

THE JOHNS HOPKINS KIMMEL CANCER CENTER

BREAST MATTERS



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UNDER ARMOUR CENTER OPENING


GILLIAN'S STORY
ASK THE EXPERT
AND MUCH MORE

2018/2019

Sidney Kimmel
Comprehensive
Cancer Center

M

SKIP VIRAGH
BUILDING

10 Breast and Gynecological
Cancer Clinics
Breast Health Innovation
Center
Physical Medicine and
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Skyline Café 

THE JOHNS HOPKINS KIMMEL CANCER CENTER

BREAST MATTERS

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UPCOMING EVENTS

Caregiver Workshop
Nov. 3, 2018, 9 a.m. to 12 p.m.

Integrative Medicine Workshop
Oct. 23, 2018, 11:30 a.m. - 1 p.m.

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A Patient's Best Friend

On the Cover: Patient illustrations that capture patients engaged in physical activities were created by French graphic designer Florian Nicolle.

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WEB EXCLUSIVE:
Cancer Matters podcast with Vered Stearns,
Elissa Bantug, and Bill Nelson bit.ly/2oKFnuw

[Celebration]

INNOVATIVE CARE



Skip Viragh Outpatient Cancer Building, Under Armour Breast Health Innovation Center Open

ON JUNE 8, 2018, approximately 200 people, including family members, friends and business associates of Skip Viragh; Johns Hopkins leadership; donors; art committee members; Under Armour representative **Stacey Ullrich**; and breast and ovarian cancer program co-director **Vered Stearns** celebrated the opening of the new Skip Viragh Outpatient Cancer Building, home to the Under Armour Breast Health Innovation Center.

When Stearns first met with Ullrich, head of global philanthropy

for Under Armour, to discuss a Kimmel Cancer Center partnership with the athletic apparel company, she described a place that would pull together all breast health services under one roof, creating a superior experience and delivering the most innovative care in the world.

This unique center delivers on this vision and more. “When we learned of Skip Viragh’s gift, we sought to merge these two moments together and bring it to life,” says Ullrich. “The Under Armour Breast

Health Innovation Center is built with the principle that wellness and illness can exist together. This floor—this entire building—will empower people to continue to do it better, to be survivors.”

The Under Armour Breast Health Innovation Center, located on the 10th floor of the Skip Viragh Outpatient Cancer Building, provides a complete experience for breast cancer patients and gynecologic cancer patients, bringing together the best clinical and supportive care in one location and accelerating research. It is also home to the Breast and Gynecologic Cancer Multi-Disciplinary Clinic, where as many as 40 experts partner with patients to develop treatment and supportive care plans.



Clockwise from top right: Attendees tour the physical medicine and rehabilitation room; From left, Linda Jones, Stacey Ullrich, Bobby Jones, Vered Stearns; One-of-a-kind artwork features patients engaged in physical activities; Mark Viragh and Stacey Ullrich



It wouldn’t have been possible without Under Armour, Stearns says.

“Working with Under Armour, we were able to integrate wellness with breast cancer care from diagnosis to after treatment, creating an unparalleled experience in a peaceful and motivating space for our breast cancer patients,” says Stearns. “A cancer education room offers videos, print materials, seminars on breast health, nutrition and healthy lifestyle that can be shared worldwide through social media.”

The Under Armour Breast Health Innovation Center also offers a number of unique features, not the least of which is its beautiful window-filled space with panoramic views of the Baltimore skyline. A physical medi-

cine and rehabilitation room provides patients the opportunity to consult with a rehabilitative medicine expert to receive a plan to help reduce the physical effects of treatment and engage in physical and occupational therapy.

One-of-a-kind artwork features patient illustrations that turn challenging diagnoses into beautiful stories of hope and inspiration.

Photos of iconic Maryland scenery, captured by Skyview Photos,—an entrepreneurial group of Baltimore City middle schoolers in collaboration with Crossroads School, Living Classrooms and Under Armour—also bring life to the space.

For patients undergoing mastectomy, a nipple tattoo room brings the work of tattoo artist **Vinnie Myers**—internationally recognized

for realistic, 3D nipple tattoos that incorporate every anatomical detail—to patients completing their breast reconstruction process.

“**Kevin Plank** [Under Armour CEO] tells us to dream big and never forget our mission,” says Ullrich. “So many Under Armour teammates were involved with the planning and design of this space, and we thought about the entire experience, from the floor to wall coverings and photos to the colors and even the chairs.”

Ullrich says they wanted to help create a superior experience for patients and families while facilitating the most innovative care in the world. “Dr. Stearns envisioned it. The patient and families built it,” she says.

THE NIPPLE TATTOO ROOM IS OPEN

Call 410-876-4638 to learn more about nipple tattooing.

Watch a webinar hosted by Vinnie and Anna Myers on Dec. 5th 2018. bit.ly/JHUCancerSurvivorshipWebinars

Watch a video: *Nipple Tattoos—A New Option for Breast Reconstruction.* bit.ly/2x9Apex

ONLY ON THE WEB
Watch a video of the dedication event: bit.ly/2vshsDT
Take a video tour of the building: bit.ly/2MrSPxE



GILLIAN'S STORY

Incredible courage in the face of unthinkable challenges and a bold intent to inspire others.



Gillian Lichota is the kind of woman who leaves a lasting impression. It isn't just because she's beautiful and fit, or that she's an adventurous research scientist who's traveled the globe studying the effects of climate change and promoting conservation. Rather, it has to do with her incredible courage in the face of unthinkable challenges and her bold intent to inspire others.

During the early weeks of pregnancy, Gillian noticed the sudden appearance of a rather large lump on her breast. Initially, she wasn't alarmed. However, when she began to feel a burning sensation and noticed an odd dimpling in that area, she could no longer ignore the lump. She shared her concerns with her gynecologist, who immediately scheduled a breast ultrasound to examine the lump, followed by a biopsy.

The findings were shocking. Still in her first trimester of pregnancy, Gillian was diagnosed with stage III breast cancer. The diagnosis seemed as untenable as her options. She could undergo surgery to remove this aggressive pregnancy-related breast cancer, and risk losing her baby in the process, or delay the surgery and take the chance that the cancer would advance significantly. Gillian decided her unborn child deserved a healthy, cancer free mother and opted to have the surgery.

Wracked with fear and uncertainty

As she was wheeled into surgery, Gillian anxiously wrestled with the greatest fear and uncertainty of her life. She thought to herself: "This seems like an impossible mountain to climb.

It's difficult to see the summit. How am I going to do this?" It was then that she made a pact with herself to approach this "impossible mountain" one step at a time. After completing treatment, she vowed, she would find the biggest, most beautiful mountain and climb it, just because she could! First, she would have to endure all that stood between envisioning the goal and achieving it.

Soon after surgery, son Kailen was born, but Gillian's experience as a new mother was hardly like that of most women. After undergoing chemotherapy while pregnant, and just four weeks after delivering her son, Gillian underwent three more months of rigorous chemotherapy that left the

"Each woman has her own journey, and it is different."

self-described adrenaline-junky-adventurer physically debilitated, emotionally and mentally.

"Women diagnosed with breast cancer under the age of 50 face a unique set of challenges. We must also consider issues of pregnancy, fertility, and family obligations that come with having young children. Their careers are often interrupted, adding financial strain to the emotional burden of the diagnosis itself. Few resources are geared toward helping women like myself with their transitional reset and acceptance of their body," says Gillian. "I could not have endured the pregnancy, surgeries, chemotherapy and first year of motherhood without the incredible support of my husband, Boe, and amazing community of friends."

Partnering with her medical team on treatment decisions

Throughout her cancer odyssey she also leaned on her Kimmel Cancer Center health care team, particularly her oncologist Vered Stearns, M.D., whom Gillian says "is very much about empowering her patients with information and choice."

"Dr. Stearns explained the latest research to me, but she left the final decisions up to me. She empowered me to make the choices that felt right for me," Gillian says.

Second chances and making every moment count

After completing her medical treatments and surgeries, Gillian worked to prove that wellness and illness can co-exist on a continuum and to become an example for other young women affected by breast cancer. She trained and conditioned her body, mind and

spirit to meet the goal she set out for herself before her first surgery. In the summer of 2015, Gillian summited Mount Kilimanjaro in Tanzania, the highest free-standing mountain in the world, reaching approximately 5,895 meters above sea level.

Despite fear and exhaustion—much like she faced when diagnosed with breast cancer during her first trimester of pregnancy—Gillian again overcame the daunting task before her. She conquered the summit. "After six days of climbing for approximately nine hours a day, and under the bright light of the full moon, we were finally approaching the summit. As we climbed the glacier to reach the summit, the sun was beginning to rise over Africa and everything was illuminated. I was dizzy, completely exhausted and in pain, but the beauty of it all was completely overwhelming," she says. With a friend's encouragement, and in spite of exhaustion, pain and frostbitten fingers, Gillian made it to the top. "I rose to the challenge and did it. I made every moment count and never gave up. I closed one chapter of my life and opened another," she says.

Overcoming fear and helping others

Breast cancer is particularly aggressive in young women, and Gillian's cancer was no exception. In the spring of 2017, after five years in remission, the unthinkable occurred. Her breast cancer returned and, this time, it had spread. There was no cure. Still she was fueled by her passion for life and determination to rise above her situation. Purpose became her antidepressant. She knew she was in a unique position to help others. Gillian wanted a better experience for young women with breast cancer. She wanted them to thrive in mind, body and spirit. "I decided to once again do the thing I thought I could not do. I wanted to challenge old paradigms and change perceptions of what it means to have—and to live with—breast cancer," she says. With this goal in mind, she started the **iRise Above Foundation** to directly benefit the health and wellness of women under age 50 who are diagnosed with breast cancer.

Her foundation's mission is to surround young women with targeted, age-appropriate and connected health and wellness resources to enable them to rise above the residual effects of breast cancer, complete a life-changing mind-body-spirit expedition, and enjoy long-term survival.

Gillian's future plans include tagging humpback whales in Rarotonga and leading other young breast cancer survivors on new adventures, including trekking through Nepal and the Himalayas to reach Everest Base Camp, summiting Mount Kilimanjaro followed by a safari, and hiking, biking, kayaking and ice-climbing from Chile to Argentina.

"There is a fear associated with facing a new physical, mental and spiritual challenge, like climbing a mountain or trekking through a remote place in a foreign country, that is not unlike facing cancer," she says. "Each woman has her own journey, and it is different. To step outside of her comfort zone to do something like this helps in healing and empowerment and offers confidence that she can rise in the face of adversity."

riseabovefoundation.org

TAILORED THERAPIES

Making Radiation Therapy More Patient-Centric

Jean Wright, M.D.

PROTONS ARE THE MOST NOVEL DEVELOPMENT IN PATIENT-CENTERED RADIATION THERAPY, AND CAN BE TAILORED SO THAT THEY PENETRATE ONLY A SELECTED DEPTH THROUGH TISSUE. CONSEQUENTLY, RADIATION STOPS AT THE TUMOR, PRESERVING HEALTHY, NON-CANCER TISSUE BENEATH.

OVER THE DECADE that Kimmel Cancer Center radiation oncologist **Jean Wright, M.D.**, has been practicing, medicine has become increasingly patient-centered.

“Therapies are being tailored to the individual,” she says. “Treatment protocols have changed to make them more convenient and tolerable for patients, without sacrificing their efficacy.”

Wright, who heads the Kimmel Cancer Center’s breast radiation oncology program and practices at its Sibley Memorial Hospital location, says that for select breast cancer patients, her field is offering more and more options to treat this disease over a shorter course, and with techniques and technology that can help spare healthy tissue.

Wright’s radiation oncology colleague **Sara Alcorn, M.D., M.P.H.**, who practices on the Kimmel Cancer Center’s East Baltimore campus, says radiation therapy for women in the early stages of breast cancer would traditionally entail daily treatments for six weeks or more. Now, it is often possible to cut that course in half.

However, asking patients to take and hold a deep breath during treatment pushes the heart back from the chest and downward, away from the radiation beam.

“We now use that technique commonly for the majority of our patients with left-sided breast cancers,” Wright says.

The Johns Hopkins National Proton Therapy Center, set to open in the fall of 2019 at Sibley, provides more opportunity to spare healthy tissue. Protons can be tailored so that they penetrate only a selected depth through tissue. Consequently, Wright explains, radiation stops at the tumor, preserving healthy, non-cancer tissue beneath.

The most novel development in patient-centered radiation therapy, says Alcorn, is the potential to omit radiation entirely. For postmenopausal patients with less aggressive, early stage breast cancers, the decision to administer radiation often falls into a gray zone. The Kimmel Cancer Center is currently participating in a study to determine



Sara Alcorn, M.D., M.P.H.

“By giving greater attention to patient preferences and quality of life, we can tailor our approach in a way that reduces the burdens of cancer therapy while still providing effective care.”

“These shorter courses are more convenient for patients,” Alcorn says. “It also lowers their cumulative radiation dose, which can help lessen the negative side effects that can accompany radiation therapy.”

Wright says research has shown that simple changes in patient position can also significantly reduce radiation exposure to healthy tissue. For patients with left-sided breast cancers who need radiation directed at the lymph nodes that cluster near the underarm, unnecessary exposure to the heart has long been a concern.

whether select patients can successfully avoid radiation. Alcorn is also leading efforts to design a tool to help patients and their physicians decide together whether to proceed with radiation therapy based on preferences concerning side effects and values.

“By giving greater attention to patient preferences and quality of life,” she says, “we can tailor our approach in a way that reduces the burdens of cancer therapy while still providing effective care.”



A PATIENT'S BEST FRIEND

Tracie Cline, 25, spent her whole life in a small town in Pennsylvania, but the energetic young yoga instructor sought a new adventure. She'd always wanted to live at the beach and was preparing to move to Charleston, South Carolina, with her trusty dog Mia, an Australian shepherd/collie mix, when she found a lump in her breast.

On the first day of spring in 2018, Tracie was diagnosed with HER2-positive breast cancer. Confronting breast cancer upended her plans, at least temporarily. It also frightened her. She knew what would calm her anxiety and fears while receiving treatment, but she wasn't sure if she'd be able to use that source of support in a hospital setting.

"I told my nurse navigator, Catherine Klein, 'I don't want to do this if I can't have Mia with me,'" recalls Tracie. "She makes me more comfortable and at ease when I'm scared." In turn, Klein, whose role as a breast cancer nurse navigator is to help breast cancer patients through their treatment and recovery journey, assisted with initiating the process so that Mia was allowed to accompany Tracie to her appointments as an emotional support animal (ESA).

ESAs are pets that provide comfort to their owners during stressful situations. In a medical setting, they are considered part of the treatment program as they minimize patients' negative emotional symptoms, according to the National Service Animal Registry. Unlike service animals, ESAs don't require specific training. They simply must be manageable in public.

A 2015 study in the *Journal of Community and Supportive Oncology* was the first to document the improved emotional well-being of cancer patients using animal-assisted therapy.

"She steals the show," says Tracie. Everyone's like, 'Hi Mia.' She just lights up everyone's faces."

Cline is thankful for her health care team, including her nurse navigator, surgeon Mehran Habibi and oncologist Roisin Connolly, for making it possible to have Mia be a part of her treatment process. Subsequently, Tracie is considering "paying forward" the goodwill by seeing if Mia could be an ESA for cancer patients at her local hospital in Pennsylvania.

{ Mia }

{ Tracie }

HARNESSING THE POWER

Bringing the Promise of Immunotherapy to Breast Cancer

AFTER A RESIDENCY at Parkland Health & Hospital System, a fellowship at Johns Hopkins and a faculty position at Northwestern University, Cesar Santa-Maria, M.D., recently



returned to Johns Hopkins. Santa-Maria is a clinician-scientist who splits his time between treating breast cancer patients and researching new ways to fight the disease, working closely with laboratory scientists. This type of research is referred to as translational medicine, as experts take problems they see in the clinic back to the laboratory. Similarly, what they learn in the laboratory is then translated into novel treatment strategies for patients.

"My desire to improve outcomes for patients with breast cancer has motivated my entire academic career," says Santa-Maria.

His main focus is immunotherapies, treatments that harness the power of the immune system to fight cancers. More drugs are gaining Food and Drug Administration approval, and they have had dramatic results for some patients, extending survival far beyond what's been possible with other therapies. But, as single agents, they've shown only a modest benefit for patients with breast cancer.

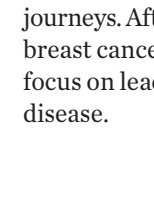
Santa-Maria's research aims to change that by finding ways to make breast cancers more immune-susceptible. He is leading a clinical trial to test combining immunotherapy drugs with other drugs known as Cyclin D Kinase inhibitors. These latter drugs are a standard of care for advanced breast cancers, halting the cell cycle so that cancer cells can't replicate. Recent research suggests that they also cause localized inflammation in tumors. This inflammation is the result of immune activity, and his trial will see if it can make tumors more sensitive to immunotherapy drugs.

While at Northwestern, a different trial led by Santa-Maria showed that combining two immunotherapy drugs known as checkpoint blockers—a PD-L1 inhibitor and a CTLA-4 inhibitor—benefited patients with triple-negative breast cancers (those that tested negative for estrogen receptors, progesterone receptors and HER2). A new trial to confirm these results is planned. Much of the science behind immune checkpoint blockers—drugs that thwart the cancer cells' ability to hide from the immune system—was developed at the Kimmel Cancer Center's Bloomberg-Kimmel Institute for Cancer Immunotherapy.

"By finding ways to make breast cancers more vulnerable to immunotherapies," he says, "we're hoping to attack this disease in a whole new way and ultimately improve outcomes for patients."

SUPPORTING PATIENTS ON THE BREAST CANCER JOURNEY

AFTER MEDICAL school in Ireland and an oncology fellowship in 1995 at Johns Hopkins, Rima Couzi, M.D., knew that she wanted to focus on breast cancer. She was attracted to the idea of helping other women through their cancer



journeys. After her two sisters developed breast cancer, Couzi had a renewed focus on leading the fight against this disease.

"It's a personal motivator for me to do the best I can for every patient in front of me," she says.

Couzi returns to the Kimmel Cancer Center in January 2019 with an impressive depth of experience that includes treating thousands of breast cancer patients over the last two decades at the University of Maryland St. Joseph Medical Group. Her goal is to use the knowledge she gained to develop customized treatment plans for breast cancer patients.

She will be based primarily at the Kimmel Cancer Center's Green-spring Station location, where her practice will focus on evidence-based care and access to clinical trials.

Beyond caring for patients with acute disease, Couzi notes that much of her work has focused on the issues that arise with survivorship. These may include residual side effects from treatment, worries about the risk of recurrence, side effects of hormonal therapy and other ongoing issues.

"Because the prognosis of most breast cancers is quite good, we have a lot more survivors in breast cancer compared to many other types of cancer," she says. "Our clinics rapidly fill with survivors. Every breast cancer patient has specific medical issues, along with unique concerns and emotions. My job as a clinical oncologist is to support my patients during this complex journey."

[Ask the Expert]

NEHA MANGINI

Neha Mangini, Pharm.D, the only pharmacist at Johns Hopkins who specializes in treating breast cancer patients, explains her integral role on the care team. Mangini serves as an important resource for prescribing physicians and patients alike.

What role do pharmacists play in caring for patients with breast cancer?

In the last five years, there have been several new oral medicines approved for breast cancer that target specific characteristics of cancer cells. These oral therapies offer the convenience of more time at home and fewer visits to the oncologist's office or to the infusion center. However, they do place greater responsibility on the patient and the caregivers to know how to properly take the medicine, track the on-days and off-days of a cycle, and what side effects are common and how to manage them and which ones require a phone call to the medical team. There is also a lot of care coordination, as these medications are often mailed from specialty pharmacies to the patient's home. I help educate patients on how to take these medicines and safely handle and store them at home. I try to empower patients on ways to prevent common side effects. Behind the scenes, I'm making sure the medicine is dosed properly based on their kidney and liver function, identifying if there are any serious drug-drug interactions, getting prior authorization approved by the insurance and helping order the appropriate labs for monitoring. When patients first start on a new medicine, I provide teaching in person or over the phone. I also call them within a week of starting to make sure they've received the medicine and that they've gotten off to a good start. After that, I check in at least once a month so that they have the support they need.

I also serve as a resource to the physicians, nurse practitioners and nurses on the cancer care team by helping answer drug information questions—for example, how to dose chemotherapy for a patient on dialysis or what chemotherapy and supportive care medicines are safe during pregnancy.



What special challenges do these patients have from a pharmaceutical perspective?

I've noticed that many patients with cancer take complementary medicines, herbal supplements or vitamins. I look through the available data to make sure everything they take is safe and won't conflict with their prescribed cancer medicines. I make sure their supplements do not have phytoestrogens—plant based estrogens—as they can encourage some types of breast cancer to grow. Sometimes patients may stop taking medicines because of side effects without letting their cancer care team know. I work with patients to make sure they remember to take their cancer medicine every day.

In what other ways do you help patients manage their disease?

The new oral targeted therapies can be extremely expensive, up to \$10,000 per month without insurance. Many of my patients are insured through Medicare, which has a coverage gap, also known as the “doughnut hole,” where they have to pay \$5,000 out-of-pocket every year. Patients without Medicare can also have high copayments. I work closely with our patient assistance program specialists to utilize all available financial resources to help our patients afford their cancer medicines. These include one-time free trial vouchers, copay cards, nonprofit grants, and free medicine programs from the manufacturer. In 2018, we helped 248 breast cancer patients by obtaining 91 copay cards, 73 nonprofit grants, and 84 free medicine approvals from the manufacturer.

What advances do you see on the horizon for breast cancer pharmaceuticals?

One of the most exciting developments for cancer in general is the use of immunotherapies, medicines that harness the immune system to fight disease. Some seem promising for certain types of breast cancer, such as triple negative breast cancer. I am also excited to see clinical trials of oral targeted therapies that are currently FDA approved for advanced breast cancer being studied for earlier stages. The goal is keeping cancers from coming back so that people will live longer with cancer and so that more cancers will be cured.

SORT, COLOR, ANALYZE

A Better Understanding of Metastasis

A SINGLE MALIGNANT cell becomes two, then four, then eight. As a tumor grows, these multiplying cells eventually put a strain on local resources and



grow away from blood vessels, starving them of oxygen. But while oxygen deprivation might be a death sentence for normal cells, it can be the

opposite for cancer. Studies have shown that a lack of oxygen causes cells to stabilize the production of proteins called hypoxia-inducible factors (HIFs), which affect the activity of hundreds of genes involved in chemotherapy resistance and metastasis—the migration of cancer cells that is responsible for most cancer deaths.

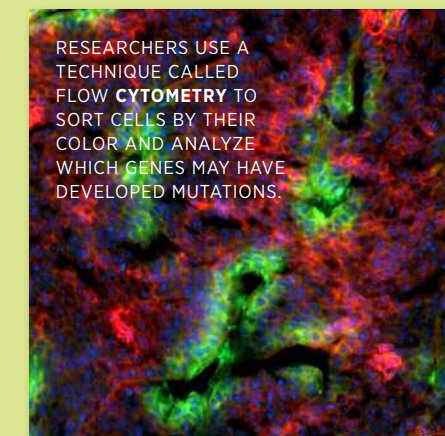
Although some drugs directed toward HIFs have been tested in clinical trials, they haven't been very successful at treating metastatic cancers, says breast cancer researcher **Daniele Gilkes, Ph.D.** One reason for this failure, she adds, is that relatively little is known about exactly what happens to cells that produce HIFs.

“If we could get a better handle on the timeline of events after cells are deprived of oxygen,” she says, “we might find subpopulations of cancer patients for whom these drugs could be helpful.”

Funded by a \$150,000 grant from the Emerson Collective Cancer Research Fund, Gilkes and her colleagues are using a novel method to better understand the superpowers that malignant cells develop once they're oxygen-starved.

She is using an animal breast cancer model that her lab developed that shows which cancer cells are

deprived of oxygen. In this mouse model, breast cancer cells glow red when they're exposed to light. But once they become oxygen deprived, they glow green.



By harvesting these cells, both within the tumor and after they metastasize to locations such as the lungs, liver, bone and brain, the researchers can use a technique called flow cytometry to sort cells by their color and analyze which genes may have developed mutations between the two groups and which have differences in activity that may enhance their ability to metastasize.

“If we could get a better handle on the timeline of events after cells are deprived of oxygen, we might find subpopulations of cancer patients for whom these drugs could be helpful.”

This technique will help researchers figure out which cells are oxygen-deprived among the diverse cellular mix of tumors. It will also help them establish when genetic changes that affect cellular behavior take place. This knowledge could help answer questions, such as do spreading cancer cells maintain these changes or do the cells “reset” when they reach their new environment, says Gilkes.

This fundamental knowledge could lead to better ways to fight cancers, she adds. As part of this line of research, she and her colleagues plan to test whether oxygen deprivation is what triggers resistance to chemotherapies in triple-negative cancer, a type of breast cancer that often becomes untreatable with conventional medicines, leading to a poor prognosis. They also plan to study if targeting the hypoxic cells—essentially using a genetic modification to kill them before they migrate—can prevent reduced sensitivity to chemotherapies.

“We need a different strategy to treat metastatic cancers,” Gilkes says. “Right now there is no cure. Our goal is to change that.”

EVENT ROUNDUP

Upcoming

All events are **FREE** and open to all breast cancer survivors, thrivers and caregivers unless otherwise noted.

Integrative Medicine

Free monthly integrative medicine lunch workshops on rotating topics for patients and their caregivers. Previous topics included mindfulness, meditation and Reiki. Upcoming sessions include acupuncture, various art therapies and herbs. For more information or to register, contact **Elissa Bantug** at ebantug1@jhmi.edu

Caregiver Workshop

Nov. 3, 2018, 9 a.m.–12 p.m.
A workshop to address the roles of caregiving (nurse, chef, counselor, taxi driver, financial coordinator, secretary), how to build a team, coping techniques, communicating with your medical team, and internal and community resources. For more information, contact **Elizabeth Saylor** at esaylor4@jhmi.edu.
NOTE—this is open to caregivers only.

Support Groups

Monthly support groups: 6-7:30 p.m.
*First Monday of the month—*Young Women with Early-Stage Breast Cancer
*Third Monday of the month—*Metastatic Breast Cancer Greenspring Station. Topics vary monthly. To find out more, contact **Elizabeth Saylor** at esaylor4@jhmi.edu.

Walk and Talk

Third Friday of each month, 9-10 a.m.
Join our breast cancer navigators as we walk through the mall and get some exercise! Every month features a breast cancer “hot topic” and related resources. Meet inside Towson Town Center at the tables outside of Nordstrom Rack.



The program is free, but registration is required. Contact **Jill Mull** at jmull1@jhmi.edu to reserve a spot.

Webinars

Nipple Tattooing hosted by **Vinnie and Anna Myers—Dec. 5, 2018**
bit.ly/JHUCancerSurvivorshipWebinars

Pelvic floor, sexual health and breast cancer hosted by **Mary Austin**
Watch previous webinars:
bit.ly/2LKVH7C.

Survivorship Day

2019 Breast Cancer Survivorship Day
More information to come at
<http://bit.ly/2zzcUhl>

Prior Events Recap

Survivorship Day

Annual Breast Cancer Survivorship Symposium: Open to all breast cancer patients, survivors, families and caregivers, sessions included: How to Maintain Overall Health and Wellness After Treatment; Side Effects from Care; Spirituality; Fear of Recurrence; Follow-up Guidelines; What’s New in Research; Long-Term Survivorship; Sexuality and Intimacy; Nutrition; Exercise; Integrative Medicine; Fertility; Breast Reconstruction; Living with Metastatic Cancer; Caring for the Caregiver and Helping Families Through This Difficult Time.



Survivorship expert **Don Dizon, M.D.**, was keynote speaker. Johns Hopkins medical and nursing students supervised the kids program, providing a variety of fun activities.

Bowling Fiesta

Patients, families and friends came together for unlimited bowling and delicious Mexican themed food at Stoneleigh Bowling Lanes.

Running on Empty: Fed Up with Fatigue—Living Beyond Breast Cancer

Young Women’s Initiative and Johns Hopkins Medicine collaborated on a program presented by **Lillie D. Shockney, M.A.S.**, discussing practical and medical methods to ease cancer-related fatigue.
Watch the presentation:
bit.ly/2LLMdZK.

Survivor Soul Stroll

Pink was everywhere on June 9, 2018, as 850 participants declared their commitment to battling breast cancer during the second successful year of the annual Radio One Baltimore Survivor Soul Stroll, benefiting the John Fetting Fund for Breast Cancer Prevention at the Johns Hopkins Kimmel Cancer Center. The three-mile charity walk was held at Druid Hill Park.



HONORS AND AWARDS



Birdland Hero

Breast cancer expert and prevention pioneer **John Fetting, M.D.**, was honored by the Baltimore Orioles as a Birdland Community Hero on Mother’s Day at Oriole Park at Camden Yards. The honor recognizes community heroes who inspire others through charity and community service. Fetting was nominated by former patient and breast cancer survivor Leslie Ries and survivor and patient navigator Jill Mull. After Leslie was diagnosed with breast cancer, she and her husband Tom established **The John Fetting Fund for Breast Cancer Prevention** at the Johns Hopkins Kimmel Cancer Center to help support bench to bedside research that will make breast cancer prevention a reality. “Recognition of Dr. Fetting is both an honor for his own efforts and also for the many people who work tirelessly in Baltimore and across the country to care for people with breast cancer and to conduct breast cancer research,” Ries says.

Breast cancer expert **Roisin Connolly, M.B.B.Ch.**, was promoted to UC



Associate Professor. Connolly is leading large national clinical trials testing epigenetic therapies—

treatments that target chemical alterations to genes that can support cancer growth—in combination with immune therapies and hormone therapies.

Vered Stearns, M.D., co-director of the Breast and Ovarian Cancer Program, was named to the *Forbes* list of the country’s top breast cancer oncologists.



Antonio Wolff, M.D., was included on Thomson Reuters’ 2017 list of the most



highly cited researchers in the sciences and social sciences in the world. Wolff was also named one of the American Society of Clinical Oncology’s Advocacy Champions for educating lawmakers on important cancer policies that help ensure high-quality cancer care in the U.S. remains available to all.

Antonio Wolff, M.D., and **Susan Harvey, M.D.**, were elected to the Miller Coulsen Academy of Clinical Excellence at Johns Hopkins, which recognizes and promotes excellence in patient care.



WE’RE GROWING!

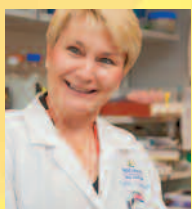
The Kimmel Cancer Center at Greenspring Station will move to the first floor of Pavilion III and is scheduled to open in April 2019.

CHEMICAL ALTERATIONS

Understanding Alcohol's Contribution to Breast Cancer Risk

EVERY DRINK MAY matter when it comes to breast cancer. Although there is considerable evidence linking alcohol consumption with breast cancer, most women are unaware, and research so far has not yet revealed how it causes breast cancer or who may be most at risk. With support from the **John Fetting Fund for Breast Cancer Prevention**, epigenetics expert and breast cancer survivor **Cynthia Zahnow, Ph.D.**, hopes to shed new light and explore what role epigenetics may play.

Epigenetics is the study of chemical alterations that help control gene expression and, as a result, the behavior of cells. Zahnow and her Kimmel Cancer Center colleagues are among the leaders in cancer epigenetics, deciphering how these chemical alterations can turn genes on and off and contribute to cancer development.



Although alcohol consumption increases breast cancer risk for women of all ages, Zahnow says younger women may be most vulnerable because breast tissue is the most sensitive to environmental exposures from the start of menstruation until first pregnancy. She says it's important to point out that it's alcohol itself, not the type of alcoholic drink (beer, wine, whiskey, etc.) that is associated with breast cancer risk.

"It's quite clear that the more alcohol a woman drinks and the younger she drinks contributes to a greater risk of breast cancer, but little is known about the underlying mechanism," she says. "We want to understand specifically what amount of alcohol consumption increases risk. Is it

one drink a week, or are other epigenetic or mutagenic hits required in addition to this to confer risk?"

As a member of what is considered among the best epigenetic programs in the world, Zahnow hopes this research will provide important information that could modify a person's drinking behavior to help lower the risk of breast cancer. She wants to determine how much alcohol, if any, is safe for women.

"This is an easily modifiable behavior," she says, and she wonders, "As a breast cancer survivor, should I be drinking at all? And, what about my daughter who is a senior in college? I also want to know if it's safe for her to drink, and how much alcohol is too much."

Zahnow and graduate student Cassie Holbert will study normal breast cells to see how their behavior changes when exposed to alcohol. For example, does alcohol cause breast cells to become more invasive, growing into ducts where they should not be? She will also examine breast cancer cells obtained from women who drink alcohol to look for similarities in epigenetic changes. "Our long-term goal is to come up with an alcohol induced epigenetic profile that could help to identify women who may be most at risk for developing breast cancer," says Zahnow.

Zahnow hopes her research will provide important information women can use to make informed decisions that could reduce their breast cancer risk.

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Help Us Make a Difference

Each contribution to the Johns Hopkins Kimmel Cancer Center makes a difference in the lives of cancer patients here at Johns Hopkins and around the world.

Our physician-scientists are leading the way on many of the scientific breakthroughs in cancer, and your donation will support patient care and innovative research that is translated to better, more effective treatments. We are also focusing on ways to prevent cancer and support survivors.

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