New Insight into How Breast Cancer Drug Works Could Lead to Improvements

In a study that upends current concepts of immunotherapies for breast cancer, researchers at Duke Cancer Institute have described a new process for how the drug pertuzumab works in tandem with trastuzumab.

The combination therapies have been frontline treatments for HER2-positive breast cancers, but the way they work has not been well understood. Better insights into the drugs’ mechanisms could enhance their current use and lead to ways to improve them.

The research team — which was led by Zachary Hartman, PhD, an associate professor in the Departments of Surgery and Pathology at Duke University School of Medicine and member of the Duke Cancer Institute — published their findings in the journal *JCI Insight*.

The team found that pertuzumab doesn’t just interrupt a cancer-causing signaling system driven by the protein HER2, but also elicits a different kind of immune response that is critical for its efficacy.

When combined with trastuzumab, the therapies lead to activation of an immune response known as the complement system, a blood defense system that aids in the body’s ability to clear foreign substances and pathogens.

“Our finding overturns existing dogma in how pertuzumab functions and demonstrates a new mechanism of action for tumor-specific antibodies,” Hartman said. “It suggests that enhancing complement activity in tumors could improve our existing therapies.”

— Sarah Avery

New Sarcoma Center Launches

In April 2022, Duke Cancer Institute announced the launch of the Duke Sarcoma Center, a center of excellence for treatment and research into sarcoma (rare cancers that affect the supporting tissue of the body).

The center is spearheaded by orthopaedic surgical oncologist and Professor of Orthopaedic Surgery and Pediatrics Brian E. Brigman, MD. It is the natural outgrowth of Duke’s personalized sarcoma treatment grounded in research and commitment to training the next generation of sarcoma clinicians and scientists.

“Over the last 15 years or so, our specialized team has really grown into a national leader in this area,” Brigman said. The center is a recognition of this accomplishment and the beginning of even better care, research, and training at Duke, he said.

The team includes 25 specialists across the disciplines of orthopaedic surgery, surgical oncology, medical oncology, pediatric oncology, radiation oncology, radiology, neurosurgery, and pathology.

These providers see more than 900 new patients per year and are actively caring for more than 2,000 patients, Brigman said. “Sarcomas may be rare cancers, but they’re not rare for us.”

According to the American Cancer Society, about 3,911 new cases of cancer in the bones and joints and an estimated 13,190 new cases of soft tissue sarcoma will be diagnosed in adults and children this year. An estimated 2,100 people are expected to die from bone and joint sarcoma and 5,130 from soft tissue sarcoma.

That’s about 17,000-plus diagnoses and 7,000-plus deaths too much. “Because they occur anywhere in the body, can affect people of any age, and have more than 100 different subtypes, they are very challenging to diagnose and cure,” Brigman said. “This work requires a true team approach. There’s ample evidence to suggest that patient outcomes are better when they’re treated by an integrated, subspecialized sarcoma team.”

— Julie Harbin
When Joseph O. Moore, MD, came to Duke as a fellow in 1975, he and his mentors treated chronic myeloid leukemia (CML) with a chemotherapy regimen that was like a “wet blanket.” It suppressed the cancer for a few years. “But it didn’t change the trajectory of the disease,” Moore said. Patients developed acute leukemia, which was almost always fatal.

By the early 1990s, younger patients could achieve a cure with a bone marrow transplant, though complications were common. By 1999, Moore was the Duke investigator for a national study of a targeted drug, imatinib, which stops leukemia cells from growing by shutting down a key protein. When imatinib was approved by the Food and Drug Administration (FDA) in 2001, it transformed CML into a disease easily treated by taking a pill.

When Moore retired from clinical practice in 2019, he was involved in a study following people with CML who had been taking imatinib long term, which showed they could safely stop therapy.

The CML example provides a snapshot of just how far cancer treatment has come in the last 50 years. For many patients, “There’s an expectation of success and people living normal lives,” said Moore, professor emeritus of medicine.

Much of that progress can be traced to research funded by the “war on cancer,” which launched in 1971 when congress passed the National Cancer Act. The act gave the National Cancer Institute (NCI) the authority and funds to create a national cancer program. The backbone is a network of comprehensive cancer centers that provide patient care and conduct rigorous research to find new and better ways to prevent, diagnose, and treat cancer.

Duke was one of the original eight such centers, designated in 1973 because of the strong research and clinical care programs it had already put into place, including one of the first brain tumor programs in the United States, said Steven Patierno, PhD, deputy
Michael Kastan

with Schanberg as the only full-time employee.

Medical and graduate students in neuro-oncology pioneer, begins serving as a mentor to Duke

1987

Laboratory Isolation Facility, the first of its kind.

1983

was making chemotherapy easier to tolerate,

Surgery, as well as treatments that are toxic to all cells, like standard chemotherapy and radiation, were the main treatments when the war on cancer began, and they are still used today. One of Duke’s contributions was making chemotherapy easier to tolerate, through clinical studies that led to the FDA approval in 1990 of a growth factor (G-CSF) that stimulates bone marrow recovery, decreasing infections and hospitalizations. “G-CSF is used all over the world now for patients getting chemotherapy,” said Michael Kastan, executive director of Duke Cancer Institute and the William and Jane Shingleton Professor of Pharmacology and Cancer Biology.

Also in the 1990s, Duke made pioneering advances in stem cell transplant for patients with blood cancers. In 1992, Duke opened the nation’s first outpatient bone marrow transplant program. High-dose chemotherapy is given on an inpatient basis, but Duke’s procedure allowed bone marrow infusions to be performed at outpatient clinics. “Patients did not have to be hospitalized, so they were able to move about more and eat better. The costs tend to

be lower as well,” said Nelson Chao, MD, MBA, Donald and Elizabeth G. Cooke Professor and chief of Duke’s Division of Hematologic Malignancies and Cellular Therapy.

Today, the program has evolved to providing all follow-up care outside the clinic for bone marrow transplant patients in recovery, at their homes or an apartment near Duke. The team was the first in the world to test this practice in 2014. In 2020, in response to the COVID-19 pandemic, they made it standard of care. The practice reduces the number of people each patient is exposed to and may reduce complications and improve survival, Chao said.

**HITTING THE TARGET**

Thanks to advances like these, the death rate from cancer in the United States has declined every year since 1991, according to the American Cancer Society.

Targeted therapies, which directly “hit” a specific protein or other molecule that has caused cancer to grow, have played a large role in that progress, Kastan said.

**WE’D EVENTUALLY LIKE TO STOP USING CYTOTOXIC THERAPIES, BUT THAT’S GOING TO BE A LONG TIME.**

Michael Kastan

The first targeted therapy — imatinib, the drug that Moore mentioned — wasn’t approved by the FDA until 2001. Duke has made key contributions in developing other targeted therapies, including Avastin, the first cancer therapy that worked by stopping blood vessel growth, cutting off the tumor’s blood supply. In 2004, Duke clinical studies led to approval of Avastin for colon cancer, and in 2007, Duke researchers at the Preston Robert Tisch Brain Tumor Center led studies showing that it worked for brain tumors, leading to FDA approval for that use.

In 2012, Duke breast cancer researchers led clinical trials that resulted in approval of lapatinib and trastuzumab, some of the first targeted therapies to treat metastatic breast cancer. “They both have become standard therapies for high-risk breast cancer,” Kastan said.

Despite such developments, some cancers still have low survival rates, and there still aren’t targeted therapies for most tumor types, because research is in “its infancy” in understanding the genetics of tumors, Kastan said. “We’d eventually like to stop using cytotoxic therapies, but that’s going to be a long time.”

Immunotherapies, which harness the immune system’s own ability to fight cancer, are another focus for the future. Immunotherapies that emerged beginning in 2010 have led to improved survival times for some cancers, and by 2015 they made it possible for lung cancer patients to achieve long-term survival for the first time, said Scott Antonia, MD, professor of medicine. The DCI Center for Cancer Immunotherapy, which Antonia directs, works to translate Duke discoveries into new immunotherapies, and to make these treatments work better for more patients.

**THE RIGHT TREATMENT FOR THE RIGHT PATIENT AT THE RIGHT TIME**

No matter the type of treatment, the future of cancer care will continue to move toward precision medicine, or “finding the right treatment for the right patient at the right time,” Kastan said. This includes choosing treatments based not only on the genetics of the tumor, but also on the genetics, age, and risk factors of each patient.

Duke has made some inroads with a Molecular Registry of Tumors that stores information about mutations in patients with advanced cancers, uses Duke-created software to match patients with treatments that may work best for their tumor, then notifies doctors automatically. In addition, Duke researchers in prostate cancer and colorectal cancer have in the last three years led clinical trials showing that a “liquid biopsy” can be used to track how tumors are evolving and responding to treatment, Kastan said. Liquid biopsies use a blood test to detect circulating tumor cell or tumor DNA, so they are less invasive and faster than traditional tissue biopsies.

Another vision for the future is a time when no one ever develops full-blown cancer. A group of Duke researchers from many different fields are working together on the idea of “interception” — intervening once someone has started down the “cascade” of events leading to cancer, but before actual cancer has developed, said Meira Ephlin, PhD, co-leader of the Cancer Risk, Detection, and Cellular Therapy Program.

“**WE’D EVENTUALLY LIKE TO STOP USING CYTOTOXIC THERAPIES, BUT THAT’S GOING TO BE A LONG TIME.**”

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Bishop Ronald Godbee and Meira Ephlin

**DIFFERENT FIELDS ARE WORKING TOGETHER ON THE IDEA OF “INTERCEPTION” — INTERVENING ONCE SOMEBODY HAS STARTED DOWN THE “CASCADE” OF EVENTS LEADING TO CANCER, BUT BEFORE ACTUAL CANCER HAS DEVELOPED, SAID MEIRA EFHLIN, PHD, CO-LEADER OF THE CANCER RISK, DETECTION, AND CELLULAR THERAPY PROGRAM.**
1. **Coupled Receptors**

   For instance, gastrointestinalists are practicing intervention when they remove pre-cancerous polyps during a colonoscopy. Another example — testing and treating for the stomach bacterium H. pylori, which causes ulcers and is thought to infect 50 percent of the world's population. Infection with H. pylori increases risk of stomach cancer, but treating an infected person with a two-week course of antibiotics eradicates the bacterium and reduces risk of stomach cancer by 50 percent, Epplein said.

   Epplein has worked with community partner Bishop Ronald Godbee to host H. pylori testing events at a Durham church. Participants received letters about their results and were encouraged to share this information with their primary care doctors and, if appropriate, ask to be treated.

   The research group is working to develop other methods of intervention and new ways to identify people at high risk for cancer.

   **TREATING THE PERSON, NOT JUST THE CANCER**

   Duke was one of the first cancer centers to make patient care the priority.

   In 1987, Rachel Schanberg founded the Duke Cancer Patient Support Program in memory of her daughter, Linda Schanberg Clark, who died from Hodgkin's disease at age 26. “She was the first to say that her daughter received excellent medical care, but she felt there were many challenges for her daughter and her family that no one talked about,” says Cheyenne Corbett, PhD, who worked with Schanberg and is now co-director of the Duke Supportive Care and Survivorship Center.

   Schanberg quit her job as a school counselor to direct the program. Corbett heard about it in 2002 when she was finishing a doctoral degree in family therapy at Nova Southeastern University in Florida. “Even then, there were very limited options in cancer centers or in the community to help families facing cancer,” Corbett said.

   Corbett started working with Schanberg in 2002 part time, coordinating volunteers and providing counseling. There was very little money, but Schanberg persisted. “She was one of the strongest, feistiest people I’ve ever met,” Corbett said.

   “Every day, if Rachel saw a patient in need or someone who looked lost or confused or sad, she would stop and sit and just connect with them,” Corbett said. “That’s the heart of what we do: Stop and really listen to what the patient is going through.”

   Corbett became director of the program when Schanberg retired in 2006, and she and her team have grown their cancer support services and research into the DCI Supportive Care and Survivorship Center, created in 2017.

   The center offers an array of services to all DCI patients and their families, such as therapy, patient navigation, tobacco cessation, a teen and young adult oncology program, financial assistance, exercise consults, a program focused on heart health of cancer patients, a sexual health and intimacy program, a cancer genetics program, and fertility services. The center also leads research and training programs.

   **A NEW ERA AT DUKE**

   In 2010, then-Chancellor for Health Affairs Victor Dzau, MD, announced plans to unite all of Duke’s cancer care, research, and education under one organization — the Duke Cancer Institute (DCI). This structure breaks down barriers between departments and between the health system and the university, said Kastan, an accomplished cancer biology researcher who came to Duke in 2011 after leading the cancer center at St. Jude’s Children’s Research Hospital. “I knew that in the setting of this structure, that the sky was the limit, and that we could do great things in this environment with the great people at Duke.”

   The new investments in cancer care and research included a 267,000-square-foot Duke Cancer Center building.

   It opened in 2012 with natural light, family space, and clinics set up so that patients can see multiple providers in one building.

   Duke staff and patients worked with architects and designers to make the building “a physical embodiment of Duke Cancer’s philosophy of patient-centered care,” Corbett said.

   “That is one of the reasons why it’s such a special place: the voices of team members, patients, and families were included in the design.”

   **WORKING TOWARD HEALTH EQUITY**

   In 2012, after Patierno left his position as founding executive director of the George Washington University Cancer Center to become deputy director of DCI, one of the first things he and Kastan did was launch an Office of Health Equity to improve population health for communities that DCI serves. “Lack of access to care, lack of early detection, lack of healthy lifestyle, lack of education, lack of health insurance, lack of trust in the medical system — all of these things work together, and we need to implement solutions that address all of them,” Patierno said.

   In 2017, that team, led by Nadine Barrett, PhD, won an Innovators Award from the

   **2014** Duke Adult Bone marrow transplant team is the first in the nation to test at-home care for stem cell transplant recipients in recovery.

   **2015** DCI member Nadine Barrett, PhD, is awarded the Nobel Prize in Chemistry for his 40 years of study of how the body repairs mistakes in the DNA code.

   **2016** Shelby Heagy, MD, PhD, is named one of Time magazine’s 100 most influential people. She leads the first national, randomized trial of adjuvant chemotherapy for stage II breast cancer.
American Association for Cancer Research, for their work developing community partnerships to reduce cancer disparities. Those activities include developing a diverse and engaged community advisory council, forming a research agenda, and implementing a program of community-facing navigation and screening events. The team is now part of a larger program called Community Outreach, Engagement, and Equity.

If cancer screening shows that someone needs further care, there are many points where the system can break down, Patierno said. Duke employs people called navigators who try to find and overcome those gaps. The same community-facing navigators who work with people at screening events provide detailed follow-up to arrange treatment, at Duke or even at other cancer centers, depending on the person’s location and needs, said Angelo Moore, RN, PhD, assistant director of community outreach, engagement, and equity for DCI.

At Duke, the community-facing navigators make a “warm handoff” to internal patient navigators, who help make their first appointments and connect them to financial services, transportation, and other support. The team continually works to improve and expand this model, which spans pre-treatment through active cancer treatment and survivorship (care after active cancer treatment ends), Patierno said. A paper describing the model was published in April 2020 in Cancer Medicine.

“The ultimate goal is to achieve cancer health equity,” Patierno said, which means that everyone would have an equal opportunity to prevent, detect, treat, and survive cancer.

If the next 50 years are anything like the previous ones, there will be more “fantastic evolutions” in cancer care, as Moore described it. After coming to Duke for a fellowship in 1975, then staying on as faculty, Moore never left, he said, because there wasn’t a better place to do what he loved: “Treating patients, running clinical studies, and helping people.”

Stacey Phipps and her 8-year-old daughter, Kerry.

“He [Vijay Paryani, MD] was really interested in my life outside of cancer, and I could feel that.”

Stacey Phipps

by name, and he asked about her career. “He was really interested in my life outside of cancer, and I could feel that,” Phipps said.

“When I was diagnosed with breast cancer, my immediate thought was about my daughter, Kerry, and what would happen to her if something happened to me,” Phipps said.

The family participated in a Duke program designed for families facing cancer, called KidsCan. Children and teens can talk with people their own age about their parents’ cancer, and parents can talk to each other about what it’s like to be a parent while undergoing cancer treatment.

“When I finished treatment at Duke, it sounds funny to say, but I was sad that I wasn’t going to see my care team for a while,” Phipps said. “I really felt that everyone really cared about me, and I missed them in an odd way.”

“I’m just so blessed to live in a place where I have such good care available to me,” she said. “I find my hope by looking at this 8-year-old next to me.”
**Dissecting Disparities in Cancer Outcomes**

**BY ANGELA SPIVEY**

Drives cancer outcomes, trying to understand why some groups of people fare worse than others, and what can be done to erase those disparities.

**THE STRESS OF SYSTEMIC RACISM**

In the United States, African Americans and Hispanics tend to have poorer cancer outcomes compared to white patients. For instance, Black people with lung cancer are more likely to die than whites with the disease. In ovarian cancer, survival rates for white women have increased since the 1970s, but survival rates for Black women have gone down.

Tomi Akinyemiju, associate professor and vice chair for diversity, equity, and inclusion in the Department of Population Health Sciences and associate research professor in the Duke Global Health Institute, points out that disparities like these have multiple causes. She and a team that includes a biostatistician and a medical geneticist measure those aspects: biological factors like genetic predisposition, as well as what are called “social determinants of health.” That term refers to factors such as socioeconomic status, education, access to health care, and systemic racism.

The biological and social intersect in an idea called allostatic load, which is biological wear and tear caused by a state of chronic stress. The idea was developed in 1993 by a researcher at Rockefeller University, Bruce McEwen, PhD. “Before that, it was clear that the social context in which people lived affected people’s health. But the concept of allostatic load allowed us to measure what happens,” Akinyemiju said.

Allostatic load is calculated by looking at markers of strain on several of the body’s organs and systems, including the heart, the immune system, and the neuroendocrine system (hormones that respond to the nervous system). High allostatic load indicates that the body is in a state of over-reaction or hyper-reactivity, Akinyemiju said.

“Everybody has a normal stress response, right? We all get stressed out, then we adjust,” Akinyemiju said. “Our bodies know how to fight or flight, but always being in fight mode. Things wear and tear faster.”

In general, allostatic load increases as people age. But when Akinyemiju’s team analyzed data from a Centers for Disease Control survey that tracked more than 30,000 people over 30 years, they saw that higher allostatic load scores began at younger ages for African American and Hispanic/Latinx participants, and the scores stayed higher over time, compared to white people. This work was published in June 2021 in the journal Preventive Medicine.

In a different study that looked at healthy people over time, Akinyemiju’s team again found that African Americans in the study had higher levels of allostatic load, and these higher levels were statistically linked to higher risk of death overall and higher risk of death from cancer. Other studies have linked high allostatic load to increased risk of death from heart disease.

Akinyemiju says that treatments to address some of the elements of high allostatic load, such as high blood pressure or high blood sugar, can help, but the underlying issues must also be addressed. “Ideally, we are intervening to prevent the fundamental cause of this, which is the societal structure that continues to disadvantage a whole group of individuals,” she said. “So there’s a bigger societal conversation we need to have about those deeply entrenched issues.”

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Deavion Godfrey, research intern; Anjali Gupta, research assistant; April Deveaux, MD, Akinyemiju’s research team: From left: Melina Ksor, research assistant; Chioma Omeogu, research assistant.

“Even where there is a therapy that is effective and FDA approved, there are still breakdowns in access, and it’s our job to meet patients where they are to make sure we meet their needs,” Akinyemiju said.

Akinyemiju’s team documents and analyzes those breakdowns. They’re doing that now in a large study of patients with ovarian cancer, funded by the National Institutes of Health. Called the Ovarian Cancer Epidemiology, Healthcare Access and Disparities (ORCHiD) study, this effort will measure health care access and how it affects treatment, quality of life, and survival in 1,600 patients from cancer registries in North Carolina and eight other states.

**CULTIVATING SENSITIVITY**

Some elements of health care access are straightforward to measure, like whether patients can afford treatments or have insurance, or whether they live near a major cancer center that offers the latest treatments and support services. But other factors aren’t as well studied because they involve surveying patients and measuring intangible elements like trust.

Those patient perceptions matter, Akinyemiju said. “If a provider is recommending a particular medication that may have substantial side effects, if you don’t trust the recommendation and trust that the provider is giving you their best work, you may not follow their guidance.”

The ORCHiD team developed a survey that better captures these feelings, by conducting focus groups and testing with patients. “Some focus group participants have said that at times they felt like they were just a number,” Akinyemiju said. “We hear this a lot from our patients who are lower income and who are racial minorities — this issue of empathy and patient-provider communication and cultural sensitivity being missing. Our patients explain that even simple acts help, like the provider putting a hand on their shoulder, and saying, ‘We’ll do everything we can, we’re here for you.’ Patients know it when they feel it.”

Cultural sensitivity training is one part of a far-reaching strategy that must happen to improve access to care, Akinyemiju said. As associate director for community outreach and engagement at Duke Cancer Institute, she leads a team effort to address cancer health disparities (see Building Trust to Beat Cancer, at right). This work includes research, providing cancer screening and education in the community, and working collaboratively with other scientists to ensure that Duke Cancer Institute is improving health outcomes for all the patients it serves.

Back when Akinyemiju was just starting her PhD in epidemiology, she had her eye on studying HIV, but received funding on a doctoral fellowship to study cancer. It may have been a happy accident, but as she learned more about cancer, she realized she had found her life’s work.

“I realized that cancer, and advancing cancer health equity, is one of the top global health challenges of our generation,” she said. “Meeting that challenge requires that we identify and address the fundamental causes of cancer disparities and promote equitable access to cancer prevention and treatment. This must be a top priority for the next 30, 40 years.”

**EQUALIZING CARE**

Not everyone gets equal access to cancer prevention and treatment. Fixing the problem is urgent, Akinyemiju said, because studies show that when everyone receives equal access, some of the racial differences in cancer outcomes are erased.

For instance, Akinyemiju’s team has found that when Black people with lung cancer receive immunotherapies, which have become standard of care for advanced non-small-cell lung cancer, they actually fare better than white people receiving the same treatment. In their analysis of data about more than 3,000 lung cancer patients treated with immunotherapies, the death rate among Black patients was 15% lower than for white patients. The study was published online in November 2021 in the *Journal of Immunotherapy*.

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At Duke, since 2017, the electronic medical record has included a health maintenance check to discuss prostate cancer risk and an algorithm to guide screening developed by a team of doctors from the Duke Departments of Primary Care, Family Medicine, Radiology, Urology, and Medical Oncology, George said. The algorithm requires that doctors in the Duke Primary Care Network...
The Path to Care

When 60-year-old Vennice Roberts visited the emergency room in December 2020, X-rays showed a spot on her lung.

Doctors suspected cancer, so she was connected with Nadia Aguilera-Funez, a community-facing navigator with Duke Cancer Institute (DCI).

The spot turned out to be a blood clot caused by COVID-19.

But Aguilera-Funez stayed in touch. She and LaSonja Barnett, DCI community-facing navigator lead, got Roberts approved for a program that provided medication free of charge.

Then they helped her get cancer screenings. She had never had a colonoscopy, and she hadn’t had a mammogram for several years.

The mammogram showed that she had stage 1 breast cancer.

Roberts lost her job, then her health insurance. Since 1989, she had worked as a cook supervisor at a nursing facility. “I loved to cook for the residents, watching people enjoy my meal,” she said.

The team connected Roberts with a program that provides treatment free of charge, and have been with her every step of the way.

“Together, we wanted to show her there was hope even as things were crumbling down,” Aguilera-Funez said. “We held her by the hand and didn’t let go.”

“All I have to do is call them,” Roberts said. “They have been a blessing in my life.”

Roberts is used to taking care of others, and it has been hard to accept that she can’t return to work because of COVID-19.

Sometimes we have to go on a journey that we don’t want to go on, but I’m getting better.”

Vennice Roberts

“Sometimes we have to go on a journey that we don’t want to go on, but I’m getting better.”

Valerie Worthy

Internal Navigator

Helps patients keep track of and get to medical appointments, coordinates care, and helps patients complete insurance paperwork.

Lasonia Barnett

Community Navigator Lead

Educates about cancer prevention and screening; assists with cancer screening or finding a primary care provider; finds financial assistance and directs patients to further care.

Angelo Moore

Assistant Director of Community Outreach, Engagement, and Equity

Leads the community-facing navigation team. Three of his aunts died from cancer.

Nadia Aguilera-Funez

Bilingual Community Navigator

Edncuates about cancer prevention and screening; assists with cancer screening or finding a primary care provider; finds financial assistance and directs patients to further care.

YOU CAN HELP expand programs to provide more people the cancer screening and treatment they need. To give, use the enclosed envelope, or visit bit.ly/dcispring22

WHAT IS A PATIENT NAVIGATOR?

A navigator guides a patient through the health care system. Navigators help patients communicate with their health care providers so they get the information they need to make decisions about their health care.

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A navigator guides a patient through the health care system. Navigators help patients communicate with their health care providers so they get the information they need to make decisions about their health care.

External Navigator

Find information about finding cancer care. They help patients understand what an elevated PSA level means, and she explains what the treatment options are if they do have cancer, and can connect them to support resources, such as transportation or financial assistance.

Internal Navigator

Provides information about care, and helps patients complete insurance paperwork.

Navigator Lead

Leads the community-facing navigation team. Three of his aunts died from cancer.

Bilingual Community Navigator

Edncuates about cancer prevention and screening; assists with cancer screening or finding a primary care provider; finds financial assistance and directs patients to further care.

Assistant Director of Community Outreach, Engagement, and Equity

Leads the community-facing navigation team. Three of his aunts died from cancer.

Navigators

Guide a patient through the health care system. Navigators help patients understand what an elevated PSA level means, and she explains what the treatment options are if they do have cancer, and can connect them to support resources, such as transportation or financial assistance.
THE GAIL PARKINS MEMORIAL OVARIAN CANCER WALK & 5K RUN will celebrate 20 years of progress and 20 years of memories on Saturday, September 24, 2022, with an in-person event at Sanderson High School in Raleigh, North Carolina, and a virtual event throughout September. Melanie Bacheler organized the walk in memory of her mom, Gail Parkins, who lost her two-year battle with ovarian cancer at the young age of 56. The event raises awareness about ovarian cancer and its symptoms, provides funds for Duke ovarian cancer research, and pays tribute to those touched by the disease. In 2021, the event raised more than $222,000. To register, donate, or volunteer, visit ovarianawareness.org

THE THIRD ANNUAL TEE OFF VS. CANCER golf tournament in Atlanta raised more than $230,000 to support areas of greatest need in research and care at Duke Cancer Institute. The event was founded and organized by 1979 Duke University graduate and Duke Cancer Institute Board of Advisors member Rick Geiryn, and 1979 Duke graduate and emeritus Board of Advisors member Michael Fields. Join them for their fourth annual tournament on September 19, 2022. Visit bit.ly/dcитееoff for details. Want to organize your own golf tournament to benefit Duke cancer? Email dcidevelopment@duke.edu.

WHEN DUKE CANCER INSTITUTE BOARD OF ADVISORS MEMBER NANCY WRIGHT finished chemotherapy treatment for pancreatic cancer, nurses on the fourth floor of Duke Cancer Center brought out a small bell for her to ring to celebrate. Feeling inspired, Wright’s family, including her husband, J. Gordon Wright, who 10 years ago this year survived stage 4 lymphoma, donated the Sound of Hope Bell in her honor. The Wrights stopped by the Seese-Thornton Garden of Tranquility across from Duke Cancer Center to ring the bell shortly after it was installed in April 2022.

An Extra Birthday

The color blue and butterflies always make Jamie Cooper Moales think of her late sister, Sara Elizabeth Cooper.

She tears up talking about her. “You would think after 21 years, it would be easier. But it isn’t always,” Moales said. “Sara was super-friendly and wanted to make everybody feel special.”

They were both into softball and volleyball and played instruments in the marching band. “She was outgoing and everyone’s best friend. I was the studious and nerdy one,” Moales said.

In 1999, when Sara was 16, she came to Duke for a biopsy and was diagnosed with non-Hodgkin’s lymphoma. After responding well to the first round of treatments, her cancer soon relapsed. Additional chemotherapy failed, so she had a stem cell transplant at Cincinnati Children’s Hospital, where she spent her 17th birthday. The transplant was not successful, and the cancer spread. She died of the disease in September 2000, at her family’s home in West Virginia.

“While Sara did not have the outcome we hoped and prayed for, because of the care she received at Duke, we had one more birthday with her, and for that my family is immensely grateful,” Moales said.

Moales made a gift to start the Sara Elizabeth Cooper Immunotherapy Research Fund at Duke Cancer Institute to support work to develop new treatments that harness the immune system’s innate ability to fight cancer.

“I believe that if Sara were diagnosed today, the promise of immunotherapy would have saved her life,” she said.

To learn more or give to this fund, visit: bit.ly/saracooperfund

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YOU CAN SUPPORT THE FIGHT
Gifts to Duke Cancer Institute help us develop new treatments and provide compassionate care. To make a gift, visit bit.ly/dcispring2022. Thanks for your support!
DCI Office of Development
Amy Deshler, Assistant Vice President
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STRONGER THAN EVER
Father of five and Baptist pastor John Sanders was diagnosed with stage 2 pancreatic cancer in 2018. After a second opinion at Duke, he had a 12-hour surgery at Duke, then a plan of oral chemotherapy devised by Duke doctors, working with specialists near his South Carolina home. He has been cancer free since 2020.

“I tell everyone, everywhere I go, ‘If you want to live, you need to come to Duke,’” he said at an April event where more than 500 researchers, providers, staff, and patients celebrated Duke’s 50 years of cancer research and care. “My hope, my faith, and my resilience have never been stronger.”
Visit dci50th.org to support the next 50 years of Duke cancer care.

“MY HOPE, MY FAITH, AND MY RESILIENCE HAVE NEVER BEEN STRONGER.”
John Sanders