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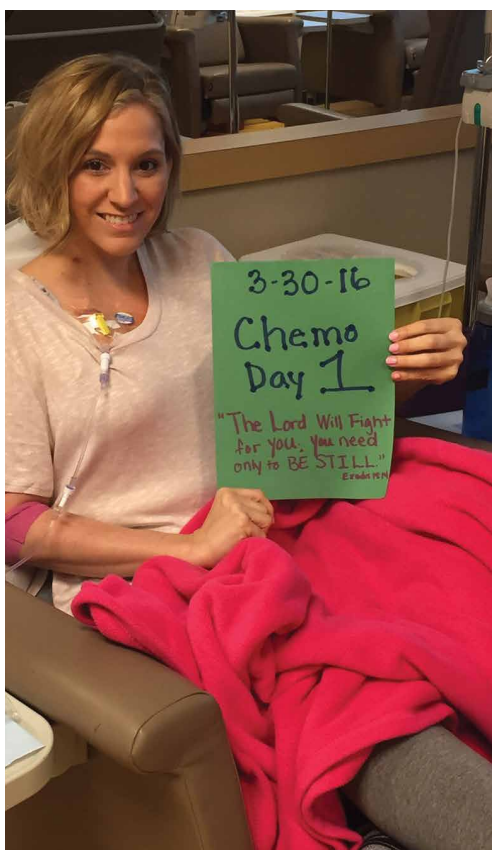
On Making the Breast Cancer Treatment Decision: A Personal Story

Leigh Rozelle found the lump purely by accident, just three days before Christmas. As she crossed her arms, she felt a golf ball-size knot on the outer side of her left breast.

“My family practitioner was able to squeeze me into her schedule the very next day,” says Rozelle, who is 38. “When she examined my breast, she was concerned and asked me if I had time to see a breast surgeon the following morning if she could get me in.”

The breast surgeon was Liz Lee, M.D., who is affiliated with Memorial Hermann Memorial City Medical Center. “Dr. Lee did an ultrasound and told me the lump was slightly larger than 3 centimeters in diameter,” Rozelle says. “She wanted to move quickly and sent me to the breast center for a mammogram and biopsy the following day. And that’s how I spent my Christmas Eve.”

Four days later on Dec. 28, 2015, she heard her diagnosis: stage 1A, grade 3 ductal carcinoma in situ with some invasive components. Grade 3 and 4 tumors tend to grow rapidly – much faster than lower grade tumors. She also learned that her particular cancer was triple negative – characterized by the absence of three receptors known to fuel most breast cancers: estrogen receptors (ER), progesterone receptors (PR) and human epidermal growth factor receptor 2 (HER2). Although triple-negative breast cancers do not respond to receptor-targeted treatment and tend to be more



Leigh Rozelle on her first and last day of chemotherapy treatment at Memorial Hermann Memorial City Medical Center. Leigh was diagnosed with breast cancer in December 2015, and received all of her treatment at Memorial Hermann.

aggressive, they typically respond to chemotherapy. The diagnosis gave her a glimpse into the future.

The multidisciplinary Breast Cancer Tumor Board at Memorial Hermann Memorial City met to discuss Rozelle’s case and agreed that surgery was the best first course of action, followed by chemotherapy. In January, she met Frankie Ann Holmes, M.D., a medical oncologist affiliated with the hospital.

“I was struggling with what type of surgery to have – lumpectomy or

mastectomy – and had a scare in the process,” Rozelle says. “On the MRI they found patches in my right breast, which were biopsied and identified as dense tissue, not tumors. Then I had lots of questions: If I do a mastectomy and

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DIGITAL VERSION

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MEMORIAL
HERMANN
Cancer Centers

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then need radiation, will that delay reconstruction? How will I know if I need radiation? I learned that they could remove a few lymph nodes to make sure that the cancer hadn't spread. We did that on Feb. 1, 2016, in the left arm. Luckily all five lymph nodes were negative and I would not need radiation. But the tumor was growing, and because of the size, I felt that a lumpectomy would leave my breast lopsided. I was dealing with something aggressive and I wanted to take aggressive action. I had faith in Dr. Lee. In the end I decided to move forward with a mastectomy, and then decided on a double mastectomy because I'm young and want peace of mind."

Dr. Holmes referred Rozelle for prehabilitation - occupational therapy in advance of mastectomy to optimize the outcome and help improve quality of life after treatment. "I'm a big believer in



Leigh and her support system on her last day of chemotherapy.

prehabilitation," Dr. Holmes says. "When we see cancer patients, we're very aware that they have lives beyond diagnosis and treatment. Patients who have mastectomy and lymph node dissection, as Leigh did, will lose some range of motion in the arm and shoulder on the affected side and also be at risk for lymphedema. If a patient is deconditioned before chemotherapy, an exercise program can help with fatigue during treatment. We can address all of

these challenges before treatment."

Prior to surgery, Rozelle saw Emilia Dewi, OTR, O.T.D., CLT, an occupational therapist and certified lymphedema therapist at TIRR Memorial Hermann Outpatient Rehabilitation-Memorial City. Dewi evaluated her and took measurements for a compression sleeve, which encourages the movement of lymph through the body and discourages pooling of lymph in the arm.

"After the mastectomy, I had four drains and couldn't do a whole lot of exercising but I could do some light stretching," Rozelle says. "Once the drains were out, I went back to continue therapy before I started chemotherapy." She saw Emilia twice a week for about a month, working primarily on improving range of motion in her shoulder.

"As it turns out, I didn't have a lot of swelling," she says. "I was aware of it, but it was nothing anyone else would notice.

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Emilia got me started early with a sleeve to help prevent full-blown lymphedema.”

Rozelle prepared for chemotherapy as diligently as she had prepared her home for life after mastectomy. “I read what to expect of chemotherapy but avoided the horror stories. I focused on things I could do around the home to make my life easier. The preparations were comforting and gave me a sense of being in control.”

Early on, Dr. Lee emphasized Rozelle’s role in treatment planning. “She told me

that they were going to recommend chemotherapy, but that it was my choice whether to have it,” she says. “I was surprised. I’ve been blessed with good doctors, including my reconstructive surgeon, Dr. Rafi Bidros. He’s phenomenal. As a team they have it down to a really good science.”

Rozelle finished chemotherapy in mid-August and had her reconstructive surgery in November after giving herself a chance to bounce back from chemother-

apy. “No matter how much I prepared and took charge of things, there were bad days, so I was happy to be done with chemotherapy. A lot of friends and family came to celebrate my last day, and all the nurses came out to wish me well. I have a lot of good support and a lot of people praying for me at different churches, and I know that this is just a season in my life. It will pass.” ♦

A NOTE FROM LEADERSHIP



Everyone at some point is touched by cancer. Whether it’s a loved one or a personal diagnosis, we will all encounter cancer at some point in our lifetime.

For those of us who have spent careers in the fight against cancer, we feel a deep connection to each and every one of our patients as we help them along their cancer journey. For me this connection comes as a result of the inspiration of my grandmother who had breast cancer. It was in the late 1960s

and there was very little treatment for breast cancer at the time. My grandmother was the very example of a loving and generous spirit. She always went out of her way to love and serve her family, friends and neighbors. It is my privilege to have been influenced by her and motivated to continue her legacy of caring.

From our dedicated nurse navigators, who help guide patients through every step of their journey, to our expert affiliated physicians, who are committed to providing high-quality cancer care, it is everyone’s mission to be there when our patients need us most.

As reflected in this edition of the Memorial Hermann Cancer Journal, this

fall Memorial Hermann rallied together as a system to spread the message of prevention and early detection, in particular, regarding breast and lung cancer. It is our hope that by maintaining Memorial Hermann’s strong presence in the community, we will continue the fight against cancer through screenings, prevention, education and outreach, because at Memorial Hermann, you’ll never fight cancer alone.

Sandra Miller, M.H.S.M., RN, NE-BC
*Senior Vice President
Oncology Service Line*



According to the American Cancer Society, a man’s lifetime risk of dying from cancer is 1 in 4, and for a woman, that chance is 1 in 5. As physicians who see cancer

every day, we know a person’s best chance at beating this disease is through early detection. It is up to us to spread awareness and to continually educate our community on their risk factors and what screening options are available to them.

Over the past year, our physician steering committee, in partnership with Memorial Hermann oncology leadership, has made significant progress in expanding cancer prevention and early detection programs. In addition to our expanded Low-Dose CT Lung Cancer Screening program, we have also increased access to cutting-edge tomosynthesis mammogram technology at our facilities throughout Greater Houston. Memorial Hermann is also encouraging any patient that walks through our doors to utilize a new screening self-assessment tool to help determine whether he or she is due for a breast, lung, colon or prostate cancer

screening. Our hope is that the use of this tool, along with guidance from our expert affiliated providers and navigation team, will allow for early detection and better overall survival outcomes.

Thank you for being on this journey with us and entrusting your patients with our care. Together, we are fighting cancer one patient at a time.

Ron J. Karni, M.D.
*Chair, Physician Strategic Steering
Committee
Oncology Service Line*

Digital Tomosynthesis Improves Early Detection of Breast Cancer

In 2011, Memorial Hermann was the first hospital system in the southern part of Texas to introduce a new, leading-edge digital technology that improves radiologists' ability to detect smaller tumors at the earliest stages of breast cancer, especially in women with dense breasts. Today, digital breast tomosynthesis is available at 15 Memorial Hermann locations around the city.

“Digital tomosynthesis creates a highly focused 3-D image of the breast that aids in detection of small tumors earlier than traditional mammograms, which is especially important for women with dense breast tissue,” says Anne C. Kushwaha, M.D., a diagnostic radiologist at Memorial Hermann Breast Care Center-Upper Kirby, Memorial Hermann Breast Care Center-Southwest and Memorial Hermann Bobetta Lindig Breast Care Center-Memorial City. “Radiologists examine mammograms to rank tissue density in four categories: almost entirely fatty (category 1), scattered areas of fibro-glandular tissue (category 2), heterogeneously dense (category 3), and extremely dense (category 4). Women with any breast density beyond fatty tissue, which includes those in categories 2 through 4, should get digital tomosynthesis. This is 90 percent of women.”

Fat appears dark on mammograms, while fibro-glandular tissue and cancers appear white. Because it's difficult to see white on white, malignant masses may be obscured by fibro-glandular tissue when viewed with traditional 2-D mammography. This is called masking; some cancers may be hidden by the overlying tissue and not detectable to the radiologist.

Tomosynthesis can be performed at the same time as traditional mammograms to boost accuracy. Much like computed tomography, tomosynthesis takes a series

of low-dose exposures that are mathematically processed into 1-millimeter slices that visualize breast tissue in three dimensions, removing spatial ambiguity.

“Digital breast tomosynthesis takes a sweep through the breast, allowing us to see several slices and reducing the possibility of a malignancy being hidden by overlapping tissue caused by compression,” says Dr. Kushwaha, an associate professor in the department of Diagnostic Radiology at The University of Texas MD Anderson Cancer Center. “Dense breast tissue can look similar to cancer on a mammogram. Tomosynthesis makes it easier to distinguish between dense tissue and malignancies, and allows radiologists to look at isolated areas of the breast in greater detail. We find cancers that might not be found on traditional 2-D imaging. In addition, tomosynthesis has been shown to reduce the number of false positives resulting in fewer women being called back for more tests.”

There's another issue for women with dense breasts: They have double the cancer risk compared to the average, similar to the risk associated with a family history of breast cancer. The topic is currently under investigation.

Although cancer may be more difficult to spot on traditional mammograms, they are the only exam proven to lower mortality in women. “Mammograms detect early signs of cancer, including calcifications that can't be felt during a manual breast exam,” Dr. Kushwaha says. “Women with heterogeneously dense or extremely dense breasts can request an ultrasound for additional screening, as it has been shown to increase the number of cancers detected. For women with a lifetime risk of breast cancer greater than 20 percent, an annual MRI is recommended in addition to mammography.”

Regardless of a woman's breast

“TOMOSYNTHESIS MAKES IT EASIER TO DISTINGUISH BETWEEN DENSE TISSUE AND MALIGNANCIES, AND ALLOWS RADIOLOGISTS TO LOOK AT ISOLATED AREAS OF THE BREAST IN GREATER DETAIL. WE FIND CANCERS THAT MIGHT NOT BE FOUND ON TRADITIONAL 2-D IMAGING.”

- ANNE C. KUSHWAHA, M.D.

density, yearly mammograms should start at age 40, or earlier in the case of a very high risk of breast cancer or the presence of a known mutation in either the BRCA1 or BRCA2 gene. There is no consensus on when women should cease annual mammograms. Most physicians recommend continuing screening mammograms as long as the woman is healthy.

The American College of Radiology endorses breast tomosynthesis, saying recently, “Better sensitivity will likely translate into more lives saved.” The technology is available at Memorial Hermann Breast Care Centers at Memorial Hermann Memorial City Medical Center, Memorial Hermann Katy Hospital, Memorial Hermann Southeast Hospital, Memorial Hermann Greater Heights Hospital, Memorial Hermann Sugar Land Hospital, Memorial Hermann Southwest Hospital, Memorial Hermann The Woodlands Hospital, Memorial Hermann Northeast Hospital, Sienna Convenient Care Center, Cypress Breast Care Center, CyFair Imaging Center, South Katy Imaging Center, Pearland Imaging Center, Victory Women's Imaging Center and Upper Kirby Breast Center.

For more information about breast cancer screening, visit memorial-hermann.org/imaging-and-diagnostics/breast-care-centers. ♦

Funds Raised at the Memorial Hermann Foundation's Annual Razzle Dazzle Luncheon Bring Advanced Biopsy Technology to Memorial City

A Hologic Affirm™ Prone Biopsy System – the first in use in Texas – is the newest high-tech addition at the Bobetta Lindig Breast Care Center at Memorial Hermann Memorial City Medical Center. The unit was purchased with funds raised by community members through the Memorial Hermann Foundation's Annual Razzle Dazzle Breast Cancer Awareness Luncheon.



Hologic Affirm™ Prone Biopsy System at Memorial Hermann Memorial City Medical Center.

The Hologic system is the only dedicated prone stereotactic biopsy system with both 2-D and 3-D imaging. “For the first time we can comfortably and accurately biopsy lesions seen only with 3-D digital breast tomosynthesis, which allows us to visualize very thin slices of tissue and find tumors that otherwise might remain hidden,” says breast radiologist Ethan Cohen, M.D.,

an assistant professor in the department of Diagnostic Radiology at The University of Texas MD Anderson Cancer Center and medical director of the West Division of MD Anderson Breast Care with Memorial Hermann. “Before the Hologic, we could see small tumors at their earliest stages using tomosynthesis but had no way to biopsy them in a way that was comfortable for women. In addition to superior image quality, the new system improves the biopsy experience by allowing women to remain more relaxed in a prone position.”

The Hologic Affirm system's C-arm provides 360-degree breast access, allowing the radiologist to move the biopsy needle without having to move the patient or the mammography machine. “Traditionally we've only been able to perform biopsies on two-dimensional findings with the patient face down, using mammography as a guide,” Dr. Cohen says. “With the new system we can locate the area easily, and if we need to approach it from the side or from a different angle, we can do it by making a few adjustments to the computer system.”

Julie Voss, interim CEO for the Memorial Hermann Foundation, points to the importance of philanthropy in



Keynote speaker, author and breast cancer survivor Elin Hilderbrand.

ensuring that the Memorial Hermann Health System remains at the forefront of medicine. “Philanthropy allows us to have that margin of excellence,” Voss says. “In a system as large as ours, many great programs vie for new technology. Philanthropy helps us stay on the cutting edge. The women who attend the Razzle Dazzle Luncheon do so out of a desire to find better ways to diagnose and treat breast cancer. Anyone who visits the Bobetta Lindig Breast Care Center can see the difference that contributions from the community have made.”

At the Seventh Annual Razzle Dazzle luncheon held Oct. 6, 2016, community members raised more than \$400,000 in support of the Lindig Breast Care Center. ♦



Mayor Pro Tem Ellen Cohen, Kristina Somerville, Hallie Vanderhider, Leigh Rozelle, Mary Ann McKeithan and Julie Voss at Razzle Dazzle.

Only 30 percent of breast centers in the United States have 3-D digital breast tomosynthesis, even though the technology has been approved for use since 2011. Tomosynthesis is available at 15 Memorial Hermann locations throughout Greater Houston. For more information, visit memorialhermann.org/imaging-and-diagnostics/breast-care-centers.

Video-Assisted Thoracic Surgery Gives Patients a Minimally Invasive Option for Lung Cancer Surgery

Removal of malignant lung tissue using video-assisted thoracic surgery (VATS) offers patients who qualify for the procedure a faster and more comfortable recovery. Primarily available only at leading academic hospitals such as Memorial Hermann-Texas Medical Center, VATS for lung cancer is also offered at Memorial Hermann Southeast Hospital.



PHILIP A. RASCOE, M.D., FACS
Cardiothoracic Surgeon affiliated with
Memorial Hermann

“VATS is an option for most small or peripheral lung tumors,” says Philip A. Rascoe, M.D., FACS, an associate professor in the department of Cardiothoracic and Vascular Surgery at McGovern Medical School at UTHealth. “The standard of care for treatment of lung cancer has long been to remove the lobe that contains the tumor and all potentially affected lymph nodes. Historically, VATS was used to

remove a slice of lung for biopsy. With advances in technology and improvements in our skill set, we can now remove lung lobes and perform the lymph node dissection thoroscopically, sparing many patients an open thoracotomy.”

VATS employs the same principles of anatomic resection as the open procedure, including individual dissection and ligation of blood vessels and bronchi. “The question has always been whether VATS provides the same long-term outcomes as open thoracotomy,” Dr. Rascoe says. “Recent studies have demonstrated oncological equivalency with regard to resection margins and lymph node dissection, as well as five-year survival rates. We’re basically doing the same operation through smaller incisions.”

VATS allows for removal of a lung cancer-containing lobe through three small incisions - two of 2 centimeters in length (less than an inch), one for the camera and the second for retraction, and a third incision of 5 centimeters in

length for removal of the lobe and lymph node dissection. Advantages for the patient are considerable, including less postoperative pain by avoiding the spreading of the ribs required for open thoracotomy; decreased length of hospital stay; faster overall recovery and return to work; and fewer complications, including the need for blood transfusions.

“A percentage of people, about 3 to 5 percent, develop chronic post-thoracotomy pain that persists along the scar line for more than two months following surgery, a condition that is difficult to manage,” Dr. Rascoe says. “In addition to allowing patients to avoid the acute pain associated with open thoracotomy, VATS allows them to avoid post-thoracotomy pain syndrome. We don’t see the same incidence of pain at six months to one year after VATS.”

Dr. Rascoe sees patients in clinic at Memorial Hermann-Texas Medical Center and Memorial Hermann Southeast Hospital. To refer a patient, call 713.486.1144. ♦

Nineteen Memorial Hermann Locations Offer Superior Breast Care Across the City

Memorial Hermann gives women the best breast-care experience available at 19 Houston-area locations, combining advanced technology with fellowship-trained radiologists and a comfortable, spa-like environment. Services include 2-D mammography, 3-D digital breast tomosynthesis, diagnostic mammography, digital mammography, breast ultrasound and breast MRI, as well as bone density scans and ultrasound, stereotactic and MRI breast and lymph node biopsies.

Fifteen locations offer MD Anderson

Breast Care with Memorial Hermann, and 15 sites offer 3-D breast tomosynthesis, an FDA-approved digital technology that helps physicians detect smaller tumors at the earliest stages of breast cancer. Tomosynthesis takes 15 successive images at slightly different angles across the breast, resulting in improved accuracy in screening results and better pinpointing of lesion location. Clinical trials using the Dimensions 3-D system showed measurable improvement in clinical performance over conventional mammography. The

trials also showed significant gains in specificity, giving radiologists the confidence to rule out cancer and reduce callbacks. Other benefits include improved lesion and margin visibility and the ability to accurately localize structures in the breast.

Tomosynthesis is available at Memorial Hermann Breast Care Centers at Memorial Hermann Memorial City Medical Center, Memorial Hermann Katy Hospital, Memorial Hermann Southeast Hospital, Memorial Hermann Greater Heights

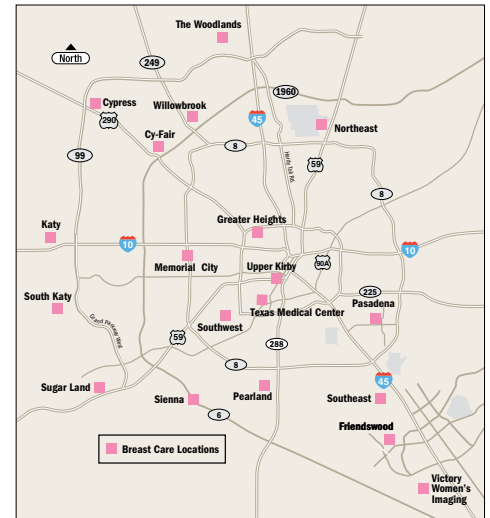
Hospital, Memorial Hermann Sugar Land Hospital, Memorial Hermann Southwest Hospital, Memorial Hermann The Woodlands Hospital, Memorial Hermann Northeast Hospital, Sienna Convenient Care Center, Cypress Breast Care Center, CyFair Imaging Center, South Katy Imaging Center, Pearland Imaging Center, Victory Women's Imaging Center and Upper Kirby Breast Center.

The Bobetta Lindig Breast Care Center at Memorial City recently added the Hologic Affirm™ Prone Biopsy System with both 2-D and 3-D imaging, enabling radiologists to accurately biopsy lesions seen only on 3-D breast tomosynthesis with patients in a more relaxed prone position. A breast cancer support group meets monthly at that location.

Breast Care Centers at six hospitals – Memorial Hermann Memorial City

Medical Center, Memorial Hermann-Texas Medical Center, Memorial Hermann Southwest Hospital, Memorial Hermann Southeast Hospital, Memorial Hermann Greater Heights Hospital, Memorial Hermann The Woodlands Hospital, Memorial Hermann Katy Hospital and Memorial Hermann Sugar Land Hospital – bring together a multidisciplinary tumor board comprised of affiliated medical oncologists, radiation oncologists and surgeons who discuss care options for the best possible patient outcomes. There are seven Nurse Navigators across the Memorial Hermann System who provide additional resources to patients diagnosed with cancer.

To refer a patient or schedule an appointment, visit memorialhermann.org/imaging-and-diagnostics/breast-care-centers or call 877.704.8700. ♦



BRCA1/2 and Other Genes Associated with Breast and Ovarian Cancer: The Importance of Genetic Testing

Most cancers are not inherited. Only about 5 percent to 10 percent of breast cancers and 10 percent to 20 percent of ovarian cancers are hereditary, due to at least one genetic change that significantly contributes to the risk of developing cancer. Among the mutations – and linked to both types of malignancies – are BRCA1 and BRCA2, genes that produce tumor-suppressor proteins, which help repair damaged DNA and play a role in ensuring the stability of a cell's genetic material. When either of these genes is altered or fails to function correctly so that its protein is not made, damage to DNA can't be repaired properly. As a result, cells are more likely to develop additional genetic alterations that can lead to cancer.

“BRCA1 and BRCA2 were first sequenced in 1995 and 1996 and are key factors in predicting breast and ovarian

cancer risk, but it's also important for healthcare providers to know that there are at least 17 other genes that can increase the risk of both cancers,” says Kathryn Mraz, MS, CGC, certified genetic counselor with the Cancer Risk Genetics Program at the Memorial Hermann Cancer Center-Texas Medical Center and McGovern Medical School at UTHealth. “Because we haven't tested many of these genes for as long a period of time as we've tested BRCA1/2, we haven't quantified the associated risk for many of them. Basically, predicting the risk of developing breast or ovarian cancer is no longer as simple as having a mutation in either BRCA gene.”

BRCA genetic testing has improved over the years. “In the early years we just did sequencing, which is like a spell check for genes that picks up 85 percent of the mutations,” Mraz says. “Since 2008



KATHRYN MRAZ, MS, CGC
Certified Genetic Counselor
Memorial Hermann Cancer Center-
Texas Medical Center and
McGovern Medical School at UTHealth

we've had the capability to check for large genetic deletions and duplications, which gives us a big-picture view. Compared to spell check, this is more like proofreading for sense to make sure that things are not out of order, and it picks up 10 to 15 percent for BRCA1/2 carriers. Around 2012, it became a combined test. So patients who had negative results on a test for a BRCA1/2 mutation in 2007 haven't really been comprehensively tested.”

Specialists at the Cancer Risk Genetics Program see between 25 and 40 patients each month, including new *Genetic Testing* continues on page 8

Genetic Testing *continued from page 7*

patients and those who return in follow-up. They meet with Mraz and a medical oncologist to discuss cancer risk assessment; if their personal or family history is suggestive of a hereditary cancer syndrome, they are offered genetic testing, if available.

They also discuss ways to help lower cancer risk or take preventive measures on a personal level. A team of experts develops a personalized cancer surveillance plan for each patient's needs and

helps them navigate their care. They also address the cancer risk of family members and make recommendations for evaluation and testing.

"Genetics is a rapidly advancing field, and we have to keep up with the literature," Mraz says. "If we find either BRCA1 or BRCA2 or a lower-risk gene to be mutated or not working, we follow National Comprehensive Cancer Network (NCCN) recommendations for BRCA-related cancer risk in addition to considering updated literature. We also follow

each of these patients in our clinic. Maybe a woman just had breast surgery and hasn't yet made plans for ovarian cancer risk management, is a candidate for high-risk pancreatic surveillance or has family members who would benefit from testing and she wants to learn more about their options. It's a lot to deal with, and I help them navigate the process by providing information. We make recommendations about how to proceed so that they can make informed choices." ♦

**Genetic Counseling Testing:
When Is It Recommended?**

Genetic counseling can be appropriate for individuals and family members who want to make informed decisions to assess their risk and plan for the future.

Counseling is recommended for anyone with a diagnosis of cancer at age 50 or younger; anyone who has been diagnosed with two or more primary cancers; anyone with a diagnosis of one or multiple rare cancers or discovery of a rare tumor; anyone with more than one close

family member diagnosed with either the same type of cancer or related cancers – for example, breast, ovarian and/or pancreatic cancer or colon and endometrial cancer; anyone with multiple family members with cancer; anyone with more than 10 colon polyps over their lifetime; anyone of Ashkenazi Jewish ancestry with a personal or family history of breast, ovarian, prostate or pancreatic cancer; anyone who has previously undergone genetic testing through a physician and wants to learn more about the results; anyone considering genetic

testing or inquiring about information for a family member; anyone at high risk, with or without a known cancer susceptibility syndrome, who has questions about cancer prevention, screening options or treatment; and anyone who is concerned about their personal or family's cancer risk, regardless of high-risk status.

Physicians need to provide a referral to the Cancer Risk Genetics Program at Memorial Hermann-Texas Medical Center. Patients may also contact Kathryn (Kate) Mraz directly at 832.325.7206 to learn more about the process.

Early Detection of Gastrointestinal Cancers With Advanced Endoscopic Techniques and Teamwork

At the Ertan Digestive Disease Center, affiliated gastroenterologists use state-of-the-art endoscopic technology for the detection and treatment of gastrointestinal (GI) cancers. If cancer is diagnosed, close collaboration across disciplines ensures that a medical oncologist sees the patient the same day.



NIRAV THOSANI, M.D., M.H.A.
Director of Advanced Endoscopy
Ertan Digestive Disease Center
Memorial Hermann-Texas Medical Center

"We get our patients into the system very quickly," says Nirav Thosani, M.D., M.H.A., who holds the Atilla Ertan Chair in Gastroenterology, Hepatology and Nutrition at McGovern Medical School

at UTHealth and is director of advanced endoscopy at the Ertan Digestive Disease Center at Memorial Hermann-Texas Medical Center. "We start the process by performing all diagnostic procedures within the same week of referral. Our patients have access to a comprehensive range of technology under one roof – an advantage available only at select endoscopic centers in the United States."

Advanced endoscopic technology at the Ertan Center includes volumetric laser endomicroscopy (VLE) for early detection of esophageal cancer within Barrett's esophagus, endoscopic ultrasound (EUS) with elastography for detection and staging of various GI cancers, cholangioscopy and pancreatoscopy for detection of pancreaticobiliary

cancers, double-balloon endoscopy for diagnosis of small bowel tumors, and chromoendoscopy for the diagnosis of early colon cancers.

Gastroenterologists work in close collaboration with their medical oncology, pathology and surgical oncology colleagues to provide quality care in a timely fashion. "A cytopathologist is available during each EUS-guided biopsy to review the sample and provide an immediate diagnosis, a patient benefit available only at specialized centers," Dr. Thosani says. "This practice prevents unnecessary repeat procedures due to inadequate sampling of the tumor, and it also ensures that patients receive timely care."

Affiliated medical oncologist Julie

Rowe, M.D., and her partner Putao Cen, M.D., see patients soon after a biopsy at the Memorial Hermann Cancer Center-Texas Medical Center, where radiology scans and treatments are scheduled to assure a plan of care is quickly identified. Nutritionists and social workers are also available to provide assistance.



JULIE ROWE, M.D.
Affiliated Medical Oncologist
Memorial Hermann Cancer Center-
Texas Medical Center

“The service we provide patients is unique in that they have access to every provider they’ll need once they’re in our system,” Dr. Rowe says. “The fact that we’re all located on the same floor in the Memorial Hermann Medical Plaza makes

it very convenient. We educate patients on what to expect of their treatment, and have a dedicated GI team that includes physicians, nurses and medical assistants as well as a genetic counselor and oncology-certified pharmacists. Each case is reviewed by a multidisciplinary gastrointestinal tumor board.”

Affiliated gastroenterologists at the Ertan Center perform minimally invasive endoscopic procedures such as radiofrequency ablation of Barrett’s esophagus as well as pancreaticobiliary tumors, endoscopic mucosal resection and endoscopic submucosal dissection for treatment of early GI cancers. “These diagnostic and therapeutic procedures are performed by less than 2 percent of gastroenterologists in the Houston area,” Dr. Thosani says. “If patients

Join gastroenterology specialists from McGovern Medical School at UTHealth affiliated with Memorial Hermann-Texas Medical Center on Feb. 11 for the 2017 Gastroenterology and Hepatology Symposium, Frontiers in Gastrointestinal and Liver Disease. The symposium will take an in-depth look at the latest advancements in technology, controversial topics, and treatments of GI and liver disease. For more information and to register, visit www.memorialhermann.org/gi-symposium.

require additional care, they have the full support of a top-ranked hospital in the Texas Medical Center. Our goal is to provide excellence in clinical care with compassion, grounded in cutting-edge research in gastroenterology and hepatology.” ♦

PERSPECTIVES ON RESEARCH

An Adjuvant Therapy, Plerixafor, Shows Promise in the Treatment of Glioblastoma Multiforme

In late summer of 2013, a 66-year-old man living in Panama developed vision difficulties, a persistent right-sided headache and memory loss for recent events. When a CT of the brain performed in Panama City revealed a large right temporal occipital tumor, the patient sought care in Houston, where he was diagnosed with glioblastoma multiforme (GBM), a tumor notorious for its poor prognosis and short clinical history. The average length of survival following diagnosis is 12 to 15 months.

“It’s almost a given that patients who receive the standard-of-care treatment for GBM – maximal resection of the tumor, intensive radiation therapy and chemotherapy with temozolomide – will suffer a relapse,” says Adan Rios, M.D., an associate professor in the division of Oncology at McGovern Medical School at UTHealth and a member of the medical staff at Memorial Hermann-Texas Medical Center. “As a result, there is a generalized very fatalistic attitude toward GBM, much

the same as we once had about other diseases that are now curable. The propensity of the tumor to recur and cause death has long been a difficult oncological problem, especially when viewed in light of the intensity of the treatment. As researchers, we continue to seek treatments that will produce good responses, with an eye toward developing a cure.”



ADAN RIOS, M.D.
Associate Professor, Division of Oncology,
McGovern Medical School at UTHealth
Medical Oncologist, Memorial Hermann-
Texas Medical Center

In a case report published in May 2016 in *Oncoscience*,¹ Dr. Rios and other authors at McGovern Medical School reported the results of adding plerixafor to the standard-of-care regimen as an adjuvant therapy. “Preclinical studies in a human xenograft animal model² have shown us that the standard-of-care treatment kills the tumor cells and the blood

vessels that supply the tumor. However, after treatment, there’s an increase in the tumor cavity of a factor known as stromal derived factor 1 (SDF-1), the cognate ligand of the CXCR4 receptor,” he says. “This increase produces mobilization of CXCR4 + myeloid cells from the bone marrow and the circulatory system. Once these cells attracted by the SDF-1 recolonize the tumor cavity, they produce secondary blood vessels (vasculogenesis) that renourish the dying tumor. We hypothesized that, if we treated our patients in a similar manner as was done in the animal model and could block these cells to keep them from rescuing the tumor, either the cancer would be cured or the period of response to the therapy would be increased significantly. Rather than seeking a new treatment that might do a better job of destroying the tumor itself, patients with GBM may benefit more from a therapy that allows the standard treatment to continue its

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Plerixafor continued from page 9

course and destroy the tumor without being subverted by the vessel-saving cells.”

That therapy may be plerixafor, an immunostimulant used to mobilize hematopoietic stem cells into the bloodstream in cancer patients. When the patient from Panama had completed his first 12 months of adjuvant treatment with plerixafor, his adjuvant regimen of temozolomide and lapatinib were discontinued. At the time of this publication, he was 36 months out from diagnosis – more than double the average life expectancy. His plerixafor regimen has been changed from weekly to once a month, and he continues on metformin and niacinamide, without clinical or radiological evidence of relapse.

“We recognize the limitations

inherent in reporting only one case, but given the natural history of GBM, the duration of the patient’s response deserves attention,” Dr. Rios says. “To our knowledge, he is the first patient treated with an adjuvant regimen involving a combination of chemotherapy plus inhibitors of metabolic pathways – and more significantly, plerixafor, an agent that specifically inhibits vasculogenesis. Clinical observations of a disease with a very poor prognosis don’t require a large number of cases to demonstrate the effectiveness of a particular approach. The fact that our patient had a positive response – plus the positive results of studies in an animal model – makes adjuvant treatment with plerixafor of great interest to us.”

“It’s really exciting to think that the

standard-of-care treatment for glioblastoma may just need a tweak,” he adds. “In a disease notorious for fatal outcomes, any intervention that gives a patient longer life is worthy of further clinical exploration.” ♦

¹ Rios A, Hsu SH, Blanco A, Buryanek J, Day AL, McGuire MF, Brown RE. Durable response of glioblastoma to adjuvant therapy consisting of temozolomide and a weekly dose of AMD3100 (plerixafor), a CXCR4 inhibitor, together with lapatinib, metformin and niacinamide. *Oncoscience*. 2016 May; (3)5-6:156-63.

² Kioi M., Vogel H, Schultz G, Hoffman RM, Harsh GR, Brown JM. Inhibition of vasculogenesis, but not angiogenesis, prevents the recurrence of glioblastoma after irradiation in mice. *J. Clin. Invest.* 2010;120(3):694-705.

A Patient Benefits From Participation in a Clinical Trial of a New Treatment for Relapsed Ovarian Cancer

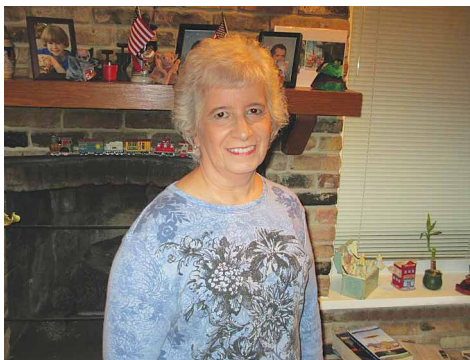
Not long ago, Donna and her boyfriend made a 3,000-mile road trip across the country to sightsee and visit family members. Thanks to her participation in a clinical trial under way at Memorial Hermann-Texas Medical Center, she was able to travel while continuing chemotherapy with a new drug for women who have relapsed ovarian cancer. To be eligible for the trial, patients must have responded to previous platinum-based chemotherapy and have a harmful muta-

tion in either the BRCA1 or BRCA2 gene.

The drug is olaparib, which stops an enzyme called PARP (poly [adenosine diphosphate-ribose] polymerase) from working. “In normal cells when a strand of DNA is damaged, PARP helps to repair it,” says Joseph Lucci III, M.D., site principal investigator for the trial and a professor in the department of Obstetrics, Gynecology and Reproductive Sciences at McGovern Medical School at UTHealth. “The BRCA1 and BRCA2 genes produce tumor-suppressing proteins, providing another way to repair damaged DNA; cancer cells that do not have these proteins due to mutation in the genes are unable to repair themselves. When both ways of repairing damaged DNA are not working, cancer cells die, which makes olaparib of clinical interest for the treatment of women with advanced BRCA-mutated ovarian cancer.”

Donna is among the women to benefit from the tumor-blocking effects of olaparib, which is marketed under the name Lynparza™. Diagnosed with breast

cancer in 1979 during her third pregnancy, she underwent a mastectomy at the age of 33, a week after the birth of her daughter. Both her mother and her mother’s sister were treated for breast cancer; because of her family history she decided to undergo a second mastectomy a year later. She remained cancer free until 2011, when she was diagnosed with primary peritoneal cancer, a relatively rare malignancy that develops most commonly in women and is a close relative of epithelial ovarian cancer.



“(Donna is) a delightful person who’s very active and continues to live her life.” - Joseph A. Lucci III, M.D.



JOSEPH A. LUCCI III, M.D.
Director, Division of Gynecologic Oncology
McGovern Medical School at UTHealth

Donna started chemotherapy in 2011, finishing three rounds followed by a hysterectomy. After the surgery, she underwent another five rounds that reduced her score on the Cancer Antigen 125 test (CA 125) – used to look for early

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Ongoing Clinical Trials

TRIAL NAME	DESCRIPTION
<p>Prospective international observational cohort non-comparative study describing the safety and effectiveness of ZALTRAP® administered in combination with FOLFIRI for the treatment of patients with metastatic colorectal cancer in current clinical practice: A Post-Authorisation Safety Study (PASS)</p>	<p>This multicenter observational study is investigating the long-term safety and clinical outcomes of ZALTRAP in combination with FOLFIRI as a standard-of-care treatment. Approximately 1,000 adults with metastatic colorectal cancer who have failed treatment with an oxaliplatin-based regimen will be enrolled at sites across the country, with 24 to be enrolled at the Houston site.</p> <p>Lead Physician: Julie Rowe, M.D. Contact: Christine Marie Kent, 832.325.6515, Christine.M.Kent@uth.tmc.edu</p>
<p>A Phase III, Randomized, Open-Label, Multi-Center, Safety and Efficacy Study to Evaluate nab-Paclitaxel (Abraxane) as Maintenance Treatment After Induction With Nab-Paclitaxel Plus Carboplatin in Subjects With Squamous Cell Non-Small Cell Lung Cancer (NSCLC)</p>	<p>Researchers are evaluating the use of Abraxane® (nab-paclitaxel) as a maintenance treatment in non-small cell lung cancer (NSCLC) patients, after response or stable disease with nab-paclitaxel plus carboplatin, in the areas of safety, efficacy and progression-free survival. The study will enroll about 540 male and female adults with stage IIIB or IV squamous cell NSCLC, with 6 to be enrolled at the Houston study site.</p> <p>Lead Physician: Syed Jafri, M.D. Contact: Christine Marie Kent, 832.325.6515, Christine.M.Kent@uth.tmc.edu</p>
<p>A Randomized, Placebo Controlled Phase 2b/3 Study of ABT-414 With Concurrent Chemoradiation and Adjuvant Temozolomide in Subjects With Newly Diagnosed Glioblastoma (GBM) With Epidermal Growth Factor Receptor (EGFR) Amplification</p>	<p>This Phase 2B/3 trial will determine whether the addition of ABT-414 to concomitant radiotherapy and temozolomide plus adjuvant temozolomide prolongs progression-free survival (PFS) and overall survival time (OS) among subjects with newly diagnosed glioblastoma multiforme (GBM) harboring EGFR amplification.</p> <p>Lead Physician: Sigmund Hsu, M.D. Contact: Guangrong Lu (Greg), 713.704.7100, Guangrong.Lu@uth.tmc.edu</p>
<p>A Phase III, Open Label, Randomised, Controlled, Multi-Centre Study to Assess the Efficacy and Safety of Olaparib Monotherapy versus Physician's Choice Single Agent Chemotherapy in the Treatment of Platinum Sensitive Relapsed Ovarian Cancer in Patients Carrying Germline BRCA1/2 Mutations</p>	<p>In this multicenter trial, investigators are determining the efficacy of olaparib versus physician's choice single-agent chemotherapy (weekly paclitaxel, topotecan, pegylated liposomal doxorubicin, or gemcitabine) in subjects with relapsed ovarian cancer. Efficacy is measured by assessment of progression-free survival (PFS) using blinded independent central review (BICR). Adult females with relapsed ovarian cancer possessing the BRCA1 or BRCA2 mutation and have received at least 2 prior platinum-based chemo regimens are eligible to take part. Overall, 411 subjects from 100 sites in 15 countries will be enrolled.</p> <p>Lead Physician: Joseph A. Lucci III, M.D. Contact: Dr. Sonia Robazetti, 713.500.6382, Sonia.C.Robazetti@uth.tmc.edu</p>
<p>A Randomized Phase II Study Comparing Bipolar Androgen Therapy vs. Enzalutamide in Asymptomatic Men With Castration Resistant Metastatic Prostate Cancer: The TRANSFORMER Trial (Testosterone Revival Abolishes Negative Symptoms, Fosters Objective Response and Modulates Enzalutamide Resistance)</p>	<p>Investigators are determining whether treatment with higher doses of testosterone will improve radiographic progression-free survival compared to enzalutamide in men with metastatic castrate-resistant prostate cancer (CRPC) post-treatment with abiraterone. This site will enroll 10 asymptomatic men with metastatic CRPC with no disease-related symptoms who have been treated with continuous ADT and have progressed after treatment with abiraterone. All subjects will be screened for insurance that covers enzalutamide in case they are randomized to that treatment arm.</p> <p>Lead Physician: Robert J. Amato, M.D. Contact: Christine Marie Kent, 832.325.6515, Christine.M.Kent@uth.tmc.edu</p>
<p>A Phase 3 Placebo-Controlled Study of Carboplatin/Paclitaxel With or Without Concurrent and Continuation Maintenance Veliparib (PARP inhibitor) in Subjects With Previously Untreated Stages III or IV High-Grade Serous Epithelial Ovarian, Fallopian Tube, or Primary Peritoneal Cancer</p>	<p>In this Phase 3 placebo-controlled, randomized study, researchers are determining the efficacy and tolerability of veliparib in combination with carboplatin and paclitaxel as continuation maintenance therapy in subjects with untreated Stage III or IV high-grade serous epithelial ovarian, fallopian tube or primary peritoneal cancer. This site will enroll 20 women (ages 18 and older) who have had no prior systemic therapy.</p> <p>Lead Physician: Elizabeth Nugent, M.D. Contact: Dr. Sonia Robazetti, 713.500.6382, Sonia.C.Robazetti@uth.tmc.edu</p>
<p>Evaluation of Safety and Efficacy of Electrochemotherapy in the Treatment of Pancreatic Adenocarcinoma</p>	<p>Investigators are assessing the safety and maximally tolerated electroporation field strengths in combination with chemotherapy (gemcitabine and nab-paclitaxel) treatments for patients with locally advanced unresectable pancreatic adenocarcinoma, and to examine and describe treatment changes of the tumor and surrounding stroma. Twenty-four male and female adults (ages 18 years and older) with Stage II or III pancreatic adenocarcinoma that is locally advanced or borderline resectable will be enrolled at this site.</p> <p>Lead Physician: Derek West, M.D. Contact: Karen Parker Swaby, 713.704.2842, Karen.PSwaby@uth.tmc.edu</p>

New Treatment continued from page 10

signs of ovarian cancer in women at very high risk – to the normal range. She completed chemotherapy in April 2012. A year later the cancer recurred, and she underwent another six rounds of chemotherapy under the care of Dr. Lucci.

In 2015, when her cancer recurred, he offered her the opportunity to enroll in the clinical trial of olaparib. Approved in capsule form by the FDA for the treatment of women with advanced BRCA-mutated ovarian cancer, the current study is evaluating an experimental tablet form of the drug administered at a different dose. Approximately 411 patients will take part in the study in 15 countries worldwide. Donna, who is 70, was enrolled in September 2015.

“Olaparib is commercially available

with limited access to women with BRCA mutations who have failed other forms of chemotherapy,” says Dr. Lucci, who is director of the division of Gynecologic Oncology at McGovern Medical School. “Through the trial, they don’t have to fail as many drugs before being able to access olaparib in tablet form. Participants come in to the office once a month, which allows us to assess their response and monitor any side effects. It’s a good choice for patients who want to maintain their lifestyles and activities.”

Participants remain in the trial as long as they continue to have a positive response – until progression or toxicity. “Donna responded quickly to the medication – her CA 125 was normal by January – and she has maintained that response,” Dr. Lucci says. “She developed a low red

blood cell count, which can happen with olaparib, and had a transfusion, but in general she has tolerated the drug well with minimal side effects and much less toxicity than any of the other chemotherapy drugs she’s taken in the past. She’s a delightful person who’s very active and continues to live her life.”

Dr. Lucci points out that limited therapies are available for patients with BRCA-mutated ovarian cancer. “Olaparib is the only commercially available PARP inhibitor, but others are coming on the market,” he says. “Currently the drug is restricted to patients with germline mutations – any detectable and heritable variation in the lineage of germ cells. In the future, we expect it to become more available and in broader use, which is good news for these patients.” ♦

VOLUNTEER SPOTLIGHT

Clara Cook Lambert: From Cancer Patient to Energetic Volunteer

For the past three and a half years, Clara Cook Lambert has spent every Thursday morning volunteering at the Memorial Hermann Cancer Center-Greater Heights. A few years before that, she was a cancer patient herself, coping with the same physical and emotional challenges facing the people she now supports.

“When you say, ‘Hi, my name is Clara, I’m a lung cancer survivor and I’ve been out seven years,’ patients are very happy to see you,” says Lambert, who radiates high spirits and positive energy when she introduces herself to patients in her *Survivor* T-shirt. “These people are scared, just like I was, and they need someone who’s been through it to talk to and cheer them on.”

Like many malignancies, Lambert’s cancer was an incidental finding. “I have allergies that caused a variety of temporary illnesses and saw my ENT about every six months,” she says. “As long as I took



my antibiotics and steroids, I was as good as gold. When my ENT retired, I started going to a different doctor who didn’t believe in steroids. When I still had a problem after my second round of antibiotics, he told me he thought there was something else going on and ordered a chest X-ray.”

The X-ray revealed a mass in her right lung, and the ENT referred her to Michael P. Macris, M.D., a thoracic and vascular

surgeon affiliated with Memorial Hermann Greater Heights Hospital. At the time Lambert was still smoking.

“Dr. Macris told me he wouldn’t take me into surgery until I’d stopped smoking for two weeks,” Lambert says. “I said to myself, he wants two weeks so I’m giving him three. Three weeks from the day I quit we went into surgery. When I woke up, they told me I had cancer.”

Over the course of 35 radiation

sessions and six chemotherapy sessions, the staff at the Cancer Center got to know Lambert. Impressed by her positive energy and attitude, they asked her to come back as a volunteer.

“I did, but it took me a couple of years,” she says. “For me it was hard to come back right away because of the emotional side of the experience. When I was done, I just wanted to be far away from there.”

Today, as a member of the Memorial Hermann Cancer Center team, Lambert has nothing but good things to say about her experience. “Every one of our patients is important to us,” she says. “There’s an intensity of purpose and a feeling that we can do what we do better than anyone else. We want to go above and beyond the normal protocol with the sole purpose of being the very best. As a patient I felt like I was getting the best care I could have gotten anywhere in the world. When I tell patients that, it’s the absolute truth. I’ve lived it.”

When she’s not volunteering, Lambert, who is 70, stays busy as a real estate agent and helps people organize their lives through her image consulting company, Clarafications. Indefatigable, she recently married John W. Perkins, whom she met through an online dating service.

“At the Cancer Center, everybody brings skills to the table and mine happen to be as a former patient,” she says. “When you’re healing, you need positive energy and I like to provide that. It’s a ride, but when you get to the end and your patients walk away, you hug them and then you miss them terribly.” ♦

PROFILE IN CARING

William Velasquez, M.D.: On the Front Line of Cancer Care

As a young man, William Velasquez was attracted to medicine for the opportunity it gave him to use deductive reasoning to find solutions to problems – and the excitement that accompanies the discovery and sharing of new knowledge in ways that help others. Today, you’ll find

him helping patients overcome cancer at Oncology Consultants of Houston, in the group’s practice located on the campus of Memorial Hermann Southwest Hospital.

A native of Lima, Peru, Dr. Velasquez received his medical degree at San Marcos University in his hometown, and then chose to come to the United States for training. “The training in this country is unsurpassed,” he says.



WILLIAM VELASQUEZ, M.D.
Affiliated Medical Oncologist
Memorial Hermann Southwest Hospital

He completed his residency in internal medicine at Memorial Hospital in Worcester, Massachusetts, in 1973, and went on to complete a hematology fellowship at the University of Cincinnati in 1975. When he had the opportunity to begin a fellowship in medical oncology at The University of Texas MD Anderson Cancer Center, he relocated to Houston. Following completion of the fellowship, he was offered a position as staff physician at the cancer hospital, where he advanced to associate professor of medicine and remained until 1992. He was recruited to the University of St. Louis as a professor of medicine and served as deputy chief of the hematology/oncology unit at St. Louis University Hospital until 1997.

An offer from The University of Texas Medical Branch at Galveston brought him back to Texas, where he served as chair of the department of Hematology/Oncology until 2001. Following private practice for three years at Texas Oncology, he joined Oncology Consultants, P.A., in 2005.

Within the discipline of medical oncology, Dr. Velasquez has a special interest in leukemia, lymphoma and myeloma. An active researcher, he has published nearly 200 articles and abstracts in peer-reviewed journals. He is a member of the Institutional Review Board at The University of Texas Health Science Center (UTHealth) at Houston and the Memorial Hermann Health System.

In his spare time, Dr. Velasquez plays tennis and soccer. He is also devoted to his family, which includes two grown

children and five grandchildren.

Dr. Velasquez approaches his profession with care, concern and empathy. “Many of our patients have very serious illnesses,” he says. “They are desperate when they come to us, or have serious concerns about their lives and the consequences of treatment. Our first step is to eliminate any physical or emotional suffering. Then we consider survival. In this setting, compassion is the operative word. As a practice, we play close attention to detail. We do good oncology quietly, without making a big noise about it.” ♦

EXCELLENCE IN CANCER CARE

Memorial Hermann Launches a South Region Lung Program Focused on Early Detection

Lung cancer, both small cell and non-small cell, is the second most common cancer in both men and women, after prostate cancer in men and breast cancer in women. Only skin cancer is more common, according to the American Cancer Society. For patients at high risk of developing lung cancer, Memorial Hermann now offers Low-Dose Computed Tomography (LDCT), an effective screening tool, at multiple locations throughout the Greater Houston area.

In conjunction with the screening program, Memorial Hermann recently launched a South Region Lung Program for cancer patients, with a multidisciplinary lung tumor board and a dedicated Oncology Nurse Navigator serving Memorial Hermann Southeast Hospital, Memorial Hermann Southwest Hospital, Memorial Hermann Sugar Land Hospital, Memorial Hermann Pearland Hospital and Memorial Hermann-Texas Medical Center. “From screening through diagnosis, treatment and survivorship, we work with patients individually to help them overcome barriers to healthcare access and ensure as positive an experience as

Excellence in Cancer Care continues on page 14

Excellence in Cancer Care continued from page 13 possible,” says Deidra Teoh, RN, OCN, who has been an Oncology Nurse Navigator since 2011 and rejoined Memorial Hermann in July 2016. “We’re pleased to offer patients an innovative way to get answers to their questions about their personal care based on opinions from a large multidisciplinary team of physicians representing three hospitals.”

Pulmonologists, thoracic surgeons, medical oncologists, radiation oncologists and pathologists who specialize in lung malignancies come together on the first and third Tuesdays of the month to review cases and recommend treatment plans. The meeting location for the tumor board rotates through the three hospitals on a quarterly basis, with Internet access for specialists whose clinic and surgery schedules prohibit travel to another hospital.

The South Region Lung Program is a pilot for future expansion of a solid lung tumor program at Memorial Hermann hospitals across the city. “The strength in this approach is the large number of physicians who bring their expertise to bear in discussions of pulmonary cancer cases,” says Melissa Mielcarek, director of business development at Memorial Hermann Southwest Hospital. “At baseline, we’ll have at least three physicians from each campus involved on a case, giving patients the benefits of great depth and expertise, as well as the opportunity to have their cases viewed from many different angles.”

The focus of the program is on early detection. In 2015, Memorial Hermann performed more than 250 low-dose computed tomography (LDCT) lung cancer screenings at Imaging Centers across the Memorial Hermann Health System. LDCT screenings are available at multiple locations throughout Greater Houston. Lung nurse navigators are available to assist patients with scheduling, physician referrals and follow-up for abnormal findings.

A physician order is required for an LDCT lung screening. “When a physician orders a lung screen, Deidra is notified to call the patient and track results,”

Mielcarek says. “If the screen is positive, she talks to the physician who ordered it and helps navigate the patient through the healthcare system.”

Patients who have a physician order for a screen may call the screening location nearest them to schedule the test, or schedule online at www.memorialhermann.org/lungcancer. ♦

Memorial Hermann Cancer Centers

All eight Memorial Hermann Cancer Centers are accredited by the American College of Surgeons Commission on Cancer (ACoS CoC). Only 25 percent of hospitals across the country have received this special recognition. This approval means our Centers meet national standards that have been established to ensure cancer patients receive the best care. Commission accreditation is given only after a thorough onsite evaluation process and performance review. To maintain approval, our Centers undergo an onsite review every three years.



Memorial Hermann Greater Heights Breast Care Center

The Breast Care Center at Memorial Hermann Greater Heights Hospital is accredited by the American College of Surgeons’ National Accreditation Program for Breast Centers (NAPBC). NAPBC accreditation is granted only to those centers that have voluntarily committed to provide the best in breast cancer diagnosis and treatment and are able to comply with established NAPBC standards. Each center must undergo a rigorous evaluation and review of its performance and compliance with the NAPBC standards.

To maintain accreditation, centers must undergo an onsite review every three years.



NATIONAL ACCREDITATION PROGRAM FOR BREAST CENTERS
ACCREDITED BREAST CENTER

COMMUNITY OUTREACH

Memorial Hermann Offers Free Cancer Screenings to Northeast Community

Throughout the year, Memorial Hermann Cancer Centers host free cancer screenings for the community. On Sept. 17, affiliated physicians at Memorial Hermann Cancer Center - Northeast conducted screenings for breast, prostate and lung cancer.

In total, 69 screenings were performed. Out of the nine patients pre-screened for their lung cancer risk, 3 qualified to receive a low-dose CT (LDCT) screening. One patient returned for screening and presented with Category 3 nodules. Thirty-six patients were screened for prostate cancer, of which 5 came back with abnormal results and were referred for follow-up. Twenty-four patients had a breast exam, 15 of which followed up with mammograms that all came back normal.

Memorial Hermann Cancer Centers throughout the Greater Houston area will host additional community cancer screenings in the spring, with more information to be announced in early 2017.

Bringing Cancer Awareness to the Workplace

In October, Memorial Hermann Cancer Centers rallied together to host a series of cancer awareness health fairs at various companies across Greater Houston. In partnership with Memorial Hermann Employer Solutions, employees at



The team from Memorial Hermann Cancer Center-Greater Heights at Comcast's employee cancer awareness fair.

Friedkin Group, Comcast, Humble Independent School District, Shell Deer Park, Schlumberger and the Houston Zoo were able to take advantage of Memorial Hermann's cancer expertise. In addition to presentations by affiliated physicians on cancer awareness, risks, and screenings, those in attendance were able to have questions answered by our Oncology Nurse Navigators, find out if they were due for a cancer screening, schedule mammograms, learn about an anti-cancer diet and lifestyle from our dietitian, and hear about the prevention, detection, treatment and survivorship programs that Memorial Hermann offers.

More than 700 people cumulatively attended these events, and are now one step closer to understanding their cancer risk and taking greater strides in prevention and early detection.

Community Partner Spotlight: Ovarcome

In 2009, Runsi Sen found herself having to make a tough decision: whether to continue her job in corporate America, or take a leap of faith and pursue something she never thought she would be passionate about - the fight against cancer.



RUNSI SEN
Founder and President/CEO
Ovarcome

Just 11 months earlier, Sen's mother had been diagnosed with ovarian cancer, a disease that often goes undetected until

it is late stage, making it much more difficult to treat.

"I didn't know anything about ovarian cancer," Sen recalls. "[My mother] had symptoms for years, but we weren't educated enough to know what it was."

After her mother passed away, Sen says it was as if a new path illuminated in front of her.

"I decided it was my life's calling to make other people aware of this disease, and to make sure no one else would have to be in my shoes."



Runsi Sen with Elizabeth Nugent, M.D., a gynecological oncologist affiliated with Memorial Hermann.

It was then that Sen established Ovarcome, a nonprofit organization that dedicates its time and resources to raise awareness for ovarian cancer. In addition to its awareness and outreach initiatives, Ovarcome raises funds for clinical research and provides financial assistance to underprivileged patients through its OvarCare program.

To date, the organization has given over \$30,000 in financial assistance to ovarian cancer patients in partnership with 17 hospitals in 6 states, and committed to over \$100,000 to ovarian cancer research.

One of Ovarcome's hospital partners is Memorial Hermann Health System, which Sen says has been a "big friend and champion" over the years. Sylvia Brown, M.S., RN, OCN, CNL, Oncology Nurse Navigator at Memorial Hermann Cancer Center-Texas Medical Center, sees firsthand the impact that Ovarcome's programs have on patients.

"There are times when patients have to choose between medications and food. Ovarcome makes that decision a little easier," Brown said. "I had a patient call me after receiving a care package, thrilled because she used the grocery gift card and only had to pay \$5 out-of-pocket for groceries that week. She commented that it assisted her greatly in being able to afford other necessities."



Memorial Hermann Oncology Nurse Navigators supporting Ovarcome's annual conference.

OvarCare packages include gift cards to cover gas and grocery expenses, a \$200 financial grant, \$50 towards a cancer wellness boutique and spa, and the option to take advantage of a health restoration consultation. In September, Ovarcome also began piloting a new program called OvarEmbrace, which provides care packages to patients who have just finished chemotherapy. Runsi says it's just another way of celebrating the end of a patient's treatment.

Sen credits the organization's success to hard work and support from the ovarian cancer community, saying "we are absolutely blessed with the encouragement, support, collaboration and faith we have received." Ovarcome's reach has expanded internationally in recent years, where their work is focused on general ovarian cancer awareness and sponsoring chemotherapy costs in India and Africa.

Patients eligible to receive an OvarCare package must have an ovarian cancer diagnosis, be in active treatment, meet financial eligibility guidelines, and provide income verification documentation. For more information on Ovarcome and to access the OvarCare application, please visit www.ovarcome.org/ovarcare.

Memorial Hermann Goes Pink for Breast Cancer Awareness Month

According to the American Cancer Society, 1 in 8 women will develop breast cancer in her lifetime. In order to spread the message about the importance of early detection and prevention, Memorial Hermann hospitals across the system hosted fundraisers, participated in community events, and painted the town pink as part of October's National Breast Cancer Awareness Month.

For more information on Memorial Hermann's Breast Cancer Awareness month activities, including links to news articles and blog posts, please visit memorialhermann.org/cancer/breast-cancer-awareness-month.



Memorial Hermann-Texas Medical Center



Memorial Hermann Southwest Hospital



Memorial Hermann-Texas Medical Center



Memorial Hermann Katy Hospital



Memorial Hermann The Woodlands Hospital



Memorial Hermann-Texas Medical Center



Memorial Hermann Memorial City Medical Center



Memorial Hermann Pearland Hospital



Memorial Hermann Southwest Hospital



Memorial Hermann Southwest Hospital



Memorial Hermann Southwest Hospital



The 2016 planning committee for Memorial Hermann The Woodlands Hospital's annual In The Pink of Health fundraiser



Memorial Hermann Greater Heights Hospital



Memorial Hermann Southwest Hospital



Memorial Hermann Northeast Hospital at its annual In The Pink of Health fundraiser



Memorial Hermann-Texas Medical Center



Memorial Hermann Sugar Land Hospital



Memorial Hermann-Texas Medical Center



Memorial Hermann The Woodlands Hospital



Memorial Hermann Greater Heights Hospital



Memorial Hermann Cypress

EXPERTS ON THE PODIUM

Shelita Anderson, M.B.A., B.S.N., RN, OCN, Memorial Hermann Greater Heights Hospital. *Antineoplastics for the Non-Oncology Nurse*. Presentation at Memorial Hermann Sugar Land Hospital, Sugar Land, Texas, July 2016.



SHELITA ANDERSON, M.B.A., B.S.N., RN, OCN
System Oncology Director of Nursing

Kate Mahan, M.S.S.W., LMSW, OSW-C, Memorial Hermann Northeast Hospital. *Coping with Work Stress*. Presentation at Canopy - A Cancer Survivorship Center at Memorial Hermann The Woodlands. July 2016.



DEIDRA TEOH, M.S.N., RN, OCN
Lung Oncology Nurse Navigator
South Region

Deidra Teoh, M.S.N., RN, OCN, Memorial Hermann Oncology Service Line. *Low-Dose CT Screening for Lung Cancer*. Mended Hearts Support Group at Memorial Hermann Southwest Hospital, Houston, Texas, September 2016.

Sylvia L. Brown, M.S., RN, OCN, CNL,

Memorial Hermann-Texas Medical Center. *Women's Health and Prevention*. Presentation at Schlumberger, Houston, Texas, October 2016.

Kelly S. Dempsey, M.D., Breast Center of Southwest Surgical. *Breast Exams, Risk Assessment, and Myths*. Presentation at Schlumberger, Sugar Land, Texas, October 2016.



SHARIQ KHWAJA, M.D., PH.D.
Affiliated Radiation Oncologist
Memorial Hermann-Texas Medical Center,
Memorial City and Katy

Shariq Khwaja, M.D., Ph.D., McGovern Medical School at UTHealth. *Cancer Screening and Early Detection*. Presentation at Friedkin Group, Houston, Texas, October 2016.

MEMORIAL HERMANN WELCOMES

Shariq Khwaja, M.D., Ph.D., has joined McGovern Medical School at UTHealth and is an affiliated radiation oncologist with Memorial Hermann Cancer Centers at the Texas Medical Center, Katy and Memorial City Medical Center. Dr. Khwaja practices radiation oncology with clinical interests in intensity-modulated radiation therapy, image-guided and adaptive radiation therapy, advanced

localization systems, partial breast irradiation, Gamma Knife® and LINAC-based radiosurgery, prostate low dose-rate brachytherapy and high dose-rate brachytherapy for prostate, gynecological and breast cancers, as well as pediatric malignancies.

Dr. Khwaja earned his M.D. and Ph.D. at the Mayo Clinic in Rochester, Minnesota, through the Mayo Clinic Medical Scientist Training Program. After his internship in internal medicine at Parkland Memorial Hospital/The University of Texas Southwestern Medical Center in Dallas, he went on to complete his radiation oncology residency at Barnes Jewish Hospital/Washington University School of Medicine in St. Louis, Missouri.

Dr. Khwaja is the co-author of articles published in the *International Journal of Radiation Oncology • Biology • Physics*; *Cancer Medicine*; *Otology & Neurology*; *Clinical Breast Cancer*; *American Journal of Clinical Oncology*; and *Journal of Clinical Investigation*, among other journals.

Arechia Gaines, B.S.N., RN, has joined Memorial Hermann as a Community Outreach Specialist at Memorial Hermann Memorial City Medical Center. Arechia oversees the Lindig Family Cancer Resource Center and all of its survivor-

BY THE NUMBERS

BREAST CANCER

2,374

Number of breast cancer patients seen in 2015

116,921

Number of screening mammograms performed

1,221

Patients diagnosed with breast cancer following an abnormal mammogram and/or ultrasound

813

Breast cancer surgeries performed

423

Inpatient stays for breast cancer

233

Patients received radiation therapy

103

Patients received chemotherapy

6

Clinical trials related to breast cancer

26

Patients enrolled in breast cancer clinical trials

LUNG CANCER

1,194

Number of lung cancer patients seen in 2015

301

Number of low-dose CT (LDCT) screenings for lung cancer performed

93

Lung cancer surgeries performed

609

Inpatient stays for lung cancer

121

Patients received radiation therapy

109

Patients received chemotherapy

6

Clinical trials related to lung cancer

119

Patients enrolled in lung cancer clinical trials



ARECHIA GAINES, B.S.N., RN
Community Outreach Specialist
Memorial Hermann - Memorial City Medical Center

ship and patient programs. She received her Bachelor of Science in Nursing from The University of Texas Medical Branch in Galveston, Texas, and her Bachelor of Science in Health Administration from Texas Southern University in Houston. Prior to joining Memorial Hermann, Arechia served as a staff nurse in hematology/oncology at Texas Children's Hospital. She is a certified pediatric chemotherapy and biotherapy provider.



CAROL KIRTON, B.S.N., RN, OCN
Oncology Nurse Navigator
Memorial Hermann Cancer Center - Northeast

Memorial Hermann welcomes **Carol Kirton, B.S.N., RN, OCN**, as the Oncology Nurse Navigator at Memorial Hermann Cancer Center - Northeast. Of British descent, Carol earned her Bachelor of Science in Nursing at the University of Dundee in Dundee, Scotland, and her Diploma in Adult Nursing at Robert Gordon University in Aberdeen, Scotland. Upon graduation, she worked as a staff

nurse at the Aberdeen Royal Infirmary. Although new to this role, Carol has been with the Memorial Hermann Health System since 2009, where she served as a supplemental staff nurse at Memorial Hermann Cancer Center - Texas Medical Center, as well as the supplemental oncology nurse at Memorial Hermann Cancer Center - Northeast.

Deidra Teoh, M.S.N., RN, OCN, is Memorial Hermann's new Lung Oncology Nurse Navigator - South Region. Deidra received her Master of Science in Nurse Education from the University of Houston - Victoria, and her Bachelor of Science in Nursing from Prairie View A&M University. As the Lung Oncology Nurse Navigator, Deidra is responsible for providing support and education to lung cancer patients, from screening through treatment and into survivorship. She coordinates care across five of Memorial Hermann's hospitals, as well as the first regional lung tumor board.

Please join us in congratulating **Shelita Anderson, M.B.A., B.S.N., RN, OCN**, and **Alla Vargo, AART(R), RDMS, M.B.A., M.H.A.**, on their recent promotions within Memorial Hermann's Oncology Service Line.

Shelita has been promoted to the System Oncology Director of Nursing. Before this transition, Shelita served at



ALLA VARGO, AART(R), RDMS, M.B.A., M.H.A.
Regional Director, Oncology Service Line
North Region

Memorial Hermann Greater Heights Hospital for over 20 years, most recently as the Patient Care Director for Special Projects. In her new role, Shelita will provide support for oncology nursing and the oncology service line through collaboration across the entire Memorial Hermann Health System.

Alla has been promoted to Regional Director, Oncology Service Line - North Region. Alla has been with the Memorial Hermann Health System for over 25 years, and transitions from her previous role as the Director of Business Development for Oncology Services and Administrative Director, Inpatient Imaging Services at Memorial Hermann - Memorial City Medical Center. In her new role, Alla is responsible for leading, directing, and supporting strategic and operational initiatives for the service line by working in collaboration with hospital leadership, regional administration, management teams and medical staff.

ABOUT MEMORIAL HERMANN'S CANCER CARE

Memorial Hermann offers the entire continuum of cancer care - prevention, education, screening, diagnosis, treatment, survivorship and rehabilitation. We do more than provide trusted medical care - we're helping patients navigate their entire cancer journey by caring for their physical, social emotional and spiritual needs. Patients can take advantage of cancer services in their own neighborhood through our convenient network, which includes eight Cancer Centers, 19 breast care locations, 10 acute care hospitals and dozens of other affiliated programs. Through partnerships with

Children's Memorial Hermann Hospital, Memorial Hermann Mischer Neuroscience Institute at the Texas Medical Center, TIRR Memorial Hermann and UTHealth, patients can be confident that oncology specialists are working together to ensure the best possible outcome for their cancer treatment.

At Memorial Hermann, we enable patients with the tools and resources needed to fight cancer close to home when home is where they want to be.

All Memorial Hermann Cancer Centers are accredited by the American College of Surgeons Commission on Cancer, and the Greater Heights Breast

Care Center has been granted full, three-year accreditation by the National Accreditation Program for Breast Centers.

To refer a patient or schedule an appointment, call the Memorial Hermann Cancer Center nearest you:

Memorial City 713.242.3500

Northeast 281.540.7905

Greater Heights 713.867.4668

Katy 281.644.7000

Southeast 281.929.4200

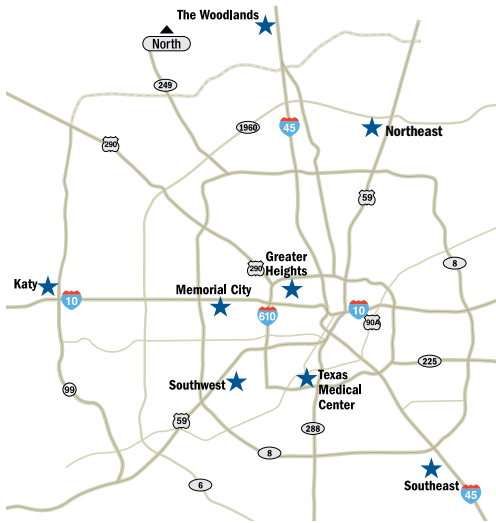
Southwest 713.456.4028

Texas Medical Center 713.704.3961

The Woodlands 713.897.5655

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MEMORIAL HERMANN CANCER CENTER LOCATIONS



★ Memorial Hermann Cancer Centers

Memorial City

925 Gessner Rd.
Houston, TX 77024
713.242.3500

Northeast

18960 Memorial North
Humble, TX 77338
281.540.7905

Greater Heights

1635 North Loop West
Houston, TX 77008
713.867.4668

Katy

23900 Katy Fwy.
Katy, TX 77494
281.644.7000

Southeast

11920 Astoria Blvd.
Suite 100
Houston, TX 77089
281.929.4200

Southwest

7600 Beechnut St.
Houston, TX 77074
713.456.4028

Texas Medical Center

6400 Fannin St.
Suite 2900
Houston, TX 77030
713.704.3961

The Woodlands

920 Medical Plaza Dr.
Suite 100
Shenandoah, TX 77380
713.897.5655

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To receive the Memorial Hermann Cancer Journal via email, please sign up online at memorialhermann.org/cancerjournal.

Sandra Miller, M.H.S.M., RN, NE-BC,
Senior Vice President, Oncology Service Line

Ron J. Karni, M.D., Chair, Physician Strategic Steering Committee, Oncology Service Line

Sunnye Owens-Garrett, Director of Marketing, Oncology

Melissa Gilbert, Editor and Contributing Writer

Karen Kephart, Writer

Steve Stanley, Designer

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