancer Institute has been an early adopter of a program by the Centers for Medicare & Medicaid Services to do just this. The program, called the Oncology Care Model, began in 2016.

“The process improvement we have put in place through this model allows better communication between patients and their doctors, as well as different specialists involved in patient care, more robust data tracking, and overall better service for our patients,” says Thomas Herzog, MD, deputy director of the UC Cancer Institute, professor, and a gynecologic oncologist.

Over the past two years, Dr. Herzog and Lana Uhrig, RN, MBA, PhD, executive administrative director of the UC Cancer Institute, have led a clinical and administrative team in implementing changes throughout the oncology service line.

The Oncology Care Model “provides a structure that directly incentivizes patient-centered care,” says Adam Alexander, quality and OCM program manager at UCCI who was instrumental in implementation. “This has allowed us to evaluate our processes with a multidisciplinary, multidepartment scope. As a result, we have a better understanding of our patients, our strengths, and our improvement opportunities.”

IMPROVEMENTS FOCUS ON THREE BROAD AREAS:

1

DIRECT PATIENT CARE IMPROVEMENTS

- Creating clarified chemotherapy treatment goals
- Improving social work processes and patient depression screenings
- Creating more patient encounters with navigators
- Creating new medical record tools and processes to enhance UCCI Survivorship Program

2

DATA ANALYSIS FOR CONTINUOUS PROCESS IMPROVEMENT

- Developing patient experience scorecard capturing clinic, infusion, and radiation therapy survey responses from our patients
- Tracking emergency department visits and hospital readmissions with a goal to ultimately decrease cancer-related ED visits for our patients by providing better symptom management
- Providing out-of-pocket cost and total-cost estimates for Medicare chemotherapy patients

3

ELECTRONIC MEDICAL RECORDS ENHANCEMENTS

- Integrating medical records of Epic and CR-Star registry system and developing Epic alerts related to ED visits
- Enhancing oncology-specific MyChart functions in Epic, including new fields for patients' clinical status during each clinic visit and a new SmartForm for an oncology-specific pain care plan
- Streamlining patient e-consents
- Using Health Planet tools to align comprehensive primary care
- Creating custom dashboards to enable caregivers to more easily answer routine questions and followup

ADDRESSING RACIAL DISPARITIES IN CANCER CARE

African-Americans have the highest mortality rate of any racial or ethnic group for all cancers; cancer is the second leading cause of death among Native Americans over age 45; and Hispanics and Latinos are more likely to be diagnosed with advanced stage cancer than non-Hispanic whites. Racial disparity in cancer care is a problem that the UC Cancer Institute is committed to ending. “It is imperative that all members of our community benefit from the advances in cancer prevention, detection, and care that are occurring in our community, spearheaded by the university,” says William Barrett, MD, UCCI director.



UCCI dedicated its fifth annual retreat to the topic: “Making Cancer Care the Great Equalizer: Science and Solutions for Health Disparities in Cancer.” The conference was held June 15, 2018, for cancer clinicians and researchers at the university, as an open forum to discuss and learn about this issue. More than 40 clinicians attended. “This event is a genuine opportunity for us to reach out to our community and to assure that cancer care at UC is primed to overcome disparities that can radically diminish the effects of cancer treatment, whether they be due to race, gender, socioeconomic, education level or other factors,” says Thomas Herzog, MD, UCCI deputy director.

UC CANCER INSTITUTE PROVIDES AWARD-WINNING CARE

In addition to its Commission on Cancer designation, UC Cancer Institute has been recognized for its excellence in many areas, including:

- The UC Cancer Institute Comprehensive Breast Cancer Center has again received reaccreditation with the NQNBC as a Certified Quality Breast Center of Excellence. Our hard work and diligent efforts to continue to provide the highest quality patient care have been recognized with this elite award.

Our center also maintains accreditation through American College of Radiology and National Accreditation Program for Breast Centers. We are one of just 21 centers nationally to maintain this triple accreditation.

- University of Cincinnati Medical Center also is accredited by The Joint Commission. Our Joint Commission accreditation means that the center has demonstrated compliance with organizational, patient care, and safety standards.
- We are one of just 50 Oncofertility Consortium sites nationally, providing our patients with access to the latest clinical care initiatives and translational research in the area of fertility preservation.
- The UC Lung Cancer Screening Program was the first lung cancer screening program in the region and is designated a Screening Center of Excellence by the Lung Cancer Alliance, and certified for lung cancer screening by the American College of Radiologists.
- Our infusion center is a Foundation for the Accreditation of Cellular Therapy (FACT) accredited facility for Autologous and Allogeneic BMT Transplant.
- *U.S. News & World Report* ranked us a High Performing hospital, specific to cancer care in 2018.
- Healthgrades reported that Cincinnati ranked No. 4 in its 2019 rankings of the top 100 cities in the country who get health care right.
- 69 UC College of Medicine faculty recognized as among top 1 percent national for best patient experience scores in 2017, according to Press Ganey.
- Cincinnati’s largest multispecialty physician group with nearly 800 board-certified clinicians and surgeons.
- University of Cincinnati Medical Center, the region’s largest hospital, primary referral center, and provider of tertiary and quaternary care.

TRANSLATIONAL RESEARCH

OCULAR CANCER

New Classification System for Posterior Uveal Melanoma

Classification of primary posterior uveal melanoma, as currently conducted according to the American Joint Commission on Cancer, may be overly complex and in need of replacement, according to James Augsburger, MD, the Dr. E. Vernon and Eloise C. Smith Chair and professor of ophthalmology at the UC College of Medicine. His research team published a study this year in *Investigative Ophthalmology & Visual Science* showing that linear LBD classification was the best three-size category discriminator among low-, intermediate-, and high-risk subgroups. The findings of the study support the belief that the current classification system may not be justified in routine clinical practice.

BLOOD CANCER

Existing Drug Could Be Used to Treat Certain Leukemias

Researchers at the UC College of Medicine and Cincinnati Children's Hospital Medical Center have discovered a target in several types of leukemia that could be treated with an existing FDA-approved drug for other types of blood cancers.

The study, published in *Leukemia*, found that the drug ibrutinib killed mutant granulocyte colony-stimulating factor receptor-expressing cells but not normal cells. G-CSFR controls the production of certain types of white blood cells, says Ken Greis, PhD, professor in the Department of Cancer Biology, member of the Cincinnati Cancer Center and UC Cancer Institute, and one of the corresponding authors on the paper.

"Progenitor cells (the precursors from which the neutrophils are made) expressing mutated G-CSFR in animal models and in human blood cells also showed enhanced sensitivity to ibrutinib, compared to the normal G-CSFR. Our work demonstrates a combined therapeutic attack, which can eliminate mutated cells and may represent an effective therapy for these patients," says H. Leighton Grimes, PhD, professor in immunobiology, and director of the Cancer Pathology Program in the Divisions of Experimental Hematology and Pathology at Cincinnati Children's.

The research is the result of a collaborative effort between the laboratories of Greis and Grimes and was conducted by Pankaj Dwivedi and David Muench, graduate students in the UC Cancer Biology and the Molecular and Developmental Biology doctoral programs.



The UC Cancer Institute
awarded \$849,216 for
research in 2017-2018

Leading Cancer Innovation Around the World

The UC Department of Radiation Oncology was represented at the American Society for Radiation Oncology's (ASTRO) annual meeting Oct. 21-24, 2018, in San Antonio, Texas. Abstracts were presented by residents Sara Medek, MD; Joshua Elson, MD; Eli Scher, DO; Michelle Barrord, MD; and medical student Casey Morrone, with an oral presentation from Jordan Kharofa, MD. Vinita Takiar, MD, PhD, also served as a session discussant, and John Breneman, MD, presented "The North American Approach to Rhabdomyosarcoma." As the leading organization in radiation oncology, ASTRO is dedicated to improving patient care through professional education and training, support for clinical practice and health policy standards, advancement of science and research, and advocacy.

GYNECOLOGICAL CANCER

Cervical Cancer Best Treated With Open Surgery

For patients dealing with early stage cervical cancer, minimally invasive surgery has been found to be significantly less effective than traditional open surgery, according to a study published this year in the *New England Journal of Medicine*.

The study, co-authored by Daniel Margul, MD, PhD, an obstetrician-gynecologist resident at UC Medical Center, found patients who had the minimally invasive surgery had a lower rate of survival than those who opted for open surgery. Those who opted for the former had a three-year survival rate of about 94 percent, compared to the 99 percent survival rate of those who underwent the latter. Doctors aren't sure the reason for the difference in outcomes, although theories listed in the study include that the carbon dioxide used to inflate the uterus during surgery could encourage the growth of cancerous cells or that the surgical tools could spread them around. "This is the second study demonstrating that open surgery has superior overall survival versus minimally invasive laparoscopy or robotic surgery in cervical cancer," says Thomas Herzog, MD, professor and deputy director of UCCI. "It is so important that we do these clinical trials," stresses Dr. Herzog, adding that a stronger immune response in open procedures could be contributing to the surprising outcomes that were observed.



(From left) Sandra Starnes, MD, Lana Ulhrig, PhD, MBA, RN, and Evie Alessandrini, MD, MSCE

LUNG CANCER

Unique Technique Helps Identify Smallest Lung Cancers

A technique used at UC Cancer Institute to find the smallest lung cancers may be the best way to locate and remove suspicious spots detected on a CT scan, according to a study in the *Journal of Thoracic and Cardiovascular Surgery*.

UCCI physicians have used the technique, called radiotracer localization, since 2009. But it is not widely used in other hospitals. Radiotracer localization involves a radioactive material being injected in or near a lung nodule, and a radioprobe is used to pinpoint the location during surgery. In addition to proving successful at locating small tumors, radiotracer localization also helped reduce the amount of lung that was removed. "This technique overcomes some of the disadvantages of other techniques and is simple to implement, requiring no additional expertise on the part of the thoracic surgeon or interventional radiologist," says Sandra Starnes, MD, co-director of the Lung Cancer Center at the UC Cancer Institute, UC College of Medicine professor, and principal investigator on the study.

RESEARCH AWARDS

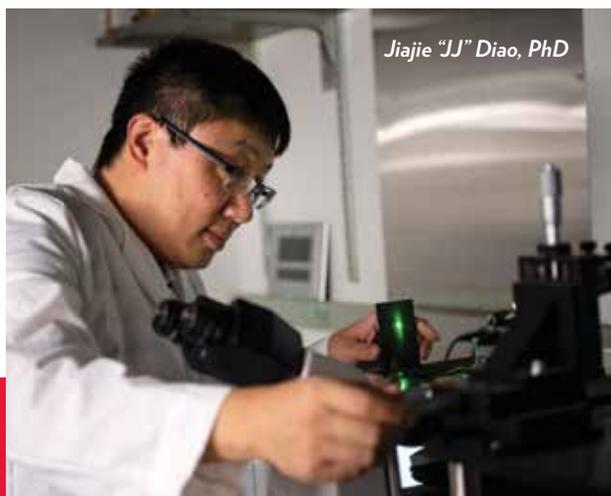
UC Cancer Institute researchers received numerous grants and awards for their work in 2017. Here are a few highlights:

- ▶ **The National Cancer Institute's National Clinical Trials Network named UCCI's Clinical Trials Office a "high-performing site"** and awarded it \$73,600 for infrastructure support. The level of funding provided is based on the site's overall national clinical trials participation, evidence of integration between research and clinical care, and data quality. "This is the second year in a row that UC has been awarded additional funding for its cooperative group work. We are proud to be recognized for our collaborative efforts with research institutes across the country," says Trisha Wise-Draper, MD, PhD, medical director of UCCI's Clinical Trials Office, oncologist, and assistant professor in the UC College of Medicine.
- ▶ Rowena "Moe" Schwartz, PharmD, associate professor of pharmacy practice and pharmacist for the UC Cancer Institute's Phase I Experimental Therapeutics Program, received the **2018 Helen McKinnon Award from the International Society of Oncology Practitioners**. This award is given to those who promote and enhance oncology pharmacy practice worldwide to improve cancer patient care.

INTEGRATIVE ONCOLOGY

Effect of Integrative Medicine on Chemotherapy Patients

New research from the UC Center for Integrative Health and Wellness shows how integrative practices such as breathwork, guided imagery, and mindfulness practices may help reduce symptoms of patients undergoing chemotherapy. Results showed that anxiety, pain, nausea, and overall distress in patients all significantly decreased post intervention. “In this study, clinical symptoms were shown to decrease following a mind-body intervention in a cancer infusion suite delivered at the point of care,” says Ellen Drosnick, a UC medical student and principal investigator on the study, which was presented in a poster session at the 2018 International Congress on Integrative Medicine and Health. Sian Cotton, PhD, UC College of Medicine professor and director of the UC Center for Integrative Health and Wellness, was the senior author.



Jiajie “JJ” Diao, PhD

- ▶ Two young investigators in the UC College of Medicine’s Cancer Biology Department have received **R01 and R35 grants from the National Institutes of Health** to help them further basic research on mechanisms that cause the formation of certain cancers. Totalling about \$3.5 million over five years, the grants were awarded to Chenran Wang, PhD, assistant professor, to study the molecular pathways that cause a rare, genetic, tumor-forming condition; and Jiajie “JJ” Diao, PhD, assistant professor, to study how a cell’s “recycling system” impacts the development of certain conditions and how it could be targeted for treatment.



Syed Ahmad, MD

GASTROINTESTINAL CANCER

Therapy After Surgical Removal of Rare Tumors May Not Increase Survival

Researchers at the UC College of Medicine recently presented a study at the Society of Surgical Oncology Annual Cancer Symposium, showing that additional or adjuvant therapy, delivered after surgical removal of a rare type of gastrointestinal tumor does not increase survival rates for patients. These findings provide insight on treatment plans for patients with these types of tumors, and may lead to eliminating the need for prescribed adjuvant therapy, preserving quality of life, and saving money. Vikrom Dhar, MD, a surgical resident at UC was co-principal investigator on the study along with Syed Ahmad, MD, professor, oncologist, and director of UC Cancer Institute Pancreatic Disease Center. “These results could lead to a new standard of care for patients with this type of cancer, regardless of the stage of the disease,” says Dr. Ahmad.

- ▶ **The Association of American Clinical Institutes Clinical Research Initiative awarded first place to a UC Cancer Institute abstract.** Selected from a record 68 submissions, the winning entry, “Building a Strong Foundation: How Leveraging Cross Collaboration Can Improve Standardization and Adoption of an eRegulatory Solution,” was written by Trisha Wise-Draper, MD, PhD; Justin Osborne; Benjamin Quast, MBA, CCRP; Emily Werff (all with UCCI); and Michael Hurley, MBA, of Complion, a clinical research software company. The abstract addresses lack of standardization in regulatory processes and technology adoption among clinical research institutions. UCCI collaborated with the UC Health Office of Clinical Research to roll out an enterprisewide eRegulatory system. The UCCI Cancer Standard was leveraged to create a Non-Cancer Standard that will be adopted across the institution.

MOVING RESEARCH FROM LAB TO BEDSIDE

In 2017, UC Cancer Institute had 122 clinical trials open to accrual

The following is a sampling of those studies:

PHASE I (FIRST IN HUMAN)

- A Phase I Open-Label Study to Evaluate the Effect of Multiple Doses of AZD1775 on the Pharmacokinetics of Substrates for CYP3A, CYP2C19, CYP1A2 and to Provide Data on the Effect of AZD1775 on QT Interval in Patients with Advanced Solid Tumors. Primary Investigator: Trisha Wise-Draper, MD, PhD
- Phase 1, Dose-Escalation, Open-Label, Safety and Pharmacokinetic, First in Human Study of BXQ-350 Administered as a Single Agent by Intravenous Infusion in Adult Patients with Advanced Solid Tumors and Recurrent High-Grade Gliomas. Primary Investigator: John Morris, MD
- An Open-Label Multicenter Phase 1 Study to Evaluate the Safety, Pharmacokinetics and Pharmacodynamics of H3B-6527 in Subjects With Advanced Hepatocellular Carcinoma or Intrahepatic Cholangiocarcinoma. Primary Investigator: John Morris, MD

PROTON

- NRG-BN001 NRG Oncology Randomized Phase II Trial of Hypofractionated Dose-Escalated Photon IMRT or Proton Beam Therapy Versus Conventional Photon Irradiation with Concomitant and Adjuvant Temozolomide in Patients with Newly Diagnosed Glioblastoma. Primary Investigator: Jordan Kharofa, MD
- 2017-2183 IIT Feasibility Study of Hypofractionated Radiotherapy in the Setting of Recurrent Diffuse Intrinsic Pontine Glioma. Primary Investigator: Luke Pater, MD
- NRG-GI003 NRG Oncology A Phase III Randomized Trial of Protons Versus Photons for Hepatocellular Carcinoma. Primary Investigator: Jordan Kharofa, MD.

BREAST

- Tomosynthesis Mammographic Imaging Screening Trial (TMIST). Primary Investigator: Lawrence Sobel, MD
- Randomized trial to determine the comparative effectiveness of the CO2RE laser device relative to topical lidocaine in treating dyspareunia among breast cancer survivors. Primary Investigator: James Whiteside, MD
- Phase III Randomized Trial of Hypofractionated Post Mastectomy Radiation with Breast Reconstruction. Primary Investigator: Teresa Meier, MD

GASTROINTESTINAL

- Colorectal Cancer Metastatic dMMR Immunotherapy (COMMIT) Study: A Randomized Phase III Study of mFOLFOX6/Bevacizumab Combination Chemotherapy with or without Atezolizumab or Atexolizumab Monotherapy in the First-Line Treatment of Patients with Deficient DNA Mismatch Repair (dMMR) Metastatic Colorectal Cancer. Primary Investigator: Jordan Kharofa, MD
- A Phase III Randomized Trial of Protons Versus Photons for Hepatocellular Carcinoma. Primary Investigator: Jordan Kharofa, MD
- A Prospective Pilot Study to Evaluate the Feasibility of Intensity Modulated Proton Therapy in Reducing Toxicity in Anal Cancer. Primary Investigator: Jordan Kharofa, MD



UCCI's patient participation in interventional trials of 5.8% is almost twice the national rate reported by the National Cancer Institute.

BRAIN

- Feasibility Study of Hypofractionated Radiotherapy in the Setting of Recurrent Diffuse Intrinsic Pontine Glioma. Primary Investigator: Luke Pater, MD
- A Phase 0/1 Exploratory Pharmacokinetic and Pharmacodynamics Study of Letrozole in Combination with Standard Therapy in Recurrent Gliomas. Primary Investigator: Trisha Wise-Draper, MD, PhD
- Feasibility Study of Modified Atkins Ketogenic Diet in the Treatment of Newly Diagnosed Malignant Glioma. Primary Investigator: Rekha Chaudhary, MD

GENITOURINARY

- University of Cincinnati Proton Boost for Prostate Cancer Utilizing MR Imaging. Primary Investigator: William Barrett, MD
- A Phase 3 RandOmized Study Comparing PERioperative Nivolumab vs. Observation in Patients with Localized Renal Cell Carcinoma Undergoing Nephrectomy (PROSPER RCC). Primary Investigator: John Morris, MD
- A Randomized, Double-Blind, Placebo-Controlled Phase 2 Study Comparing CB-839 in Combination with Everolimus (CBE) vs. Placebo with Everolimus (PboE) in Patients with Advanced or Metastatic Renal Cell Carcinoma (RCC). Primary Investigator: Kashif Riaz, MD

GYNECOLOGIC

- Using Novel Objective Bio-Data to Improve Quality of Life Assessment in Patients Undergoing Cytotoxic Chemotherapy: An Interventional Pilot Study III or IV Ovarian, Fallopian Tube, or Primary Peritoneal Cancer. Primary Investigator: Thomas Herzog, MD
- ARIEL4 (Assessment of Rucaparib In Ovarian Cancer Trial): A Phase 3 Multicenter, Randomized Study of Rucaparib versus Chemotherapy in Patients with Relapsed, BRCA-Mutant, High-Grade Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer. Primary Investigator: Thomas Herzog, MD
- Non-Randomized, Open-Label Phase II Study to Assess Olaparib Tablets as a Treatment for Subjects with Different HRD Tumor Status and with Platinum-Sensitive, Relapsed, High-Grade Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer That Have Received at Least 2 Prior Lines of Chemotherapy. Primary Investigator: Caroline Billingsley, MD

Amanda Jackson, MD



HEAD AND NECK

- Open-Label Phase II Study of Durvalumab (MEDI4736) in combination with Cetuximab in previously treated recurrent or metastatic head and neck squamous cell carcinoma (HNSCC). Primary Investigator: Trisha Wise-Draper, MD, PhD
- Phase II investigation of adjuvant combined cisplatin and radiation with pembrolizumab in resected HNSCC. Primary Investigator: Trisha Wise-Draper, MD, PhD
- Single Arm Phase 2 Study of Adjuvant Nivolumab after salvage resection in head and neck squamous cell carcinoma patients previously treated with definitive therapy. Primary Investigator: Trisha Wise-Draper, MD, PhD

HEMATOLOGY (Benign and Malignant)

- Feasibility and safety of Intrathecal Rituximab added to standard Intrathecal prophylaxis to prevent CNS relapse for CD 20 positive Non Hodgkin Lymphoma. Primary Investigator: Tahir Latif, MD
- Phase I Multi-Center Open-Label Dose Escalation Study of Thrombosomes® in Bleeding Thrombocytopenic Patients in Three Cohorts. Primary Investigator: Jose Cancelas, MD, PhD
- Phase 1/2 Open-Label Randomized Study of Ulocuplumab (BMS-936564) in Combination with Low Dose Cytarabine in Subjects with Newly Diagnosed Acute Myeloid Leukemia. Primary Investigator: Zartash Gul, MD

LUNG

- Randomized Phase 3 Assessment of Second Line Treatment with Docetaxel + Plinabulin Compared to Docetaxel Alone in Patients with Advanced Non-Small Cell Lung Cancer with at Least 1 Large Lung Lesion. Primary Investigator: John Morris, MD
- Phase II single-arm trial to investigate tepotinib in stage IIIB/IV adenocarcinoma of the lung with MET exon 14 (METex14), skipping alterations after failure of at least one prior active therapy, including a platinum-doublet-containing regimen. Primary Investigator: John Morris, MD
- A Randomized Phase III Study of Sublobar Resection (SR) versus Stereotactic Ablative Radiotherapy (SABR) in High Risk Patients with Stage I Non-Small Cell Lung Cancer (NSCLC). Primary Investigator: Sandra Starnes, MD

MELANOMA

- Randomized Phase 3 Comparison of IMO-2125 with Ipilimumab versus Ipilimumab Alone in Subjects with Anti-PD-1 Refractory Melanoma. Primary Investigator: Rekha Chaudhary, MD
- Phase III, Open-Label, Multi-Center, Two-Arm, Randomized Study to Investigate the Efficacy and Safety of Cobimetinib Plus Atezolizumab Versus Pembrolizumab in Patients with Previously Untreated Advanced BRAFV600 Wild-Type Melanoma. Primary Investigator: Rekha Chaudhary, MD
- Multi-Center Phase I/IIa Trial of an autologous tumor lysate (TL) + yeast cell wall particles (YCWP) + dendritic cells (DC) vaccine in addition to standard of care checkpoint inhibitor of choice in metastatic melanoma patients with measurable disease. Primary Investigator: Rekha Chaudhary, MD



Lisa Schmid, BSN, RN, research nurse (left), with patient.



UCCI's overall accrual rate of patients into clinical trials is 40%.

83 YEARS OF ACCREDITATION

UCCI one of nation's oldest accredited cancer centers

In 2017, the UC Cancer Institute once again received full accreditation from the American College of Surgeons' Commission on Cancer (CoC). The UC Cancer Institute is one of the CoC's five oldest cancer programs, with the first continuous date of accreditation in January 1934. To earn voluntary CoC accreditation, a cancer program must meet 34 CoC quality care standards, be evaluated every three years through a survey process, and maintain levels of excellence in the delivery of comprehensive patient-centered care. UC Cancer Institute's Cancer Committee supports the center's commitment to providing safe, quality care and service. The multidisciplinary team — made up of physicians, researchers, social workers, nurse navigators, hospital employees, and members from the American Cancer Society — meets quarterly to monitor the performance of the hospital's cancer program, to review available services and programs, to identify and fill gaps in service, and to monitor any care improvement initiatives. They are dedicated to ensuring that all of UC Cancer Institute's patients receive the highest level of care.



2018 UC Cancer Institute Commission on Cancer Performance Improvement/Accreditation Committee Membership List

Kelly Acker, MHA, BSN, RN, OCN, BMTCN

Adam Alexander, *Quality Improvement Coordinator*

William Barrett, MD, *Cancer Liaison Physician*

Clair Boyle, LISW-S, *Psychosocial Services Coordinator*

Cathy Chien

Natalie Ciulla, *Community Outreach Coordinator*

Kara Evans, BS, MBA

Casey Faber, *American Cancer Society Representative*

Kristin Fontaine

Lisa Grate, PharmD, BCOP

Kathy Gubser

Kelly Guthrie, RD, CSO, LD

Mona Hemingway, BSN, RN, PCCN

Thomas Herzog, MD

Stacy Holdeman, RD, LD

Jennifer Hopper, LGC

Amanda Jackson, MD, *Committee Chair*

Donnetta Jackson, CTR, *Cancer Conference Coordinator*

Alison Kastl, BS, CCRC, *Clinical Research Coordinator*

Michelle Kirschner, MSN, APRN-BC, ACNP

Marilyn Kugler, RN, BSN

Tahir Latif, MD, MBA, FACP

Jamie, McDermott, RN, BSN

Julie Meile-Hoctor, RN

Anndee Meyer, BSN, RN, C, OCN

Beth O'Connor, RN

Olugbenga Olowokure, MD

Gina Ryan, RN

Carla Schutte, CTR, *Cancer Registry QC*

Jill Settlemyre, *Cancer Family Care Representative*

Jill Sherlock, PT

Mike Shook, MBA/HCM, BA, RT(T)

Lawrence Sobel, MD

Annette Turner-Shepherd, RT(R)(M)

Lana Uhrig, RN, MBA, PhD, *Program Administrator*

Amy Voris, RN

Jiang Wang, MD, PhD

Michelle Woodward, CNS

Stewart Wright, MD, MeD

2017



10 Centers of Excellence

- Brain Tumor Center
- Breast Cancer Center
- Gastrointestinal Cancer Center
- Genitourinary Cancer Center
- Gynecologic Oncology Center
- Head and Neck Cancer Center
- Hematologic Malignancies Center
- Lung Cancer Center
- Ocular Oncology Center
- Sarcoma/Skin Cancer/Melanoma Center

At a Glance

34 Types of cancers treated

2,352 Analytic cases* (patients) treated at the UC Cancer Institute from throughout the U.S.



**Analytic cancer cases are those patients diagnosed and/or receiving their first course of treatment at the UC Cancer Institute.*



122 Clinical trials open to accrual

944 Patients participated in clinical trials

5 most common cancer sites

The top cancers treated in 2017 based on the tumor registry analytic caseload were:

1. Lung: 265
2. Head and Neck: 427
3. Brain and Central Nervous System: 188
4. Breast: 238
5. Melanoma: 183



3,426

Community members screened by UC Cancer Institute's mobile unit

- Breast: 2,097
- Lung: 1,071
- Skin: 106
- Prostate: 51
- Head and Neck: 101

150



MD or MD/PhD graduates from UC College of Medicine

Occurrence of cancer by site and sex 2017



Head and Neck:	206	149
Digestive System:	237	143
Respiratory System:	195	142
Hematological Malignancies and Bone:	85	67
Soft Tissue:	11	8
Skin/Melanoma:	110	73
Breast:	3	235
Gynecological:	0	134
Male Genital:	177	0
Urinary System:	94	49
Brain and CNS:	91	97
Endocrine:	60	85
Lymphatic System:	42	24
Other:	25	21

3.4%

Fewer than 4% of patients diagnosed at UC Cancer Institute go elsewhere for care, while more than 1/3 of UCCI patients come here for care after being diagnosed outside our system.

\$13B

University of Cincinnati contributes more than \$13 billion to the region



U.S. News & World Report ranked UC Health a High Performing hospital for cancer care in 2018

#1

Ranked Cincinnati's #1 Preferred Cancer Care Provider by NRC Health, Market Insights FY 2017/18

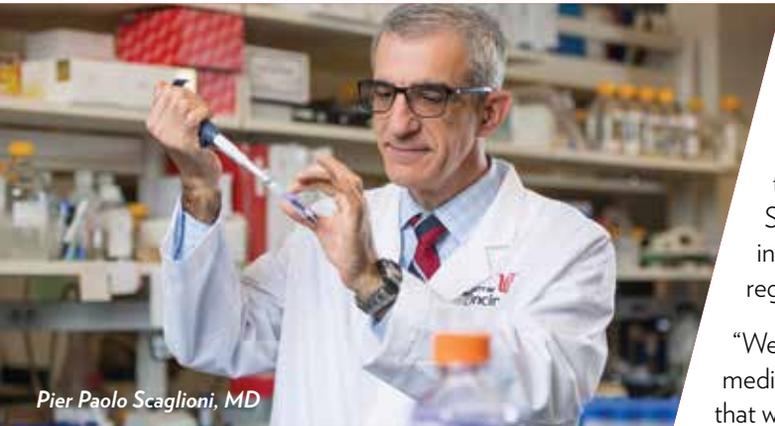
IN QUEST OF NCI DESIGNATION

Pier Paolo Scaglioni, MD, professor and Herbert F. Koch Endowed Chair in the Division of Hematology Oncology, came to UC College of Medicine on a mission to help the UC Cancer Institute receive National Cancer Institute designation.

“We are here for the community. We’re geared toward generating new knowledge regarding how the cancer cell operates — figuring out the cancer Achilles’ heel in order to obtain discoveries that will bring new drugs to patients,” Dr. Scaglioni says. “This can only be done in academic medical centers. It cannot be done in a community hospital or in a private practice because they are not geared to do clinical investigation.”

Dr. Scaglioni’s responsibilities include increasing the department’s research efforts. He’s adding more scientists, cancer biologists, and physician scientists to his team to boost the college’s focus on cancer research. Dr. Scaglioni hopes to bring more clinical trials to the university, increasing treatment options available to patients across the region. Receiving NCI designation will help achieve that goal.

“We apply standard of care. But when you are in an academic medical center, your intent is actually to make the discoveries that will lead to the next standard.”



Pier Paolo Scaglioni, MD

RIDE CINCINNATI BREAKS \$1 MILLION MARK

In 2018, Marlene Harris-Ride Cincinnati awarded UCCI scientists with five grants totaling \$200,000. Ride Cincinnati, a cycling event for all ages and abilities, was founded in 2007 by Harvey Harris, DDS, his family, and two friends in memory of his late wife, Marlene Harris, who had breast cancer. Ride Cincinnati has contributed over \$1 million directly to the university. In addition, the Western & Southern Foundation has earmarked funds from its gifts to the UC Health Barrett Cancer Center to support the Ride Cincinnati annual cycling event. The efforts to date have resulted in another \$1 million for cancer research.



Your Support Can Change the Lives of Cancer Patients!

We invite you to be a part of the exciting work happening within the UC Cancer Institute. To give your gift, please visit foundation.uc.edu/give. To speak with someone directly about your interest in giving, please call the UC Cancer Institute Development Office at **513-558-9931**.

UC CANCER INSTITUTE CENTERS OF EXCELLENCE MEDICAL LEADERSHIP

BRAIN TUMOR

Nicholas Marko, MD
Co-Director, UCCI Brain Tumor Center of Excellence
Associate Professor, Neurosurgery

John Breneman, MD
Co-Director, UCCI Brain Tumor Center of Excellence
Professor, Radiation Oncology & Neurosurgery

BREAST CANCER

Elyse Lower, MD
Director, UCCI Breast Center of Excellence
Professor, Hematology Oncology

GASTROINTESTINAL CANCER

Syed Ahmad, MD
Director, UCCI Gastrointestinal Center of Excellence
Professor, Surgical Oncology

GENITOURINARY CANCER

James Donovan Jr., MD
Director, UCCI Genitourinary Center of Excellence
Professor, Surgical Oncology

GYNECOLOGIC ONCOLOGY

Thomas Herzog, MD
Deputy Director, UCCI
Director, UCCI Gynecologic Center of Excellence
Professor, Obstetrics & Gynecology

HEAD AND NECK CANCER

Peter Stambrook, PhD
Co-Director, UCCI Head and Neck Center of Excellence
Professor, Molecular Genetics, Biochemistry & Microbiology

David L. Steward, MD
Co-Director, UCCI Head and Neck Center of Excellence
Professor, Otolaryngology

HEMATOLOGIC MALIGNANCIES & BMT

Zartash Gul, MD
Director, UCCI Hematological Malignancies & BMT Center of Excellence
Associate Professor, Hematology Oncology

LUNG CANCER

Sandra Starnes, MD
Co-Director, UCCI Lung Center of Excellence
Professor, Surgical Oncology

John Morris, MD, PhD
Co-Director, UCCI Lung Center of Excellence
Professor, Hematology Oncology

OCULAR ONCOLOGY

Basil Williams, MD
Director, UCCI Ocular Center of Excellence
Assistant Professor, Ophthalmology

SARCOMA, SKIN CANCER & MELANOMA

Jeffrey Sussman, MD
Co-Director, UCCI Skin Cancer, Melanoma & Sarcoma Center of Excellence
Professor, Surgical Oncology

Zalfa Abdel-Malek, PhD
Co-Director, UCCI Skin Cancer, Melanoma & Sarcoma Center of Excellence
Professor, Dermatology



IN SCIENCE LIVES HOPE.

UC Health's Pulse of the City is an opportunity for Cincinnati to send a resounding message of hope to those who need it most.

It is a compelling measure of the collective goodwill of the city, illuminating the power of hope in science. Join the movement by posting a message of hope using #PulseOfTheCity on Facebook, Twitter, or Instagram, and we will deliver it to patients in our care.



**University of Cincinnati Cancer Institute
Barrett Cancer Center**

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