In its largest show of support to a single organization, Baltimore-based sports apparel company Under Armour pledged $10 million to the Johns Hopkins Kimmel Cancer Center to fund a women’s wellness center that includes breast cancer and breast health support programs.

The Under Armour Breast Health Innovation Center will offer patients access to breast cancer navigation and survivorship services, nutrition programs, exercise equipment, and a learning center with resources about breast cancer prevention, treatment and research. The Breast Health Innovation Center will be housed in the new Skip Viragh Outpatient Building, which is expected to open in 2017 and will become the primary entry point for cancer care at the Kimmel Cancer Center.

“We as we thought about our programming, we really wanted to find a global partner that could move with us beyond the conversation of breast cancer and look at breast cancer prevention and breast health in general,” says Stacey Ullrich, director of global philanthropy at Under Armour. “We found that partner in Johns Hopkins.”

Forging a relationship enables both institutions to enhance their vision to include the entire spectrum of women’s breast health—from breast cancer prevention through survivorship. “Our mission at the Kimmel Cancer Center is to find ways to prevent breast cancer altogether, detect it at the earliest possible time, cure it—even in late stages—and enhance survivorship,” explains Terry Langbaum, M.S., chief administrative officer of the Kimmel Cancer Center. “We’re calling upon the innovative and creative minds at both places as we work toward better outcomes in breast health,” Langbaum says.

She says that the interplay between physical activity and healthy weight affects women at every stage of breast cancer, so this partnership was a natural fit for Under Armour. “There are exercises that people can do before and after surgery to stay as healthy as possible,” she says. Shortly after surgery, she adds, patients are encouraged to get up and move as soon as possible—even beginning with slow laps around the hospital hallways.

Physical activity is equally important for survivors, she says. “We have data that show being overweight is a risk factor for breast cancer recurrence. Conversely, survivors who adopt healthy lifestyles and maintain them are at lower risk for recurrence or a secondary cancer,” Langbaum says. Moreover, she explains, physical activity can help counteract the tremendous stress that cancer brings patients and their families.

Through the Under Armour Breast Health Innovation Center, the Baltimore-based company is now extending its fitness mission to health and wellness of breast cancer patients and survivors.

“We see a huge opportunity,” says Ullrich. “With our expertise in digital technology, we are excited to team up with Johns Hopkins in educating and empowering patients beyond what takes place in the doctor’s office.”
Addressing Fertility Concerns

Karen Smith, M.D., M.P.H., knows fertility concerns can affect patients with breast cancer in their reproductive years. Smith wants to ensure that every young woman with breast cancer seen at Johns Hopkins receives early, accurate and complete information regarding the risk of treatment-related infertility and fertility preservation.

Applying fertility preservation guidelines updated in 2013 by the American Society of Clinical Oncology and those of other organizations, Smith and colleagues created a quality improvement protocol applicable to newly diagnosed female breast cancer patients ages 18 to 44. She plans to implement the protocol and prospectively evaluate adherence.

About 20 to 25 percent of patients with breast cancer treated at Johns Hopkins are of reproductive age, compared to about 12 percent nationally, and Smith believes they will appreciate and benefit from a service that provides education about the risk of treatment-related infertility, fertility preservation options and, when appropriate, referrals to fertility specialists.

“It’s important to address fertility issues up front, to help women achieve their fertility goals,” says Smith. “Current data suggest that many clinicians aren’t adhering to these guidelines.”

Resistance Gene Identified

Johns Hopkins Kimmel Cancer Center researchers led by Ben Park, M.D., Ph.D., identified a gene that may explain why some breast cancers are resistant to the commonly prescribed hormonal treatment tamoxifen. The estrogen-blocking drug is used to prevent and treat breast cancer. This gene also may help identify aggressive breast cancers at early stages.

Examining the genetic records of thousands of breast cancer patients, Park and team discovered that overexpression of the MACROD2 gene in breast cancer cells was associated with tamoxifen resistance. The scientists also found similar overexpression of the gene in cells from tumors that had spread beyond the breast.

“This gene may eventually prove useful in screening for some aggressive forms of breast cancers and acting as a target for therapy,” Park says.

Blood Test Guides Treatment

A newly developed blood test may help identify residual cancer cells left behind after breast cancer surgery. The test would provide a much-needed tool to help cancer clinicians definitively identify early-stage breast cancer patients who still have cancer cells remaining after surgery and would benefit from additional treatment, such as chemotherapy. Just as important, it will help determine patients that could be spared additional treatment.

“Currently, oncologists are overtreating breast cancer patients because they don’t know who to treat,” says breast cancer expert and test developer Ben Park, M.D., Ph.D. About 30 percent of early-stage breast cancer patients will experience a recurrence of the disease. Identifying which patients make up that 30 percent would save the other 70 percent from undergoing further treatment that is expensive and causes undesirable side effects, he says.

Early research of the test had promising results, and Park and team are now planning larger studies. In related work, the researchers demonstrated the ability to use a blood test to detect estrogen receptor gene resistance mutations in breast cancer patients. Park says, “Essentially, we are moving toward the end goal that blood will someday become the source for assessing the likelihood that a patient’s tumor will spread.”
Breast Cancer, Family History and Weight Gain

Breast cancer survivors with a family history of the disease, including those who carry BRCA1 and BRCA2 gene mutations, gained more weight over the course of four years than cancer-free women—especially if they were treated with chemotherapy, according to a prospective study by Johns Hopkins Kimmel Cancer Center researchers led by Kala Visvanathan M.B.B.S., M.H.S. In the four-year span, survivors gained significantly more weight—3.6 pounds on average—than cancer-free women. Among 180 survivors diagnosed with cancer during the last five years of the study period, 37 (21 percent) gained at least 11 pounds over a four-year period compared with 35 of 307 (11 percent) of their cancer-free peers. The weight change findings remained the same after accounting for other factors associated with weight gain, such as increasing age, transition to menopause and level of physical activity, the researchers say. Results of the study are published in the July 15, 2015, issue of Cancer Epidemiology, Biomarkers & Prevention.

21% GAINED AT LEAST 11 POUNDS OVER A FOUR-YEAR PERIOD COMPARED WITH 11% OF THEIR CANCER-FREE PEERS.

Leukemia After Chemotherapy

The risk of developing leukemia after chemotherapy for early-stage breast cancer, though small, is twice as high as previously reported, according to a new study by Johns Hopkins Kimmel Cancer Center researchers published in the Feb. 1, 2015, issue of the Journal of Clinical Oncology.

The study team used data from 20,063 patients with breast cancer that were collected between 1998 and 2007. It determined that patients treated with surgery and chemotherapy, with regimens that include anthracycline and alkylating agents, were more likely to develop leukemia within 10 years of treatment than patients treated only with surgery. The researchers found a 0.46 percent cumulative risk of developing leukemia in those who received surgery and chemotherapy after 10 years of follow-up, compared to just 0.16 percent of cumulative risk in surgery-only patients. Earlier studies had estimated risk at 0.25 percent risk for breast cancer patients who had surgery and chemotherapy.

“WE SHOULD MAKE AN EFFORT TO REDUCE THE USE OF CHEMOTHERAPY IN SITUATIONS WHERE THE ACTUAL POTENTIAL FOR BENEFIT IS UNCERTAIN.”

He collaborated with cancer prevention expert Kala Visvanathan, M.B.B.S., M.H.S., on the study.

Wolff says that many factors—including tumor size, whether cancer has spread to lymph nodes, and whether tumors test positive for certain breast cancer-related hormone and growth receptors—should be used to determine an individualized treatment plan for patients with early-stage breast cancer, including whether chemotherapy is necessary. “We should make an effort to reduce the use of chemotherapy in situations where the actual potential for benefit is uncertain,” says Wolff.
Teaching Providers About Survivorship
Elissa Bantug, M.H.S., Antonio Wolff, M.D., and Kimberly Pears, M.D., co-directed our first continuing medical education course on cancer survivorship in April 2015. Providers from all over the region attended to learn about the critical components of cancer survivorship, including medical and psychosocial effects of cancer and its treatments, potential gaps and barriers in care, and strategies for effective care delivery.

Survivors, Caregivers and the O’s
Thirty young breast cancer survivors and their caregivers enjoyed a night of sports and support at Co-Survivors at Camden Yards on July 27, 2015, with the Young Survival Coalition/Johns Hopkins Face2Face support and networking group. Marc Silver, author of Breast Cancer Husband, spoke to the group about his experience, recounting with poignant and often hilarious honesty his efforts to support his wife through her diagnosis and treatment. Survivors and their caregivers, families, and friends also enjoyed a meal and a ballgame.

Survivorship Day
On March 14, 2015, over 300 breast cancer survivors, caregivers and families joined us at Port Discovery Children’s Museum for our first Johns Hopkins Breast Cancer Survivorship Day, with a theme of “Building Together: Foundations of Breast Cancer Survivorship.” The event was co-sponsored with Susan G. Komen Maryland. While children participated in a variety of activities, including art, dancing, mad science, yoga, juggling and cooking, adults attended a variety of sessions and panel discussions, including fear of recurrence, living with advanced cancer, spirituality and hope, sexuality and intimacy, caring for the caregiver, what to expect after treatment, and a question-and-answer session with breast cancer experts. Registration will open soon for the second annual Johns Hopkins Breast Cancer Survivorship Day on May 21, 2016. Look for more information at hopkinscancer.org.
Alleghany Initiative

The first round of research grants has been awarded as part of Johns Hopkins’ collaboration with the Allegheny Health Network Cancer Institute. The 10 investigator-initiated grants included a range of discovery projects in the basic sciences to more clinically focused studies. Funded grants included a project by Josh Lauring, M.D., Ph.D., from the Johns Hopkins Breast Cancer Program, for “Engineering chromosomal amplifications to identify cooperating oncogenic drivers in breast cancer.” Lauring and his team will use the funding to further develop this technology and begin to test therapeutic approaches targeting these chromosomal amplifications.

Metastatic Breast Cancer Network Leadership Award

Andrew Ewald, Ph.D., was one of two physicians who received $50,000 through the Metastatic Breast Cancer Leadership Award. He was honored for his significant contributions to understanding basic knowledge about the process of metastasis whereby improving how patients are treated. The award recognized Ewald’s work pioneering the development and use of 3-D culture techniques to capture and analyze in real time the growth and invasion of breast cancer tumor cells.

Komen Maryland Survivorship Award

Antonio Wolff, M.D., was awarded $50,000 from Susan G. Komen Maryland to focus on the survivorship needs of patients with breast cancer living with metastatic disease. Funds will include a pilot program for some patients to receive a specialized “living with breast cancer” visit, new educational materials, provider training and a community webinar. (See story on page 7)

We Have Some of the Best

Newsweek, in conjunction with healthcare information firm Castle Connolly, named the Top Cancer Doctors 2015 in the United States. Congratulations to our Antonio Wolff, M.D., Deborah Armstrong, M.D., and Leisha Emens, M.D., Ph.D., for making the list.

Baltimore magazine also highlighted John Fetting, M.D., and Lisa Jacobs, M.D., as two of Baltimore’s top doctors.

Avon Award

Ben Park, M.D., Ph.D., was awarded $300,000 from the Avon Foundation to perform real-time isogenic cell line modeling. The goal of his study is to determine actionable mutations from a molecular tumor board to determine the response to targeted therapies for metastatic breast cancer.

New Breast Cancer Fellow

Virginia surgeon Maureen O’Donnell, M.D., had a passion for taking care of breast cancer patients, but she realized the field had advanced rapidly since her residency and wanted more training. Through generous funding from the Potomac Valley Dressage Association (PVDA) Ride for Life, O’Donnell has been offered a one-year fellowship at Johns Hopkins for training in state-of-the-art breast cancer care as she rotates through medical oncology, radiation oncology, breast surgery, genetics and other disciplines.

Young Investigator Award

Roisin Connolly, M.B.B.Ch., was awarded a Young Investigator Award from the National Comprehensive Cancer Network for a project investigating whether the immune system can be harnessed in the treatment of triple-negative breast cancer. Tumor biopsies and blood samples obtained from patients will be used to learn more about how the immune system is acting in patients with triple-negative breast cancer, and to identify action mechanisms of epigenetic and immune treatments, as well as potential biomarkers, which will determine which patients respond best to these treatments.

This research was highlighted in the Johns Hopkins Medicine Science: Out of the Box series and received first place in the American Society for Cell Biology’s Share Your Science Video Contest. Watch it at www.youtube.com/watch?v=gezIo3p2dl8.

Clinical Excellence Award

Julie Lang, M.D., and John Fetting, M.D., were inducted into the Miller-Coulson Academy of Clinical Excellence at the Excellence in Patient Care Symposium in March.

New Professorship

Nagi Khouri, M.D., was awarded the inaugural Carol Ann Flanagan Professor in Breast Imaging for his dedication to women with breast disease and his skill as a breast care clinician.

New Role for John Fetting

John Fetting, M.D., stepped down from his position as the associate director for medical practice at the Kimmel Cancer Center to pursue his passion for patient care and advocacy of breast cancer prevention research. He has worked tirelessly for 17 years to assure that patients received care of the highest quality. Fetting continues to care for patients with breast cancer at the Kimmel Cancer Center’s Green Spring Station facility. He will also work with the Fetting Fund team in its efforts to promote and support breast cancer prevention research.

Young Investigator Award

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Immune Therapy Shows Promise

Preliminary results of an early, multicenter study showed an experimental immune therapy drug was safe in patients with metastatic, triple-negative breast cancer. These early findings offer new hope in the fight against this particularly aggressive and difficult-to-treat disease.

The study involved 54 patients with advanced triple-negative breast cancer from the Johns Hopkins Kimmel Cancer Center and other cancer centers. The patients received an experimental drug, known as a PD-1 blockade, designed to disrupt a pathway that hides tumor cells from immune system.

“Early data in this trial show that the drug is generally safe and well-tolerated, and it appears to be able to control disease in some of these patients,” says study leader Leisha Emens, M.D., Ph.D. “Now we’ll need to test it further in more patients and compare it with standard therapies to establish its therapeutic value.”

The drug binds to an immune-regulating protein known as PD-L1, disrupting an interaction between it and a related protein known as PD-1, enabling an immune response against the cancer cells.

The researchers determined that 37 of the 54 patients expressed the PD-L1 protein in some immune cells within their tumors, and 21 of these patients were evaluated to assess the impact of the drug. Six patients survived at least 24 weeks without disease progression, an unusual result among patients with this type of advanced and resistant cancer. Two patients saw their cancers disappear, and tumors shrunk in another two patients.

Next steps include testing the drug’s benefit in groups of patients and comparing it with standard treatments to determine its therapeutic value. A large global study to evaluate it as a possible standard therapy is underway.

“Engaging the immune system to fight breast cancer is a game changer,” says Emens. “This is especially true for triple-negative breast cancer, for which chemotherapy is currently the only standard treatment option outside of a clinical trial. Identifying a way to predict ahead of treatment which patients are more likely to respond is critically important, and there are ongoing efforts to identify biomarkers for patients who are more likely to respond to this therapy.”

Epigenetic Breakthrough Therapy

Epigenetics is the term used to describe natural control mechanisms that influence gene expression. Cancer cells use these control mechanisms to survive and spread. Epigenetic therapies target these controls and have shown the ability to reset them to normal, resulting in the death of cancer cells. Clinician-scientist Roisin Connolly, M.B.B.Ch., is investigating whether epigenetic-targeted drugs may help overcome resistance to standard breast cancer treatments.

Connolly was recently selected to lead a large international study of 600 patients with advanced hormone receptor-positive breast cancer. The study evaluates whether adding an epigenetic-targeted drug, known as an histone deacetylase inhibitor, to endocrine therapy for breast cancer will improve outcomes for patients. Increased survival results in an earlier trial led the FDA to grant “breakthrough therapy” designation to this treatment combination.

“We are trying to better understand how these treatments work in patients with breast cancer and to identify markers which can predict benefit for individual patients,” Connolly says. “If the study confirms a benefit in survival with the addition of the epigenetic drug, this would be a practice-changing result and would lead to FDA approval of this agent for use in the advanced breast cancer setting.”
A considerable number of breast cancer patients—as many as 30 percent—are diagnosed with metastatic disease. This advanced stage of cancer is the focus of much laboratory and clinical research as our experts look for novel treatments, such as immune therapies, to attack these difficult cancers. At the same time, we want to make sure our patients have the support they need and are living well regardless of their stage of cancer, says Elissa Bantug, Breast Cancer Survivorship Program Manager.

Bantug is working with Breast and Ovarian Cancer Program co-director Vered Stearns to develop educational materials tailored to the unique needs of patients with advanced breast cancer. “These patients are living a long time with their cancer, and they have a lot of questions. Many of the materials developed for all breast cancer patients are not sufficient for these patients,” says Bantug.

A new grant from Komen Maryland is helping Kimmel Cancer Center breast cancer experts address the different needs of patients with advanced breast cancer. Bantug is working with breast cancer clinician Antonio Wolff on several new initiatives aimed at helping this patient group. They have established a “living with breast cancer visit” dedicated to discussing ways to optimize health and wellness for as long as possible. The visit also tackles the importance of addressing unresolved spiritual, financial, professional, and family issues. A pilot study begins October 1 with 40 patients and will provide patient and caregiver appointments with a nurse practitioner. The appointments are scheduled about six weeks after the diagnosis, allowing the patients some time to adjust to the realistically shocking news they have received and begin to think about the questions and concerns they have.

“We’ll talk about diet and nutrition, and exercise, but also about their goals and wishes and introduce palliative care and hospice care,” says Bantug. Research shows, patients and families do better when the difficult decisions are discussed earlier in the course of their disease, when they are feeling well, but too often, Bantug says, palliative care and hospice specialists are not called in until patients are near death and families are under significant stress. Bantug believes experts can be more effective in helping caregivers understand patients’ expectations and to help patients realize their goals, if all members of the care team are included from the onset.

“This is not a conversation about dying. This is a conversation that gives patients the opportunity to tell us how they want to live,” says Bantug. Some patients want to make videos showing how to make favorite family recipes; others want to write cards to their spouses, children and friends. Whatever is important to the patient, this program helps them take back control of their lives. Experts will also discuss clinical trials that may benefit the patient.

Stearns and team recognize they cannot see every patient at the Kimmel Cancer Center, but they want to extend similar services to breast cancer patients everywhere, so they also used the Komen Maryland funding to develop a webinar available via the Internet. Living Well with Advanced Cancer can be viewed on October 28, 2015 (See Upcoming Events for more information.). The program is tailored to breast cancer patients but the information is useful to all patients battling advanced cancers.
What are some of the factors you consider when providing individualized care to patients with breast cancer?

Today, when we evaluate and provide treatment recommendations for patients with newly diagnosed breast cancer, we look at a number of factors, including the specific characteristics or features of the tumor, the patient's age, personal preferences, and other illnesses or health-related matters.

How does this knowledge inform the way you treat patients?

We know from research that certain factors we analyze can help us decide what treatments will work best for each patient. To guide us in making these decisions, we look for unique biological characteristics, known as biomarkers, in the patient's tumor and/or her blood. Also, specific features of a patient's genetic makeup can sometimes tell us whether an individual will be more or less likely to benefit from a treatment or suffer side effects. The tools we use to deliver individualized precision medicine are the product of our laboratory and clinical research activities, and many of them have become the standard of care in the clinic.

Can you provide some examples of how analyzing a patient’s genetic makeup can affect a treatment decision?

We have tools that allow us to evaluate genes that an individual was born with (germline), which may influence how a patient could benefit or be harmed by certain treatments. For example, an individual who is a carrier of the BRCA gene mutation may benefit from specific chemotherapy agents or new agents targeting repair pathways in the tumor cells. We can also evaluate the tumor's genetic makeup (somatic). We expect that tumor cells will have both germline mutations but also a collection of new alterations that can influence treatment decisions. Another example is in patients with early breast cancers that are being fueled by hormones, known as hormone receptor-positive breast cancer. With these types of tumors, we can send them for further profiling before we decide on a treatment plan. This helps us decide if that patient needs only hormonal therapy or hormonal therapy plus chemotherapy. Finally, at the Kimmel Cancer Center, in collaboration with breast cancer genetics expert Ben Ho Park, M.D., Ph.D., we are conducting studies of tests that detect the presence of cancer DNA in the blood. If no cancer DNA is found after surgery, that tells us that surgery may have been sufficient treatment for that woman, and she may not need additional therapy.

Vered Stearns, M.D., co-director of the Breast and Ovarian Cancer Program at Johns Hopkins, explains some of the exciting ways she and her team of experts are taking an individualized approach to breast cancer treatment. Precision medicine is about getting the right treatments to the right patients, sparing patients the risks and interventions that are not likely to help them and directing them to those that will. With expertise in treating all breast cancers—the most common, the most complex and the most rare—Stearns discusses how she and her team are using the latest research advances to find and attack this disease.

“The tools we use to deliver individualized precision medicine are the product of our laboratory and clinical research activities, and many of them have become the standard of care in the clinic.”
All of the exciting innovations centered on precision breast cancer medicine that you and other Johns Hopkins researchers are developing and beginning to provide to patients rely on adequate funding. Have you been successful in obtaining this support?

We've been very successful at having some of our initial ideas funded. My experience has been that small seed funds for high-risk ideas, mostly from private donors, help us generate important data that then lead to large grants. Two key examples are a $1.7 million grant from the Centers for Disease Control and Prevention (CDC) that supports a five-year initiative aimed at individualized approaches for young women diagnosed with breast cancer. A large gift from Under Armour will allow us to pursue some very innovative ideas in prevention and survivorship. Both of these projects initially began from smaller funds and have grown into larger and very successful endeavors.

Can you share some of the resources that will be made available to breast cancer patients and survivors as a result of the CDC grant?

The grant will fund educational programs, enhance support and increase awareness. As we enhance our electronic educational materials, we will make these resources available for patients beyond those we treat at Johns Hopkins. We also will develop a more individualized prescription for wellness, helping women learn how to continue to stay healthy and focus on nutrition, physical activity and psychosocial support. In addition, we plan to offer educational symposia to address the unique needs of younger women with breast cancer. Once we identify additional resources, we plan to extend these services to women of all ages.

“The aim of precision medicine goes beyond the goal of helping women live longer; we want them to live better for longer.”

How do you translate grant funding into more precise treatment for women with breast cancer?

Breast cancer in younger women is one example. As a leading academic medical institution, we often see more difficult and unusual cases. Most breast centers have just a few breast cancer patients who are under 45. At the Kimmel Cancer Center, about 25 percent of our patients are young women who seek out Johns Hopkins trusting they will find the most advanced treatment options. Their cancers are often a little more aggressive, and they generally need several types of treatment. Many of these women are building careers and families. We want to identify their needs and make sure they are aware of the resources available to them right from the beginning. Of course, we want to be certain that we give them the best chances for long-term survival, but we also want to do this in the least harmful and most beneficial way possible. The aim of precision medicine goes beyond the goal of helping women live longer; we want them to live better for longer.

We’ve talked about younger women with breast cancer. What about older patients, those most commonly diagnosed with breast cancer?

Older patients, I feel, many times, are under or overtreated. Most oncologists don’t have the tools we have here at the Kimmel Cancer Center to evaluate the safety and effectiveness of treatment options in the light of age and other health issues, especially for women older than 70. We have assembled an expert team of specialists to more accurately address the needs of this group of patients. Every woman 70 years and older seen at Johns Hopkins is evaluated for potential age and health-related concerns. These factors are unique to each patient and are taken into consideration as our experts devise and tailor the best treatment recommendations for every patient. We want to make sure we optimize and individualize treatment for these women.

“Our experts have developed patient educational resources on 14 types of rare breast tumors. Our nurse navigators meet with patients at their first medical oncology visit and offer them support throughout their treatment journey. Our research scientists are world leaders in striving to decode these rare diseases and discovering novel, effective treatments for them.”

What about breast cancer patients with rare tumors?

There are several types of rare breast tumors that have unusual characteristics, so one could argue that these patients have the most need of precision medicine. These tumors may require different and more complex treatment modalities compared to other breast cancer patients. Most cancer specialists may see a rare tumor once a year, some just once in a lifetime, but at the Kimmel Cancer Center, we commonly see patients with rare tumors. In 2012, we established the Center for Rare Breast Tumors at Johns Hopkins. Our experts have developed patient educational resources on 14 types of rare breast tumors. Our nurse navigators meet with patients at their first medical oncology visit and offer them support throughout their treatment journey. Our research scientists are world leaders in striving to decode these rare diseases and discovering novel, effective treatments for them.

It sounds as though Johns Hopkins is making a lot of progress towards maximizing individualized care for patients with breast cancer. What about the future excites you?

Some of the new technologies available are very exciting. They allow us to study thousands of genes from very small amounts of tissue or even blood. In the next few years, we’ll be able to use the specific information from individual patients to reveal patterns and draw broader conclusions that will help many. This translation of laboratory and clinical science into improved cancer medicine for all is at the core of precision medicine. There’s still a lot of work to be done, but it’s exciting to see how far we’ve come.
While many advances have been made in breast cancer treatment over the years, very little progress has been made in preventing the disease. The John Fetting Fund for Breast Cancer Prevention, initiated by Leslie and Tom Ries in 2010, is aimed at addressing this lack of progress by supporting prevention research conducted by Johns Hopkins breast cancer scientists.

“Our two main thrusts are to identify patients at risk, using genetic and epigenetic markers, and to try and develop products for prevention that have a favorable profile and don’t have side effects,” says John Fetting, M.D. Already, pilot projects for these goals are underway and moving along well, he reports.

To date, risk factors for cancer are relatively weak, only modestly elevating the risk that a woman will develop breast cancer, explains Fetting. That may change, however, with the advent of biomarkers that denote changes to the DNA of a woman’s breast tissue.

Johns Hopkins researcher Kala Visvanathan, M.B.B.S., M.H.S., is looking at breast tissue in women having surgery for breast cancer to see if normally appearing tissue contains some of the same genetic and epigenetic changes found in the cancerous tissue. Fetting says: “We want to know: Can we look at normal breast tissue and find evidence of these DNA changes happening prior with breast cancer and her efforts to fund breast cancer prevention at the Johns Hopkins Kimmel Cancer Center. See it here: https://youtu.be/geRSCva05JI.

At left: Amy Mone, Director of Public Affairs, Leslie Ries, Laurie Singer, video producer
to the development of cancer? If Visvinathan and her team find these changes in normally appearing breast tissue of women with breast cancer, they will develop studies to look for these changes in the breast tissue of women without breast cancer. These changes may identify women at substantial risk.”

Currently, some women deemed at risk for developing breast cancer are prescribed medicines, like tamoxifen or aromatase inhibitors, to reduce risk. But because of their undesirable side effects, few women take them. Johns Hopkins researchers are looking for alternatives.

Dipali Sharma, Ph.D., is exploring the breast cancer prevention potential of honokiol, a natural substance extracted from the bark of the magnolia tree. Sara Sukumar, Ph.D., is evaluating the spice curcumin.

“THERE HAS LONG BEEN A SMALL GROUP OF PREVENTION DIEHARDS, NOW, WITH ADVANCES IN CANCER BIOLOGY, MORE SCIENTISTS ARE JOINING THE EFFORT. WE ARE GAINING MOMENTUM.”
– JOHN FETTING

With the combined effort to both pinpoint women at risk for breast cancer and the discovery of agents that can safely prevent them from developing the disease, Fetting believes they are beginning to achieve the goals of the Fetting Fund. “There has long been a small group of prevention diehards,” he says. “Now, with advances in cancer biology, more scientists are joining the effort. We are gaining momentum.”

For more information about the Fetting Fund: www.hopkinsmedicine.org/kimmel_cancer_center/centers/breast_cancer_program/fetting_fund.html

To support cancer prevention through the Fetting Fund, contact Ellen Stifler at stifler@jhu.edu or 410-361-6391.

October is Breast Cancer Awareness Month

231,840 women will be diagnosed with breast cancer this year.

You can help make a difference.

From prevention to laboratory science, clinical studies, and survivorship, there are many ways to make a difference. Support our Kimmel Cancer Center clinicians and scientists as they work to defeat breast cancer.

Contact us today:
410-361-6391
stifler@jhu.edu

Run Raises Money for Triple Negative Breast Cancer Research

In 2006, Cindy Rosencrans, was diagnosed with triple negative breast cancer—a treatment-resistant type of breast cancer that affects about 20 percent of patients. The cancer took Cindy’s life in 2009, and in her memory the family has continued her commitment to raising money for much needed research. Cindy’s daughter, Ali, is lacing up her sneakers and running the New York City Marathon to raise money for triple negative breast cancer research at the Johns Hopkins Kimmel Cancer Center. If Ali raises $25,000, an anonymous donor has agreed to make a matching donation. Get more information or contribute at https://www.razoo.com/story/Run-For-Cindy-2015-Nyc-Marathon.
Help Us Make A Difference

Each contribution to the Breast Cancer Program at 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 breast 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 breast cancer and support survivors.

You may designate a gift to a specific faculty member.

To make your donation online, go to www.hopkinscancer.org and click “Make A Gift.”

To mail your donation, send to:
Johns Hopkins Kimmel Cancer Center
750 E. Pratt Street, Suite 700
Baltimore, MD 21202

To contact our Development Office by phone, fax or email:
Phone 410-361-6391
Fax 410-230-4262
Email: stifler@jhu.edu

Visit us on the Web at hopkinscancer.org.
Click on Breast Cancer Program, left column

If you prefer not to receive fundraising communications from the Fund for Johns Hopkins Medicine, please contact us at 1-877-600-7783 or JHHOpOut@jhmi.edu. Please include your name and address so that we may honor your request.