

Discover Health

West Chester Campus
2022 Issue 3

Cancer Survivorship Program
is Enhancing Quality of Life

Pg. 6

First-in-the-World
Cancer Clinical Trial
Pg. 1

Dovie's Story: Early Detection
and New Treatments Offer Hope
Pg. 2

Breast Cancer Is No Match
for Superior Care and a
Positive Attitude
Pg. 3-4

The Current State of
Colorectal Cancer
Pg. 5

Special Edition: Cancer Success Stories

Groundbreaking Cancer Research is Happening in Your Backyard

UC Health Conducts World's First FLASH Proton Therapy Trial in Humans

The Queen City is solidifying its position as a top leader in cancer research thanks to the Cincinnati Children's Hospital Medical Center / University of Cincinnati Medical Center Proton Therapy Center located in Liberty Township, with the first FLASH proton therapy trial being completed in humans.

FAST-01 (**F**eAsibility **S**tudy of FLASH Radiotherapy for the **T**reatment of Symptomatic Bone Metastases) is the first human clinical trial of **FLASH** therapy—placing UC Health and Cincinnati Children's Hospital Medical Center at the forefront of this pioneering work.

The trial has been led by John C. Breneman, MD, medical director of the UC Medical Center Proton Therapy Center and professor emeritus in the Department of Radiation Oncology at UC College of Medicine. Emily Daugherty, MD, UC Health radiation oncologist, assistant professor of radiation oncology at UC College of Medicine and lead sub-investigator for the trial, and Anthony Mascia, PhD, director of medical physics and adjunct assistant professor of radiation oncology at UC College of Medicine, support the trial as well.

FLASH therapy, an experimental treatment modality delivering radiation therapy at ultra-high dose rates in typically less than one second, may be more than 400 times faster compared to conventional radiation therapy. While the concept of ultra-high dose rate radiation delivery has been studied for many years, UC Health is pioneering this new trial focused on humans.

"We are the only health system conducting this trial in the world," says Dr. Daugherty. "It is astounding and important for people to know that this groundbreaking work is happening right here in Cincinnati, right in their backyard."

Launched in November 2020, the FAST-01 trial met its enrollment target of 10 participants with bone metastases in the extremities to evaluate clinical workflow feasibility and treatment-related side effects. Doctors confirm that this revolutionary treatment has been effective and continue to track patients enrolled in the trial to ensure that the effectiveness continues.

Dr. Breneman says the primary goal of the first trial period was to study the safety of the therapy in humans, with effectiveness of treatment as a secondary goal. Currently, Dr. Breneman and his team are working with the Food and Drug Administration (FDA) to prepare for the second trial—a follow-up study of the experimental treatment modality delivering radiation to different parts of the body. The first trial focused on delivering radiation to bone metastases in the arms and legs.

"The second trial is working its way through the regulatory agencies right now. And we hope to open the study by the fall," says Dr. Breneman.

While the treatment modality is still in the experimental phase, it is possible the technology will be used routinely in patient care by 2027, adds Dr. Breneman. Researchers are able to perform this groundbreaking work in Cincinnati because of the Proton Therapy Center—the one-of-a-kind research facility is a partnership among the University of Cincinnati, UC Health and Cincinnati Children's. It includes a fully operational proton treatment room dedicated exclusively for research with other integrated laboratories.

"We are conducting revolutionary research that is not being performed anywhere else in the world. And we hope to change lives," says Dr. Breneman.

What Is Proton Therapy?

Proton therapy is a type of radiation therapy that uses protons to treat tumors. It is just as effective as traditional radiation therapy, with one major advantage: greater precision. Proton radiation can attack the tumor but avoid healthy tissues and organs nearby. This reduces the risk of treatment-related side effects and long-term complications. Doctors may use proton therapy alone, or they may combine it with other treatment methods, such as traditional radiation therapy, surgery, chemotherapy and immunotherapy.

What Is a Proton?

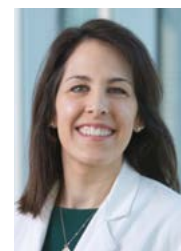
A proton is a particle found within the nucleus of every atom. Protons have unique properties that make them very effective in treating patients with tumors. For example, they can be precisely controlled to match the location and shape of the tumor. They do not deliver the entire radiation dose all at once as they travel through the body. Instead, they enter the body at a very high speed, initially delivering low levels of radiation. As they travel, they slow down. When the protons hit the tumor, they deliver the maximum tumor-killing radiation dose, then completely stop. No radiation is delivered past the tumor site. This lowers the impact on normal tissues surrounding the tumor and reduces the risk of treatment-related side effects.

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To receive the name of a cancer specialist at the UC Health West Chester Campus, please call 513-298-DOCS (3627). Learn more about proton therapy at [uchealth.com/en/cancer-center/proton-therapy-center](https://www.uchealth.com/en/cancer-center/proton-therapy-center).



John Breneman, MD
Medical Director



Emily Daugherty, MD
Radiation Oncologist



Bone Cancer Facts

About 3,910 new cases of bone cancer are diagnosed annually and bone cancer will result in 2,100 deaths each year, according to the American Cancer Society. This includes cancers in both children and adults.

Dovie's Story: Early Detection and New Treatments Offer Hope

Five years ago, Dovie Hudson, 78, of Liberty Township, spent the summer feeling like something wasn't quite right with her gastrointestinal (GI) health. As the summer turned into fall, she called her doctors to move up a colonoscopy that she had originally scheduled for late December.

On Nov. 18, 2017, she was diagnosed with stage III distal rectal cancer, and her primary care physician referred her to Jonathan Snyder, MD, UC Health colorectal surgeon at the University of Cincinnati Cancer Center and associate professor of oncology at UC College of Medicine, and Jordan Kharofa, MD, UC Health radiation oncologist at the University of Cincinnati Cancer Center and associate professor of radiation oncology at UC College of Medicine.

"I could sense something was wrong," she says. "Hearing that it was stage III was the most terrifying part."

Like Dovie, patients across the U.S. are diagnosed with gastrointestinal cancer every year. Treatment is more effective when the cancer is detected at an early stage.

Gastrointestinal cancer includes all cancers in your digestive tract organs such as the stomach, large and small intestine, pancreas, colon, liver, rectum, anus and biliary system. GI cancers account for 26% of the global cancer incidence and 35% of all cancer-related deaths, according to a study from the National Institutes of Health.

Dovie told Dr. Snyder and Dr. Kharofa that she wanted to live to see her granddaughter, Courtney, graduate from high school in May 2018, and she began months of a rigorous course of radiation and chemotherapy treatment. The doctors also told her that she would likely need surgery after the treatment to remove any remaining cancer.

When she finished her radiation and chemotherapy, the tumor was gone.

"Her therapy was given with the understanding that she would most likely have surgery. Due to the location of her tumor, surgery would have involved complete removal of her rectum and anus and creation of a permanent colostomy. When someone has a colostomy, that means that a portion of their large intestine is surgically delivered through their belly and sutured to the skin, such that all of their fecal waste empties into a bag. Some colostomies are temporary and reversible—this one would not have been," says Dr. Snyder. "Ultimately, what happened in her case was that she had an apparent complete clinical response, which is the absence of evidence of her rectal tumor after treatment."

Dovie's case represents a relatively new approach for treating some types of gastrointestinal cancers. Coined as watch and wait, the non-operative (no surgery) approach has been used more often in select patients. The watch-and-wait strategy offers a non-invasive therapeutic alternative for rectal cancer patients who have achieved a clinical complete response after chemoradiotherapy.

Dr. Kharofa says this approach has gathered momentum based on data and evidence from around the world that shows its success. "We're looking at ways to improve the odds of having a complete response. What we now know is that if you give the radiation therapy first, then the full dose of chemotherapy prior to surgery or prior to assessment, you can enhance outcomes even further, i.e. the number of patients who have a complete response (absence of the tumor) and who can avoid surgery altogether," he says.

For some patients, this approach allows them to avoid surgery and challenging lifestyle changes like coping with a permanent colostomy. Now, five years later, Dovie has not experienced any recurrence of her cancer and she has watched her granddaughter graduate from high school and now, college. She has continued

to watch her adult children thrive and her grandchildren grow into young adults, while staying active with her hobbies including reading and gardening.

"It is a miracle from God, I could be gone," says Dovie. "Because of medical science and the care I received at the University of Cincinnati Cancer Center, I have had these years to live and be with my family."

Tips for Early Prevention and Detection

While new treatment approaches are positive news for patients, both Dr. Kharofa and Dr. Snyder say the early detection and prevention of GI cancers can help people avoid treatment altogether. Tips for early prevention and detection are below.

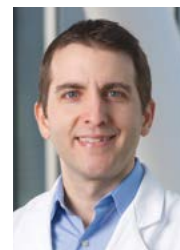
- Follow the recommendations to begin screening colonoscopies at the age of 45, unless you have gastrointestinal symptoms that would otherwise potentially require earlier investigations.
- Be aware of any genetic precursors that could impact your chances of developing a type of gastrointestinal cancer.
- Speak to your healthcare provider about any changes to your bowel movements, including blood in your stool. Note any symptoms including nausea, vomiting, change in appetite, swelling of the abdomen, heartburn or indigestion.
- Make positive lifestyle choices such as maintaining a healthy weight, limiting alcoholic drinks and never using tobacco products.

Discover More

To receive the name of a colorectal cancer specialist at the UC Health West Chester Campus, please call 513-298-DOCS (3627). To learn more about the University of Cincinnati Cancer Center, please visit uchealth.com/en/cancer-center or call 513-585-UCCC.



Jonathan Snyder, MD
Colorectal Surgeon



Jordan Kharofa, MD
Radiation Oncologist



Dovie Hudson loves to sit in her backyard and enjoy her flower garden.

Breast Cancer Is No Match for Superior Care and a Positive Attitude

Tracy Kraft is unfortunately no stranger to cancer. Her maternal grandmother was treated for breast cancer and her mother was diagnosed with non-Hodgkin's lymphoma. "It's not like I planned on having cancer," Tracy says, "but I figured I better be prepared and stay on top of preventive medicine." That preventive plan included regular mammograms.

Several years ago, a scan discovered linear calcifications in Tracy's left breast. Doctors wanted to keep a watchful eye on it, so they prescribed a mammogram every six months for Tracy.

In March 2021, one of those regular mammograms detected something that concerned Tracy's doctors and they scheduled a biopsy. The results showed Tracy had invasive ductal carcinoma in her right breast.

One of the first things Tracy did was call her younger sister, Susan Budnick, MD, an internal medicine specialist at Case Western University and a graduate of the University of Cincinnati College of Medicine. "She told me I had to be treated at UC Health," Tracy recalls. "She was sure there was only one place to receive expert cancer care." That assurance helped Tracy feel more at ease.

As a resident of Madison Township, Ohio, Tracy was relieved to discover her entire treatment plan could take place at UC Health's West Chester Campus, which was close to her home. "I literally had everything completed under one roof at West Chester, from start to finish," Tracy says. "They have everything so streamlined for the patient."

Tracy admits to feeling overwhelmed and sick to her stomach in those early days of diagnosis. But, from her very first visit to UC Health, her worries were eased. "The nurse told me that they take care of this every single day," Tracy remembers. "They just had such a positive attitude, so I did too."

Tracy's doctors recall her positive outlook more than anything else. "I don't think I ever saw her upset; she always came in with a smile," says Emily Daugherty, MD, UC Health radiation oncologist at the University of Cincinnati Cancer Center and assistant professor of oncology at UC College of Medicine. "She's just a joy to be around, no matter the circumstance."

Dr. Daugherty collaborated with two additional University of Cincinnati Cancer Center specialists, Jaime Lewis, MD, UC Health surgical oncologist and associate professor of surgery at UC College of Medicine and Mahmoud Charif, MD, UC Health medical oncologist and associate professor of oncology at UC College of Medicine, to develop a multidisciplinary care plan for Tracy.

"Not only do we have the highly specialized expertise as doctors, we all work well together, collaborating to ensure that care and services move quickly," says Dr. Daugherty. "Every patient receives a personalized care plan that doctors from all disciplines agree on together. We are constantly communicating about all of our mutual patients, which means superior cancer treatment."



Jaime Lewis, MD
Surgical Oncologist

Tracy, who turns 50 soon, agrees. She describes her first meeting with the cancer care team as refreshing. "They really put me at ease," Tracy says, "and they simplified everything."

The team laid out Tracy's plan. She would have four months of chemotherapy, surgery, physical rehabilitation and finally, radiation. This process would last from April through December. "I didn't realize breast cancer was this involved," states Tracy, who reiterated how glad she was to have this type of treatment so close to home.

The UC Health breast cancer team at the West Chester Campus manages all types of breast cancer issues: benign, high-risk and malignant.

After chemotherapy treatments from April to August, Tracy's surgery was scheduled for September 2021. Due to the linear calcifications discovered earlier in Tracy's left breast, along with the cancerous tissue discovered in the right breast, Tracy opted for a bi-lateral mastectomy. Dr. Lewis, who specializes in surgical oncology of the breasts, worked with Ryan Gobble, MD, UC Health plastic surgeon and assistant professor of surgery at UC College of Medicine, who specializes in post-mastectomy breast reconstruction.



Tracy's doctors at UC Health recall her positive attitude more than anything else.

Dr. Lewis performed the first surgery, in which she removed the cancerous tissue and lymph nodes while completely saving Tracy's nipples. Immediately after, Dr. Gobble stepped in to reconstruct Tracy's chest using implants.

"My health insurance called to double check that the surgeries were planned for one day because most places have to wait several months between removal and reconstruction," Tracy says. This sub-specialization of UC Health cancer clinicians allows for top-tier care, such as performing two surgical procedures within one day, which is not common elsewhere in the region.

"My doctors spoke very highly of each other, and they were convinced they could do this in one fell swoop," Tracy recalls, which boosted her confidence in her multidisciplinary team.

As a young, active person, who strived to remain active during chemotherapy treatments, Tracy did not think she would require physical therapy after surgery. Ultimately, the major reconstruction took some getting used to. Tracy worked with therapists to regain her strength and control, and once again, was pleased to be able to do it all at the West Chester Campus. "UC Health really proved to be a one-stop shop for cancer care," Tracy says.

Once Tracy recovered from surgery, with the help of physical therapy, the next step was radiation treatment. Although it was a long road, Tracy said her doctors and providers made it bearable. "I could not have asked for a better care team. Dr. Daugherty is amazing; I cannot speak highly enough of her. She and the rest of the cancer team genuinely care about their patients," Tracy says.

Tracy finished her last round of radiation just two days before Christmas 2021, nine months after her diagnosis. Tracy's doctors said she faced

it with an incredibly positive attitude. "She is just one of the happiest patients, and is most appreciative," says Dr. Lewis, "You can tell she just has such a positive outlook on things."

Dr. Daugherty also believes that her positive attitude has directly contributed to her successful recovery. "Studies have shown that patients who do not have pessimistic attitudes can have better outcomes," explains Dr. Daugherty. "We know there is a mind-body connection. We don't know exactly how it works of course, but we do know that it plays into how well people respond. Even though we can't understand it, we know that it is very real."

As Tracy looks ahead to the future, she is most excited about her plans to return to UC Health's West Chester Campus in September 2022 when she will embark on her next role in life: grandmother. Her daughter is expecting a baby and has switched her obstetrics care to West Chester Hospital's Maternity Services. She plans to deliver her baby there because she was so impressed with the medical care that her mother received.

Discover More

To receive the name of a breast cancer specialist at the UC Health West Chester Campus, please call 513-298-DOCS (3627). To learn more about the University of Cincinnati Cancer Center, please visit uchealth.com/en/cancer-center or call 513-585-UCCC.



Mahmoud Charif, MD
Medical Oncologist



Ryan Gobble, MD
Plastic &
Reconstructive Surgeon



Tracy Kraft is surrounded with support and love from her husband, Brett, mother Rebecca and father, Greg.

The Current State of Colorectal Cancer

Although colorectal cancer is one of the most common cancers in the U.S., cases in older patients have decreased since the mid-1980s, mainly thanks to screening and early detection.

When should you be screened? In early 2022, the American Cancer Society updated its recommendation that the colonoscopy screening age be lowered from 50 to 45.

“Unfortunately, we are seeing an increase in colorectal cancer in younger people,” says Ian Paquette, MD, UC Health colorectal surgeon at the University of Cincinnati Cancer Center and chief of the Division of Colon and Rectal Surgery at the UC College of Medicine. “This has led to a change in the screening guidelines to receive a screening colonoscopy.”

This new screening age recommendation applies to every person in the U.S., yet the rise in cases seems to be specific to certain regions.

“There are certain pockets where we’re seeing above-average increases, which includes Southern Ohio and Kentucky,” notes Jordan Kharofa, MD, UC Health radiation oncologist at the University of Cincinnati Cancer Center and associate professor in the department of radiation oncology at the UC College of Medicine.

Researchers around the world are trying to figure out why younger people are developing colorectal cancer—including Dr. Kharofa and his team at the University of Cincinnati Cancer Center. As of now, Dr. Kharofa believes dietary issues could be the culprit.

“The individual patients are not necessarily overweight, but these portions of the country are known for having a high-sulfur microbial diet, which means low in fruits and vegetables, and high in saturated fats, processed meats and low-calorie drinks,” Dr. Kharofa says.

If you’re younger than the eligible screening age of 45, it’s still important to know and be on the lookout for symptoms. Abnormalities like blood in

your stool or difficulties with bowel movements may mean you should talk to your provider about being screened.

Colorectal cancer starts in either your colon or your rectum—the parts of your large intestine that make up the lower digestive tract.

Lower Your Risk for Colorectal Cancer

According to the American Cancer Society, excluding skin cancers, colorectal cancer is the third most-common cancer diagnosed in both men and women in the U.S. While no definite way to prevent colorectal cancer exists, it is possible to lower your risk by maintaining a healthy lifestyle. Here are a few tips:

- Exercise regularly.
- Eat lots of fruits, vegetables and whole grains.
- Limit red and processed meats.
- Maintain a healthy weight.
- Avoid smoking or abusing alcohol.

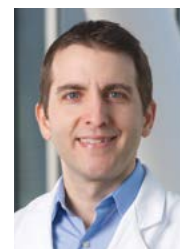
Talk to your provider about when to be screened—colorectal cancer almost always develops from precancerous polyps (abnormal growths) in the colon or rectum. Screening tests can find precancerous polyps, so they can be removed before they turn into cancer. Screening tests can also find colorectal cancer early—when treatment works best. Examples of screening methods include a visual exam, such as a colonoscopy or a stool-based test.

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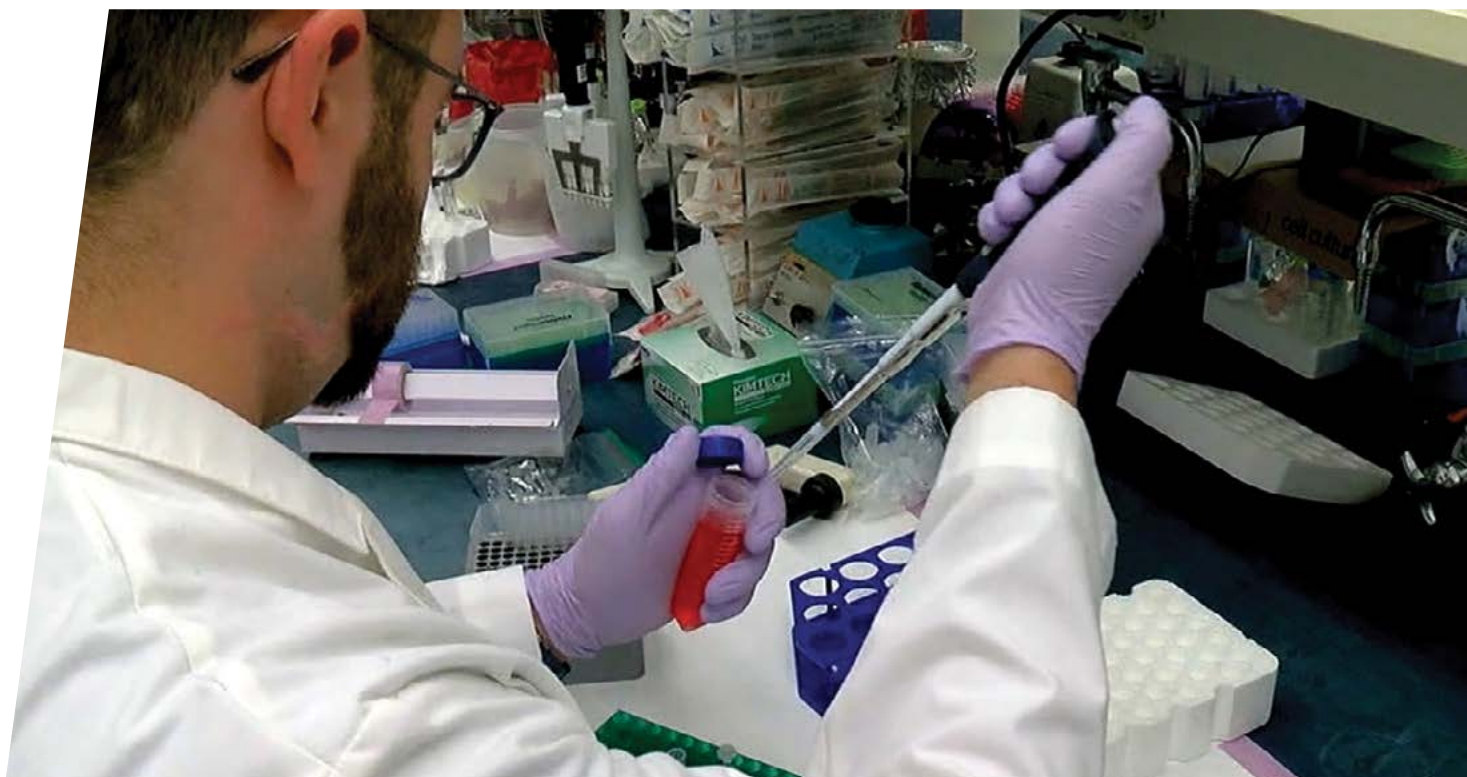
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Ian Paquette, MD
Colorectal Surgeon



Jordan Kharofa, MD
Radiation Oncologist



Cancer Survivorship Program is Enhancing Quality of Life

Jill Schiaparelli is the CEO of a successful healthcare start-up company. Between her work and her family, she is always on the go. Early one morning as she prepared to leave for a business trip in late 2018, she discovered a lump in her breast while showering.

She immediately knew that something was wrong. Less than 48 hours later, she had scheduled a diagnostic mammogram appointment at the breast imaging center located on the UC Health West Chester Campus, which then led to an ultrasound and a needle biopsy all in one day.

Doctors diagnosed Jill with HER2-positive breast cancer. "It's a really aggressive cancer, and I was diagnosed at stage III," she says.

Since her diagnosis, she has received 18 chemotherapy treatments, a mastectomy, 30 radiation treatments, breast reconstruction surgery and several other surgical procedures. Despite a very challenging treatment journey, she continued to live her life as best she could—managing her business and taking care of her teenage children.

"I was determined that cancer would not stop me and I certainly would not let it define me," states Jill. "Being active and having a positive attitude was a very important part of that. My treatment was extremely successful, and I was declared cancer-free, but I still have lingering effects from treatment." Jill adds, "You are forever changed by cancer and the journey doesn't end when treatment is over. I wanted to ensure that I was doing everything that I could to ensure a long, happy and healthy future."

For Jill, that is where the University of Cincinnati Cancer Center Cancer Survivorship and Supportive Services Program became an indispensable resource for her, providing personalized care that encompassed evidence-based interventions, disease surveillance, healthy lifestyle promotion, as well as support and resources for family and caregivers.

As the largest survivorship program in the region, it offers more than 20 types of services and therapies as well as the region's first oncology primary care clinic—designed to deliver primary care services specifically focused on the needs of adults with a history of cancer.

Melissa Erickson, MD, UC Health primary care physician, medical director for the University of Cincinnati Cancer Center Cancer Survivorship Program and adjunct assistant professor in the Department of Family and Community Medicine at UC College of Medicine, says cancer patients have many side effects related to their illness and medical treatment. "The survivorship program was created to improve quality of life and promote overall health and wellness by addressing treatment-related side effects such as fatigue, pain and mental health concerns."

"Patients who participate in these services say that they finally feel heard. They no longer have to suffer in silence or just be grateful that they survived their cancer," says Dr. Erickson. "They appreciate that someone is specifically addressing these needs and working with them to develop a plan. It aids in their recovery by improving quality of life and increasing the likelihood of adhering to cancer surveillance and/or long-term cancer treatment."

Jill has taken advantage of several survivorship offerings including the Cancer Exercise Wellness Program offered within the Daniel Drake Center's Outpatient Rehabilitation Center located on the UC Health West Chester Campus.

Personalized exercise routines and personal training for cancer survivors are delivered by a multidisciplinary team of exercise physiologists, respiratory therapists, nurses and physicians. With their help, Jill has adopted an exercise and weightlifting routine that helps with core strengthening and conditioning of her arms, which were hard to lift above her head after reconstruction surgery.

"When you are recovering from treatment—radiation, chemotherapy and surgery—you feel unsure about how to get back to normal movements and exercising," she says. "I had surgical scars on many areas of my body and I literally didn't know what I could and could not do. It makes me feel much more comfortable working with therapists who are trained in cancer recovery and who can offer personalized therapies to address my specific needs."



Melissa Erickson, MD
Primary Care Physician

"Treatment for our patients is never cookie-cutter," says Chad Balilo, manager for Cardiac, Pulmonary, Cancer and Vascular Rehabilitation and Wellness, at the Daniel Drake Center.

"Each person is unique, from diagnosis to recovery. We assess the multiple needs of each patient carefully as we deliver an individualized, evidence-based solution. Cancer exercise is not as prevalent a topic as exercise science is for heart disease. Providing patients, caregivers and the community with encouragement, education and other resources can help make the benefits of exercise more well known."

Expanding Exercise and Wellness to Cancer Patients During Treatment

The University of Cincinnati Cancer Center has a pilot program underway for bringing exercise to chemotherapy infusion suites, a clinical model to provide earlier exercise intervention during the cancer journey. Because fatigue affects patients both during and after treatment, the goal is to expand this service to reach more patients and dispel the myth that patients cannot exercise during treatment.

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With the support of the UC Health Cancer Survivorship Program, Jill Schiaparelli has remained active throughout her cancer journey.



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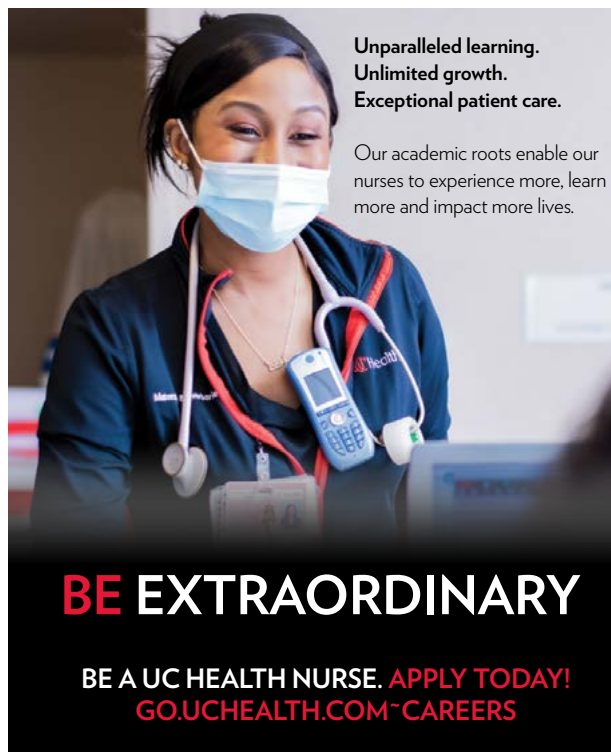
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The University of Cincinnati Cancer Center

is a collaboration between the University of Cincinnati, UC Health, and Cincinnati Children's — each bringing their own rich legacy of top-tier care. Our common goal is to minimize the suffering and mortality associated with cancer in the Greater Cincinnati region and beyond.

The University of Cincinnati Cancer Center provides the best possible care for our patients while training the next generation of cancer experts — all while being at the forefront of new advances and cutting-edge discoveries.

Discover more at uchealth.com/en/cancer-center.



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