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SURVIVORSHIP

In the Battle Against Cancer, a Strong Team is Key

In late spring 2016, Virginia Cortinas felt uncomfortable, short of breath, bloated and tired. “I knew there was something wrong, but I ignored it. I was planning a trip to Florida for a vacation with my son and his family, and didn’t want to cancel it,” she says. “When I came back, I made an appointment to see my primary care doctor.”

Following an irregular pelvic exam, Cortinas’ internist, Olubunmi Ogundadegbe, MD, with Memorial Hermann Medical Group (MHMG), referred her to David Bonilla, MD, an Ob/Gyn affiliated with Memorial Hermann Northeast Hospital in Humble, not far from her home. Dr. Bonilla identified and biopsied a large mass involving the rectum and vagina, and referred her to medical oncologist Julie Rowe, MD, assistant professor in the division of Oncology at McGovern Medical School at UTHealth in Houston. It was during this visit that Dr. Rowe ordered a CT scan.

“The pathology report from an outside lab was inconclusive,” says Dr. Rowe, who first saw Cortinas in September 2016. “Although it seemed like it might be an endometrial cancer, the tumor didn’t have the right markers. The CT scan showed a 7-centimeter rectosigmoid mass that involved the entire circumference of the rectum and invaded the vaginal wall. We couldn’t see a clear separation of the rectum and vagina. There also appeared to be lymph node involvement. We needed to approach Mrs. Cortinas’ case in a multidisciplinary fashion.”

Dr. Rowe referred Cortinas to gynecologic oncologist Joseph Lucci, MD,

for evaluation under anesthesia. Dr. Lucci is affiliated with Memorial Hermann-Texas Medical Center (TMC), and is a professor in the department of Obstetrics, Gynecology and Reproductive Sciences at McGovern Medical School at UTHealth.



“I can’t give my team enough accolades, not just the doctors, but the nurses and especially the Oncology Nurse Navigator, Carol Kirton. She explained everything, and throughout it all I felt comfortable and personally cared for.”

- Virginia Cortinas, Colon Cancer Survivor

When pathologists at UTHealth examined the biopsy specimen taken by Dr. Lucci, they identified it as stage 3 rectal adenocarcinoma.

“This demonstrates the importance of further evaluation when pathology results done by an outside lab are inconclusive,” says Dr. Rowe, who is affiliated with Memorial Hermann-TMC, and spends one day a week seeing patients at the Memorial Hermann Cancer Center-Northeast. “Because of the extent of the mass, our multidisciplinary tumor board recommended chemoradiation (a combination of chemotherapy and radiotherapy) to shrink the tumor before surgery.”

When Cortinas met with Dr. Rowe, she also saw radiation oncologist Mi Kyung Ko, MD, at the Memorial Hermann Cancer Center-Northeast. “Concurrent radiation and chemotherapy is the preferred treatment for locally advanced rectal cancer,” Dr. Ko says. “As a radiosensitizer, chemotherapy makes radiation more effective. We hoped to shrink the tumor to avoid a permanent colostomy, and minimize the amount of vaginal loss. In most cases we have two options: Administer chemotherapy first, and then do the chemoradiation or vice versa. In Mrs. Cortinas’ case, doing the chemoradiation first helped to palliate her pain and bleeding.”

Cortinas finished chemoradiation
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in five and a half weeks. “She did well overall in terms of side effects,” Dr. Rowe says. “She knew her treatment would be a long, difficult process, and she continued working throughout her therapy. She remained positive and upbeat, and her husband and daughter were there to support her.”

Even before she finished chemoradiation, she no longer needed pain medication. “So we knew the treatment was working,” Dr. Ko says. “By the time she finished therapy we saw a dramatic reduction in the mass – from 7 to 2 centimeters – and what was initially a stage 3C cancer, was downstaged to stage 2.”

By January 2017, Cortinas was ready for surgery, which was performed by Dr. Lucci, and Curtis Wray, MD, a surgical oncologist affiliated with Memorial Hermann-TMC and an associate professor of surgery at McGovern Medical School. Working together in the OR, the doctors removed the tumor and a portion of the rectum, Dr. Lucci performed a posterior veginectomy and Dr. Wray performed a diverting loop ileostomy.

“Thanks to her good response to the preoperative chemoradiation, we were able to preserve the sphincter and vagina,” Dr. Wray says. “Sometimes with really large and low rectal cancers we need to do an abdominal perineal resection, which results in a permanent colostomy. With Mrs. Cortinas we were able to avoid this.”

The lymph nodes removed during the surgery tested negative. After allowing time to heal, Cortinas had additional rounds of chemotherapy – a combination of agents known to be effective against colon and rectal cancer.

“Physicians affiliated with Memorial Hermann do a great job of working together as a team,” Dr. Ko says. “It’s common for medical care to become fragmented when many doctors are involved in a case. We use a team-based approach in which the radiation oncologist, medical oncologist, surgical oncologist, gynecologic oncologist, pathologist, and oncology nurse navigator come together to formulate the best treatment option. You don’t find that in every hospital.”

Cortinas, who is 64, finished her chemotherapy in July 2017. Due to

unrelated medical issues, she and Dr. Wray waited until December 2018 to perform the ileostomy closure.

“I can’t give my team enough accolades, not just the doctors but the nurses and especially Oncology Nurse Navigator Carol Kirton. She explained everything, and throughout it all I felt comfortable and personally cared for. I liked that they met regularly to discuss my case, and that they work together as a team,” said Cortinas. “They had all the resources they needed at their fingertips. I thank God for them every day.”

“With rectal cancer, treatment is always a lengthy process,” Dr. Rowe says. “But the short story is that despite having a large tumor, Mrs. Cortinas responded well with no metastasis. “Today she is NED – no evidence of disease.”

Virginia Cortinas' multidisciplinary care team included these providers affiliated with Memorial Hermann (left to right):

Mi Kyung Ko, radiation oncology; Joseph A. Lucci III, gynecologic oncology; Carol Kirton, Memorial Hermann Oncology Nurse Navigator; Julie Rowe, medical oncology and Curtis Wray, surgical oncology.



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A new year often brings with it a sense of hope and new beginning. What in our lives will change, and how will we continue to develop and grow as the year

goes on? These are undoubtedly everyone's most prominent thoughts while toasting at the stroke of midnight on December 31.

For cancer patients, the New Year doesn't necessarily signal a new beginning. For many, it is the start of an-

other round of chemotherapy, another round of testing and another day waiting for an updated prognosis at the physician's office. At moments when even the next day is uncertain, it may seem impossible to see the potential and light of a New Year. This can be one of the most important moments in a patient's cancer journey - one we can impact.

At Memorial Hermann, we strive to ensure our patients feel supported physically, emotionally and spiritually throughout their entire cancer journey. In this edition of the Memorial Hermann Cancer Journal, Virginia Cortinas shares her courageous

story of battling colorectal cancer, and her fond memory of the team approach which made her feel comfortable, and well taken care of the entire time.

The tireless efforts of Memorial Hermann's affiliated oncology specialists and nurses bring a beacon of light to our patients, and I am truly grateful to witness such dedication, and to be able to work alongside them. We hope you feel the same. Be well.

Sandra Miller, MHSM, RN, NE-BC
Vice President
Memorial Hermann Oncology Service Line



Giving a cancer diagnosis is always a challenging and emotional experience. In that moment, you want to have confidence and trust in the physicians who will

oversee your patient's care. At Memorial Hermann, I feel privileged to work alongside some of the best surgical, medical and radiation oncologists in the Greater Houston area. By working together, our collective goal is to devise a comprehensive treatment and survivorship plan that will give our patients the best chance of beating this horrible disease. From

The Woodlands to the Bay Area, Memorial Hermann is here to serve Houston's cancer patients. Thank you for entrusting them to our care.

Ron J. Karni, MD
Chair, Oncology CPC Subcommittee
Memorial Hermann Physician Network

EXCELLENCE IN CANCER CARE

The Whipple Procedure Offers Hope for Pancreatic Cancer Patients Diagnosed Early

Pancreatic cancer now ranks as the fourth leading cause of cancer death in the United States, according to the National Cancer Institute (NCI). The NCI estimated 55,400 new cases of pancreatic cancer in the United States for 2018, with 44,330 deaths.

"When pancreatic cancer hasn't spread beyond the head of the pancreas, we can offer patients the Whipple procedure, also known as a pancreaticoduodenectomy," says Curtis Wray, MD, a surgical oncologist affiliated with Memorial Hermann-TMC and Memorial Hermann Southeast Hospital. "In specialized centers such as ours, outcomes for the procedure

are much improved over the last 20 years."

In a pancreaticoduodenectomy, the surgeon removes the head of the pancreas, the duodenum, the gallbladder and the bile duct, followed by a complex reconstruction. The procedure is also used to treat bile duct, duodenal and periampullary cancers, pancreatic cysts and pancreatitis.

"Surgery is the mainstay of curative treatment and provides a survival benefit in patients with small, localized pancreatic tumors," says Dr. Wray, an associate professor of surgery at McGovern Medical School. "Our goal is to remove the tumor to

prevent it from spreading and prolong survival."

"Our goal now is to develop a robust robotic pancreaticoduodenectomy program and an enhanced recovery protocol," Dr. Wray says. "Ten years ago, patients were in the hospital two to three weeks after the surgery. Today, most patients can be discharged to home within a week following the Whipple procedure."



CURTIS WRAY, MD
 Surgical Oncologist affiliated with
 Memorial Hermann

New ACS Colon Cancer Screening Guidelines Announced as Three Memorial Hermann Hospitals Seek National Accreditation as Rectal Cancer Centers of Excellence

The American Cancer Society (ACS) has announced an updated guideline for colorectal cancer screening after a major analysis by ACS researchers determined colorectal cancer cases are on the rise among younger adults.

“The new ACS guidelines advise that regular screening should begin at age 45 for people of average risk,” says fellowship-trained gastroenterologist Marc Catalano, MD, professor of medicine and director of the UT Community Advanced Gastroenterology Program at McGovern Medical School at UTHealth in Houston. “People in good health, who have a life expectancy of more than 10 years, should continue regular colorectal cancer screening through age 75.”

The guidelines also recommend that people ages 76 through 85 make a decision about screening with their healthcare provider based on their personal preferences, overall health, life expectancy and prior screening history. After the age of 85, screening for colorectal cancer is no longer recommended.

“The American College of Gastroenterology and American College of Surgeons have endorsed the guidelines based on the ACS’s prospective and retrospective analyses of colorectal cancer trends in the United States, and throughout the world,” says Dr. Catalano, who is affiliated with Memorial Hermann Southeast and Memorial Hermann Pearland Hospitals. “We don’t know why there’s been an increase in cases, but diet, including processed foods and the resulting obesity, and lifestyle – lack of exercise – are the prime suspects in the rising incidence in younger adults.”

Although colonoscopy is considered the gold standard, conventional wisdom holds that any screening is better



MARC CATALANO, MD
Gastroenterologist affiliated with Memorial Hermann Southeast and Pearland Hospitals

than no screening. Stool-based tests available include the fecal immunochemical test (FIT) every year, guaiac-based fecal occult blood test (gFOBT) every year and the multi-targeted stool DNA test (MT-sDNA) every three years. Recommended visual tests include colonoscopy every 10 years, virtual colonoscopy every five years or flexible sigmoidoscopy (FSIG) every five years.

“We emphasize screening quite a bit and find that less than 50 percent of people who are eligible actually are screened,” he says. “If you’re 45 and healthy, you probably don’t see your physician often. But preventive medicine is important, and primary care providers have to lead the way.”

As a gastroenterologist, Dr. Catalano performs colonoscopies and polypectomies; he also performs a more advanced procedure called endoscopic mucosal resection (EMR).

A Colectomy Protocol Shortens Patient Stays



ERIK ASKENASY, MD
Colon and Rectal Surgeon affiliated with Memorial Hermann Southeast and Pearland Hospitals

Erik Askenasy, MD, a fellowship-trained colon and rectal surgeon affiliated with Memorial Hermann Southeast and Memorial Hermann Pearland Hospitals, has initiated an enhanced recovery after surgery (ERAS) protocol as part of the hospitals’ growing colorectal service line.

“After elective colectomy for colon

cancer without free flap, we’re seeing lengths of stay of around 1.6 days, thanks to our new ERAS protocol,” says Dr. Askenasy, an assistant professor of surgery at McGovern Medical School who is leading Memorial Hermann Southeast’s process toward accreditation through the National Accreditation Program for Rectal Cancer. “After major colectomy, 63 percent of our patients stay one day, and 90 percent are home by day two. This kind of fast recovery is among the lowest reported.”

Dr. Askenasy and his partner, Marianne Cusick, MD, developed the protocol, which encompasses the entire perioperative period. “Our protocol addresses patient care starting well before the operation, and continues through the postoperative course, giving us a global view of the patient’s perioperative experience,” Dr. Askenasy says. “We’ve found that through a combination of multi-quadrant blocks to the abdominal wall, changes to some of the anesthetic drips and preoperative patient education that intra- and postoperative narcotic requirements are minimal. Doing narcotic-free, or narcotic-sparing surgery combined with decreased anesthesia, allows patients to eat immediately afterwards without the bowel function disruption caused by narcotics. About a third of our patients do not require narcotics for the entire hospital stay, including time in the operating room.”

“To achieve these results, a lot of communication is necessary,” he adds. “We’ve built a great team which includes preoperative nursing, anesthesia, postoperative care, floor nursing, pharmacy and administration. Everyone has bought into the concept, and the results speak for themselves.”

Toward NAPRC Rectal Center Cancer of Excellence Accreditation

Dr. Askenasy also leads Memorial Hermann Southeast Hospital's efforts to seek accreditation through the National Accreditation Program for Rectal Cancer (NAPRC), developed through the OSTRiCH Consortium (Optimizing the Surgical Treatment of Rectal Cancer) and the Commission on Cancer® (CoC), a quality program of the American College of Surgeons.

"Memorial Hermann's treatment model is based on successful international models that emphasize program structure, patient care processes, performance improvement and performance measures," he says.

To meet the high standards of the American College of Surgeons (ACOS), the hospital's multidisciplinary team, including Oncology Nurse Navigators, has researched evidence-based protocols and processes for rectal cancer care. Dr. Askenasy leads the tumor board at Memorial Hermann Southeast, which includes colorectal surgery, radiation oncology, medical oncology, pathology, gastroenterology and radiology. The team works together to review information and design treatment plans based on National Comprehensive Cancer Network® guidelines. Teams at Memorial Hermann Memorial City and Memorial Hermann The Woodlands Medical Centers are also pursuing the Rectal Cancer Center of Excellence designation, led by affiliated colon and rectal surgeons Joseph Cali, MD, and Mark Pidala, MD, respectively, both of whom are assistant professors of surgery at McGovern Medical School.

Clinicians at all three hospitals are also reviewing care after treatment to confirm that evidence-based procedures were followed, including total mesorectal excision, pathological assessment and MRI staging and reporting. The ACOS requires presentation of a pre-treatment plan,

continued treatment after surgery and follow-up on all patients as part of a survivorship program.

"We follow our patients from the time of diagnosis through treatment and

survivorship," Dr. Askenasy says. "We work as a team that includes private and academic physicians to determine the best course of action for each patient to offer the best possible outcomes."

Dr. Anneliese Gonzalez Named Division Director of Oncology at UTHealth

Anneliese O. Gonzalez, MD, has been appointed director of the division of Oncology at McGovern Medical School at UTHealth in Houston, and director of the Memorial Hermann Cancer Center-Texas Medical Center. Her appointment is a part of the overall oncology service line growth under way at Memorial Hermann Health System and McGovern Medical School.

In her new role, Dr. Gonzalez will lead a team of 10 medical oncologists who primarily serve the Memorial Hermann Cancer Center-Texas Medical Center, and treat patients at Memorial Hermann Cancer Center-Northeast. The team includes seven oncologists currently on staff. Dr. Gonzalez is currently recruiting four new faculty members, two of whom will join the medical staff at Memorial Hermann Northeast, and specialists in breast oncology and malignant hematology to practice at Memorial Hermann-TMC. Three nurse practitioners provide support at the Memorial Hermann Cancer Center-TMC, which recently added a dedicated manager.

The state-of-the-art Memorial Hermann Cancer Center-TMC has advanced clinical capabilities, physician specialization and services delivered within a fully integrated space which promotes holistic care and healing. The facility offers patients a personalized and comforted environment to support their needs throughout the continuum of their cancer care, accompanied by private treatment suites and counselor guidance during every step of the process.

"UTHealth's nationally recognized oncologists and researchers are equipped to address the needs of all diagnoses and stages of cancer, with

access to advanced procedures and clinical trials," says Dr. Gonzalez, who received her medical degree at the Universidad Central de Venezuela, followed by internship and residency at Allegheny General Hospital at Drexel University College of Medicine in Pittsburgh and a fellowship in hematology/oncology at St. Elizabeth's Medical Center at Tufts University in Boston. "Multidisciplinary tumor boards meet to create the most effective treatment plan for each patient, tailored to the type, stage and aggressiveness of the tumor. We consider patients an essential part of the team, and provide them with the information and support they need to take an active role in all decisions. Patients have access to a combination of therapies - medical, nutritional, physical, psychological and spiritual - as well as treatment plans personalized by clinicians who understand their concerns and the concerns of their families."

Memorial Hermann-TMC's inpatient leukemia service has also grown, and a new three-year fellowship program that combines hematology and oncology, offered through McGovern Medical School and accredited by the Accreditation Council for Graduate Medical Education (ACGME), will start in June 2019. The two fellows will complete the majority of their rotations at the Memorial Hermann Cancer Center-TMC but will also see patients at Memorial Hermann Cancer Center-Northeast.



ANNELIESE O. GONZALEZ, MD
Director, Division of Oncology at
McGovern Medical School at UTHealth

Oncology Pharmacy & Therapeutics Subcommittee Helps Ensure Quality and Cost Savings

Through a standardized formulary and order sets, Memorial Hermann is helping to improve outcomes and lower patient costs for chemotherapy and immunotherapy. A multidisciplinary team consisting of: affiliated academic and private physicians, nurses, pharmacists, oncology nurse navigators and social workers oversee



ZYAD KANAAN, MD
Assistant Professor of Oncology
McGovern Medical School at UTHealth

the delivery of all new anti-cancer agents as they become available. Additionally, this team reviews the cost, efficacy and evidence-based use of the drugs.

“Nearly 90 percent of chemotherapy is delivered in the outpatient setting,” says Zeyad Kanaan, MD, assistant professor of Oncology at McGovern Medical School. “Through these efforts, we ensure that we administer the appropriate therapies in the appropriate settings.”

The team is currently at work creating standardized order sets to

be used across Memorial Hermann’s eight Cancer Centers in an effort to: ensure clear communication among providers, reduce the risk of error in ordering and improve timeliness of delivery of cancer therapies.

“Preliminary reports show cost savings for our patients since we implemented the subcommittee,” says Sandra Miller, MHSM, RN, NE-BC, vice president, Memorial Hermann Oncology Service Line. “By making even small changes, we can save our patients significant out-of-pocket expenses.”

RESEARCH

Ongoing Clinical Trials

JAVELIN: A Randomized Double-blind Phase 3 Study of Avelumab in Combination with Standard of Care Chemoradiotherapy (Cisplatin plus Definitive Radiation Therapy) Versus Standard of Care Chemoradiotherapy in the Frontline Treatment of Patients with Locally Advanced Squamous Cell Carcinoma of the Head and Neck

Open to patients with locally advanced head and neck cancer that is previously untreated, this study is sponsored by Pfizer. Patients will be randomly treated with either standard-of-care chemoradiation (SoC CRT), or avelumab in combination with SoC CRT. Avelumab is a monoclonal antibody that inhibits the PD-1 ligand 1. The purpose of this study is to evaluate the safety and anti-tumor activity of avelumab in combination with SoC CRT, versus SoC CRT alone. Clinicaltrials.gov number: NCT02952586.

Lead Physician: Syed H. Jafri, MD

Contact: Marka Lyons at 713.500.6919 or marka.lyons@uth.tmc.edu

TRITON2: An International Multicenter, Open-label, Phase II Study of the PARP Inhibitor Rucaparib in Patients with Metastatic Castration-resistant Prostate Cancer (mCRPC) Associated with Homologous Recombination Deficiency (HRD)

Sponsored by Clovis Oncology, this study is open to men with metastatic, castrate-resistant prostate cancer who also have a deleterious germline or somatic BRCA1, BRCA2 or ATM mutation, whose disease has progressed despite treatment and who have not previously received a PARP inhibitor. They will be enrolled into one of two cohorts based on the presence, or absence of measurable visceral and/or nodal disease. Patients will receive oral rucaparib, a potent PARP1, PARP2 and PARP3 inhibitor. The purpose is to determine the benefit of PARP inhibition in this group of patients. Clinicaltrials.gov number: NCT02952534.

Lead Physician: Julie Rowe, MD

Contact: Marka Lyons at 713.500.6919 or marka.lyons@uth.tmc.edu

TRITON3: An International Randomized, Open-label, Phase III Study of the PARP Inhibitor Rucaparib vs. Physician's Choice of Therapy for Patients with Metastatic Castration-resistant Prostate Cancer (mCRPC) Associated with Homologous Recombination Deficiency (HRD)

Sponsored by Clovis Oncology, this study is open to men with metastatic, castrate-resistant prostate cancer who also have a deleterious germline or somatic BRCA1, BRCA2 or ATM mutation, whose disease has progressed despite treatment and who have not previously received a PARP inhibitor. They will be randomly enrolled into one of two cohorts to receive either rucaparib, a potent PARP1, PARP 2 and PARP 3 inhibitor, or physician's choice of abiraterone, enzalutamide or docetaxel. The researchers will determine the benefit of PARP inhibition in this group of patients, compared with the approved standard of care. Clinicaltrials.gov number: NCT02975934.

Lead Physician: Julie Rowe, MD

Contact: Marka Lyons at 713.500.6919 or marka.lyons@uth.tmc.edu

KEYNOTE-564: A Phase III, Randomized, Double-blind, Placebo-controlled Clinical Trial of Pembrolizumab (MK-3475) as Monotherapy in the Adjuvant Treatment of Renal Cell Carcinoma Post Nephrectomy

The purpose of this study is to evaluate the safety and efficacy of pembrolizumab in the adjuvant treatment of clear cell-type renal cell carcinoma, in patients with intermediate-high risk, and high risk or M1 no evidence of disease renal cell carcinoma with a clear-cell component. Participants must have previously undergone nephrectomy. Patients will be randomized to receive either pembrolizumab or placebo. Pembrolizumab is a PD-1 inhibitor that directly blocks the interaction between PD-1 and its ligands, PD-L1 and PD-L2. The study is sponsored by Merck Sharp & Dohme Corporation. Clinicaltrials.gov number: NCT03142334.

Lead Physician: Julie Rowe, MD

Contact: Marka Lyons at 713.500.6919 or marka.lyons@uth.tmc.edu

An Observational Study Profiling Biospecimens from Cancer Patients to Screen for Molecular Alterations

This observational study is enrolling advanced cancer patients with any histologically documented solid tumor or lymphoma. Surplus clinical formalin fixed paraffin-embedded (FFPE) tumor specimens of eligible subjects will be submitted for molecular profiling, and a test report will be provided back to the treating physician. For subjects identified as having molecular variants associated with an affiliated therapeutic protocol and/or approved targeted therapy, the sponsor's (Strata Oncology) report will provide additional relevant information. Subjects who have been identified with genetic alterations relevant to a trial, or targeted therapy, will be followed for treatment changes for three years from the time of signed informed consent. The purpose of this study is to understand the proportion of subjects available for clinical trials and approved targeted therapies in advanced cancer, while assessing the feasibility of using a large-scale NGS screening program to match subjects for eligibility assessments in clinical trials and/or for approved targeted therapies. Clinicaltrials.gov number: NCT03061305.

Lead Physician: Anneliese Gonzalez, MD

Contact: Marka Lyons, 713.500.6919 or marka.lyons@uth.tmc.edu

ATLAS: A Phase 2, Open-label Study of Rucaparib in Patients with Locally Advanced or Metastatic Urothelial Carcinoma

This study is open to patients with locally advanced or metastatic transitional cell carcinoma of the urothelium who have received one or two prior standard-of-care regimens for advanced or metastatic disease, and have confirmed radiologic disease progression during or following recent treatment. Patients will receive oral rucaparib, a potent PARP1, PARP2 and PARP3 inhibitor. The purpose of the ATLAS study is to determine how patients with locally advanced or metastatic urothelial carcinoma respond to treatment with rucaparib. The study is sponsored by Clovis Oncology. Clinicaltrials.gov number: NCT03397394.

Lead Physician: Julie Rowe, MD

Contact: Marka Lyons, 713.500.6919 or marka.lyons@uth.tmc.edu

A Randomized, Multicenter Phase 3 Study of Durvalumab (D) and Tremelimumab (T) as First-line Treatment in Patients with Unresectable Hepatocellular Carcinoma (HCC): HIMALAYA Study

This study is open to patients with no prior systemic therapy for unresectable hepatocellular carcinoma. Participants cannot be eligible for locoregional therapy. They will be randomized to arms evaluating durvalumab monotherapy, durvalumab plus tremelimumab combination therapy, or sorafenib monotherapy. Durvalumab is a monoclonal antibody that blocks the interaction of programmed cell death ligand 1 (PD-L1) with PD-1. Tremelimumab is a checkpoint inhibitor that binds to and down-regulates CTLA-4. Patients will be stratified according to macrovascular invasion, etiology of liver disease and performance status. The purpose of this study is to assess the efficacy and safety of durvalumab plus tremelimumab combination therapy and durvalumab monotherapy versus sorafenib in the treatment of patients with no prior systemic therapy for unresectable HCC. The study sponsor is AstraZeneca. Clinical trials.gov number: NCT03298451.

Lead Physician: Julie Rowe, MD

Contact: Marka Lyons, 713.500.6919 or marka.lyons@uth.tmc.edu



Gamma Knife Follow-up Clinic Improves Surveillance at Memorial Hermann Cancer Center-TMC

Before the advent of new focused treatments for brain cancer, the prognosis for patients with brain metastases ranged from two to seven months, according to Angel Blanco, MD, medical director of radiation oncology and Gamma Knife® radiosurgery at Memorial Hermann-Texas Medical Center and an associate professor in the Vivian L. Smith Department of Neurosurgery at McGovern Medical School at UTHealth in Houston.

“At one time patients with brain cancer had little hope. Today, we can offer them advanced therapeutic strategies such as multiple targeted chemotherapy treatments including immunotherapy; image-guided surgery; Gamma Knife® radiosurgery; and whole-brain radiation therapy,” Dr. Blanco says. “As a result, we have more patients who are long-term survivors of brain metastases.”

In late spring 2018, the Mischer Neuroscience Institute at Memorial Hermann-Texas Medical Center established

the Gamma Knife® Brain Tumor Follow-up Clinic to provide subspecialist-directed follow-up for patients with brain tumors, including metastatic lesions. In the clinic’s first four months, physicians saw more than 90 patients and identified 44 who required retreatment – people who otherwise would have experienced a delay in treatment. Key innovative components of the clinic include a 3-D evaluation of follow-up imaging and co-registration of each follow-up study with the prior radiation treatment plan, and enhanced communication with the referring oncologists, who direct the patient’s extracranial therapies.

Since acquiring the region’s first Gamma Knife® in 1993, the Mischer Neuroscience Institute has successfully treated more than 3,400 patients, and is now using a more advanced Gamma Knife® to treat meningiomas and vestibular schwannomas, metastases, arteriovenous malformations and medically

refractory trigeminal neuralgia. Usually, multiple intracranial metastases can usually be treated in a single outpatient procedure.

The Gamma Knife® Brain Tumor Clinic also offers the opportunity for future outcomes-based research. “There are many unanswered questions: Can we modify follow-up intervals for patients whose disease remains controlled for years? Should we modify Gamma Knife® doses for selected patients on the basis of their systemic treatment? The clinic offers us a unique opportunity to assess clinical response to treatment in a large population,” Dr. Blanco says. “We hope to be able to find answers to these and other questions.”



ANGEL BLANCO, MD
Medical Director of Radiation Oncology and Gamma Knife® Radiosurgery at Memorial Hermann-Texas Medical Center
Associate Professor, Vivian L. Smith Department of Neurosurgery at McGovern Medical School at UTHealth

Genetic Evaluation and Management of Lynch Syndrome in Colon and Endometrial Cancers

As of 2015, all colon and endometrial cancers diagnosed at Memorial Hermann hospitals are screened for tumor markers suggestive of Lynch syndrome, an autosomal dominant genetic condition associated with significant lifetime cancer risks of the colon (15 to 82 percent) and uterus (15 to 60 percent). The syndrome also carries a lower risk for cancers of the ovaries (up to 24 percent), stomach (up to 13 percent), small bowel (up to 6 percent), pancreas (1 to 6 percent), ureter-pelvic region (1 to 7 percent) and hepatobiliary region, as well

as for glioblastoma and sebaceous adenomas, according to the National Comprehensive Cancer Network® (NCCN) Guidelines for Genetic/Familial High-Risk Assessment: Colorectal.

“Based on guidelines set by the NCCN, universal tumor screening of colorectal and endometrial cancers should be performed to determine



KATHRYN MRAZ, MS, CGC
Certified Genetic Counselor
Cancer Risk Genetics Program
McGovern Medical School at UTHealth

which tumors may have an underlying mutation in a DNA mismatch repair gene, which can be further assessed through germline analysis,” says Kathryn Mraz, MS, CGC, certified genetic counselor in the Cancer Risk Genetics Program at McGovern Medical School at UTHealth in Houston. “Expression patterns of mismatch repair proteins is one way in which colorectal cancers can be classified. If an individual has a mutation in one of the five genes responsible for repairing DNA – MLH1, MSH2, MSH6, PMS2 or EPCAM, it results in a diagnosis of Lynch syn-

Genetic Evaluation continues on page 10

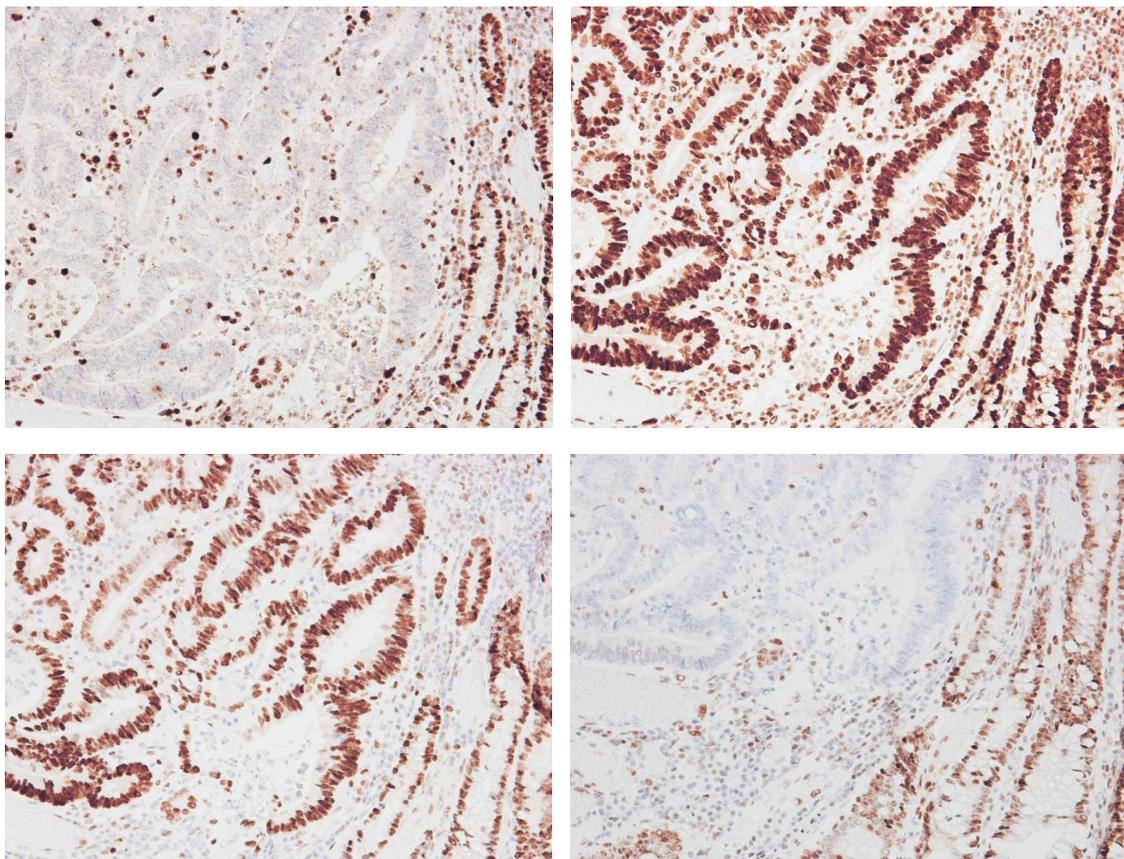
drome, which confirms the associated higher risks of cancer in various organ systems. Of these genes, MLH1 and MSH2 carry the highest risk overall.”

In the United States in 2018, the estimate for new cases of colorectal cancer totaled 140,250, comprising 8.1 percent of all new cancer cases, according to the National Cancer Institute. Approximately 3 to 5 percent of these cancers are related to Lynch syndrome. “We examine tumor tissue from all newly diagnosed endometrial and colorectal cancers using immunohistochemistry, which detects four of the mismatch repair proteins: MLH1, MSH2, MSH6 and PMS2,” says Richard Brown, MD, FCAP, a pathologist at Memorial Hermann Southwest Hospital and medical director for system laboratory services for the Memorial Hermann Health System. “If we detect normal levels of protein in a tumor and in normal tissue, Lynch syndrome is unlikely. If a patient does have a genetic alteration associated with Lynch syndrome, the pathologist sees loss of staining for one or more of those proteins in the tumor, compared to normal tissue, in which staining is retained.”



RICHARD BROWN, MD
Pathologist affiliated with
Memorial Hermann Cancer Centers

According to Dr. Brown, there are other reasons a tumor can lose expression of one of these proteins in addition to Lynch syndrome. “There may be alterations in the genes of the tumor itself but no mutation in the patient’s genes. When we do find a pattern highly suggestive of Lynch syndrome, it’s important to take the



Adenocarcinoma of the colon immunostained for the 4 mismatch repair proteins, MLH1, MSH2, MSH6, and PMS2. Note the loss of staining for MLH1 and PMS2 in the malignant glands (left) compared to the intact expression of the benign glands (right), and lymphocytes. The tumor shows intact expression of MSH2 and MSH6 (positive stain). This is the most common abnormal pattern seen in colon cancer and is, in most cases, not related to Lynch syndrome.

next step and refer the patient for genetic counseling prior to testing of the patient’s blood for the genetic alterations associated with Lynch syndrome, says Dr. Brown. “Patients need a clear understanding of what we’re looking for in gene testing, and there’s always a chance we’ll find more than one genetic mutation. Each patient has to make a personal decision about how much knowledge he or she wants.”

Over a two-year period from calendar year 2016 through calendar year 2017, 12 percent of colorectal cancer surgery patients at Memorial Hermann were eligible to see a genetic counselor due to an abnormality found with immunohistochemical screening for mismatch repair proteins.

“Even if a mutation is present in a family, it doesn’t mean that everyone who inherits the mutation will develop cancer,” Mraz says. “The general

recommendation is that people should be considered for genetic testing when they have a personal or family history that suggests an inherited cancer risk condition, when test results clearly indicate that a genetic change is present and when genetic testing will provide information that helps guide the patient’s future medical care. We can’t overemphasize how important annual surveillance is for people who learn they’re at high risk for Lynch syndrome cancers.”

“While Lynch syndrome can be screened through pathology and further identified and confirmed through genetic assessment and testing, there are at least 17 genes known to increase the risk of colorectal cancer,” Mraz adds. “Patients and their families with a personal and/or family history of colorectal cancer may benefit from a genetic evaluation with testing to clarify their risk and future recommendations.”

Heath Rushing Named Oncology Service Line Leader for Memorial Hermann



HEATH RUSHING, SENIOR VICE PRESIDENT
Oncology Service Line
Senior Vice President and CEO
Memorial Hermann Cypress and Katy Hospitals

Heath Rushing, senior vice president and chief executive officer of Memorial Hermann Cypress and Memorial Hermann Katy Hospitals, has been named senior vice president for the Memorial Hermann Oncology Service Line. In his new role, Rushing will focus on expanding clinical care, patient education and support and research.

“I am amazed at what a few dedi-

cated individuals have been able to accomplish over the last three to four years,” Rushing says. “Memorial Hermann, in collaboration with our affiliated medical staff, now has one of the largest cancer programs in the country. Together we diagnose more cancer patients than any other health system in Southeast Texas.”

The Oncology Service Line includes a network of multidisciplinary providers who are committed to ensuring a quality, service-oriented experience for patients with cancer. Their focus is on providing leading-edge cancer care tailored to individual patient needs and delivering such care with hope in

a healing environment.

“Our goal is to empower cancer patients with knowledge, and support them as we guide them through the complexities of cancer care,” he says. “We’ll also work with our affiliated private and academic physicians to expand access to research for patients. We’re fortunate to have leaders with the knowledge and skills to drive our strategy and fully integrate our cancer services across the system. If we provide the highest level of cancer care with a very personalized experience, then when people think cancer, they will think Memorial Hermann.”

Four clinicians have joined the Memorial Hermann Oncology Service Line in recent months: Erica Blanchfield, RN, Robert Hetz, MD, Gabriela Munoz, RN, and Arthy Yoga, MD.



ERICA BLANCHFIELD, RN
Memorial Hermann Cancer Center -
Memorial City

Erica Blanchfield received her bachelor’s degree in nursing at Sam Houston State University in Huntsville, Texas, in 2015. After working at Memorial Hermann-Texas Medical Center and serving as a charge nurse and preceptor at Memorial Hermann Greater Heights Hospital, she joined the Memorial Hermann Cancer Center-Memorial City Medical Center in October 2018.

robotic surgery, thoracic surgery, video-assisted thoracoscopic surgery (VATS), VATS lobectomy, lung cancer, esophageal cancer, minimally invasive esophagectomy, mediastinal tumors, minimally invasive thymectomy, chest wall tumors, pleural disease, mesothelioma, hyperhidrosis and VATS sympathectomy. Board certified in general surgery, Dr. Hetz received his medical degree at McGovern Medical School at UTHealth in Houston, and completed general surgery residency training at the same institution. He went on to complete a postdoctoral fellowship at McGovern Medical School, performing both clinical and basic science research on the use of progenitor cell therapies for the treatment of central nervous system diseases, and a cardiothoracic surgery fellowship at The University of Texas MD Anderson Cancer Center. He is an assis-

tant professor in the department of Cardiothoracic and Vascular Surgery at McGovern Medical School, and is affiliated with Memorial Hermann-Texas Medical Center and Memorial Hermann Memorial City Medical Center.



ROBERT HETZ, MD
Thoracic Surgeon affiliated with Memorial
Hermann Memorial City Medical Center

Dr. **Robert Hetz** is a cardiothoracic surgeon with clinical interests in:



GABRIELA MUNOZ, RN
Memorial Hermann Cancer Center -
Memorial City

Gabriela Munoz, RN, joined Memorial Hermann Cancer Center-Memorial City from Memorial Hermann Greater Heights Hospital, where she served as a clinical coach, trained new employees and familiarized them with Memorial Hermann. Munoz received her bachelor’s degree in nursing at Houston Baptist University in 2014.

Welcome continues on page 12



ARTHY YOGA, MD
Breast Surgeon affiliated with
Memorial Hermann Northeast Hospital

Dr. Arthy Yoga is fellowship-trained in breast surgical oncology and certified by the American Board of Surgery in general surgery. Prior to joining Memorial Hermann Northeast Hospital, Dr. Yoga was on staff

at Bethesda Women’s Health Center in Boynton Beach, Florida, where she was the director of breast surgery, performed minimally invasive surgery, and treated benign breast disease, as well as breast cancer. She received her medical degree from SUNY, Upstate Medical University in Syracuse, New York, and completed residency training in general surgery at Staten Island University Hospital in New York. She went on to complete a fellowship in breast surgical

oncology at the University of Miami Miller School of Medicine, and Jackson Memorial Hospital in Miami. She also received advanced training in oncoplastic technique at Clinique Bizet, a plastic and breast surgery center in Paris, France. A peer-reviewed author in breast disease, Dr. Yoga is a member of the American College of Surgeons, Society of Surgical Oncology and the American Society of Breast Surgeons.

ACCOLADES

Memorial Hermann Clinicians Earn Oncology Nurse Certifications

Six Memorial Hermann nurses have earned distinguished certifications in oncology.

“Certification helps a nurse move toward his or her professional goals, including applying for clinical and leadership positions. Certified nurses are confident in their skills and bring a higher level of professionalism to clinical care,” says Sandra Miller, MHSM, RN, NE-BC, vice president of the Oncology Service Line at Memorial Hermann Health System. “They’re trained to lead their coworkers on quality improvement projects, and they know how to use the knowledge and tools they’ve acquired to complete tasks efficiently.”

At Memorial Hermann-Texas Medical Center, three nurses have earned the Radiation Oncology Cer-

tification, which allows them to use their advanced knowledge of radiation oncology to better understand the needs of patients receiving radiation therapy. The nurses are: Melissa Graham, BSN, MSN, RN-BC, clinical nurse manager of radiation oncology, Gamma Knife®, neurophysiology and otolaryngology; Kimberly Alshrouf Landry, RN, radiation oncology; and George Lim, RN, BSN, MSN-NAS, radiation oncology.

To obtain the nationally accredited designation, Graham, Landry and Lim demonstrated mastery of certification program standards, which include specific eligibility for nursing practice, education and passing a comprehensive exam

based on national specialty practice. “Once a month as time allows, we have a study group,” says Graham. “These nurses worked very hard to gain this certificate. It was a tough exam with a number of physician-level questions.” The certification is granted by the Oncology Nurse Society (ONS) and the Oncology Nursing Certification Corporation (ONCC).

Three Memorial Hermann nurses have earned their Oncology Certified Nurse (OCN®) certification, validating their specialized knowledge and experience required for competent performance in the treatment of cancer patients. The voluntary

Accolades continues on page 13



Valerie Arita, BSN, RN-BC, OCN



Michael De Los Reyes, RN, OCN



Melissa Graham, BSN, MSN, RN-BC



George Lim, RN, BSN, MSN-NAS



Kimberly Alshrouf Landry, RN



Jean Verhey, RN, ADN, OCN

certification is a personal and professional accomplishment granted by the ONCC, and is recognized by peers, patients and families, other health professionals and employers. The ONCC is an independent orga-

nization and the premier provider of nationally accredited certification for registered nurses in oncology and related specialties.

The nurses are: Michael De Los Reyes, RN, OCN, Gamma Knife nurse at the Memorial Hermann Cancer

Center-Texas Medical Center; Valerie Arita, BSN, RN-BC, OCN, infusion nurse at the Memorial Hermann Cancer Center-Northeast; and Jean Verhey, RN, ADN, OCN, infusion nurse also at the Cancer Center-Northeast.

IN PRINT

Hematology-Oncology: On-the-Spot Answers to the Most Common Clinical Questions

Question, data, synthesis, solution. This is the information-sharing flow path used by the authors of a new book in McGraw-Hill's *Clinical Questions* education series, *Hematology-Oncology: On-the-Spot Answers to the Most Common Clinical Questions*. The authors, many affiliated with the division of Oncology at McGovern Medical School at UTHealth in Houston, are: editor Julie H. Rowe, MD, assistant professor of internal medicine; Putao Cen, MD, associate professor of internal medicine; Adan Rios, MD, professor of internal medicine; Anneliese O. Gonzalez, MD, associate professor of internal medicine and division director, oncology; Zeyad Kanaan, MD, assistant professor of internal medicine; Syed H. Jafri, MD, associate professor of internal medicine; Robert J. Amato, MD, professor of internal medicine; and Virginia Mohlere, scientific editor. Hazem El Osta, MD, is also a contributing author.

Dr. Rowe was approached by David I. McPherson, MD, chair, division director and professor of cardiovascular medicine at McGovern Medical School, when McGraw-Hill expressed interest in a volume on hematology-oncology after the success of *Cardiology Clinical Questions*, written by phy-



JULIE ROWE, MD
Medical Oncologist affiliated with Memorial Hermann at the Texas Medical Center

sicians at the medical school. Based on their combined experience, the authors compiled a list of the most commonly asked hematology-oncology questions, which provided the framework for the book's 20 chapters. The initial chapters provide background on the fundamentals of hematology-oncology. Subsequent chapters are divided by tumor type, beginning with

across the clinical spectrum understand the basic concepts of caring for cancer patients.”

Chapter authors include: Angel Blanco, MD, medical director of radiation oncology and Gamma Knife® centers and an associate professor of neurosurgery; Mehdi Dehghani, MSc, PhD, DABCC, assistant professor of oncology; Brian Dinh, PharmD, BCPS, BCOP, Memorial Hermann Cancer Center-Texas Medical Center; Jamie M. Everett, MD, assistant professor of pathology and laboratory medicine; Shariq Khwaja, MD, PhD, assistant professor

of neurosurgery; Kathryn Mraz, MS, CGC, certified genetic counselor; Elizabeth Nugent, MD, assistant professor of obstetrics, gynecology and reproductive sciences; Tamara

E. Saunders, MD, assistant professor of surgery; and Curtis Wray, MD, associate professor of surgery.

The book is available from McGraw-Hill Education at mheducation.com and Amazon at https://www.amazon.com/Hematology-Oncology-Clinical-Questions-Julie-Rowe/dp/1260026620/ref=sr_1_2?ie=UTF8&qid=1543517320&sr=8-2&keywords=hematology-oncology+clinical+questions.

“Compiling the practical questions and answers you need at your fingertips was a long endeavor. We hope this book will be a powerful tool to help learners from across the clinical spectrum understand the basic concepts of caring for cancer patients.”

- JULIE ROWE, MD

solid tumor types - breast, head and neck and gastrointestinal cancers - and followed by hematological malignancies - leukemias and lymphomas.

“Our goal is to empower clinicians to find the best solution for their patients as efficiently and effectively as possible,” Dr. Rowe says. “Compiling the practical questions and answers you need at your fingertips was a long endeavor. We hope this book will be a powerful tool to help learners from

A Physician-Researcher Explores the Monotheistic Worldview in *God and god of Science*



SYED H. JAFRI, MD
Medical Oncologist affiliated with
Memorial Hermann at the Texas Medical Center

“Does God exist? If so, then why can’t we see him? If we can’t see him, then how can we be sure of his existence?” asks author Syed H. Jafri, MD, in a recently published book, *God and god of Science*. A thoracic medical oncologist affiliated with Memorial Hermann Cancer Center-Texas Medical Center and a cancer researcher at McGovern Medical School at UTHealth in Houston, Dr. Jafri was inspired to write the book to explore the apparent dichotomy between reason and faith, and science and religion.

“What is the purpose of our lives? If God is all powerful, then how can we have free will? There is so much suffering in the world that a merciful and powerful God seems improbable. These questions cross our minds at various points in our lives and tend to be prominent in the minds of cancer patients,” says Dr. Jafri, an associate professor of internal medicine in the division of Oncology at McGovern Medical School. “My goal was to present a worldview based on monotheism that challenges the traditional scientific perspective about the nature of existence.”

Dr. Jafri drew on revelation, philosophy, mysticism and modern scientific knowledge while writing the book. For more information, visit https://www.amazon.com/Science-Syed-Hasan-Raza-Jafri/dp/1927930197/ref=sr_1_1?ie=UTF8&qid=1543523301&sr=8-1&keywords=god+and+god+of+science.

Additional Publications

El-Osta H, Jani P, Mansour A, Rascoe P, Jafri S. Endobronchial Ultrasound for Nodal Staging of Patients with

Non-Small-Cell Lung Cancer with Radiologically Normal Mediastinum. A Meta-Analysis. *Ann Am Thorac Soc.* 2018 Jul;15(7):864-874. doi: 10.1513/AnnalsATS.201711-863OC.

Kamil F, Rowe J. How does the Tumor Microenvironment Play a Role in Hepatobiliary Malignancies? *Journal of Gastrointestinal Oncology.* 2018 Feb; Vol 9, No. 1. doi:10.21037/jgo.2017.06.09.

Rowe J (editor) et al. *Hematology-Oncology Clinical Questions.* McGraw-Hill Education. 2018. (Edited by Julie H. Rowe, Putao Chen, Adan Rios, Anneliese O. Gonzalez, Zeyad Kanaan, Hazem El-Osta, Syed H. Jafri, Robert J. Amato, and Virginia Mohlere; other Oncology Division contributors: Mehdi Dehghani and Kathryn Mraz)

ON THE PODIUM

Report from the American Society of Clinical Oncology Annual Meeting June 1-5, 2018

Every year the American Society of Clinical Oncology (ASCO) holds its annual meeting in Chicago. This year’s convocation attracted more than 39,000 physicians, nurses, scientists and advocates from the United States and around the world, who learned about the most recent advances in cancer care. The theme for the 2018 Meeting was “Delivering Discoveries: Expanding the Reach of Precision Medicine.” This year, 6,450 abstracts were submitted for consideration by the Scientific Program Committee. This year, approximately 2,515 abstracts were selected for presentation in Oral Abstract Sessions, Clinical Science Symposia and Posters, plus more than 3,350 for online publication.

The Plenary Session this year contained four papers the organizers felt should be heard by all attendees. They have been reviewed here, briefly.

The first of these presentations was entitled KEYNOTE-042: Pembrolizumab improved overall survival in non-small cell lung cancer.

1,274 patients were randomly assigned to receive pembrolizumab, an immune checkpoint inhibitor, 200 mg every 3 weeks as a single agent, or the investigator’s choice of chemotherapy for advanced non-small cell lung cancer (NSCLC). The patients had to be without EGFR or ALK mutations, and have at least 1 percent PD-L1 tumor proportion score (TPS). The higher the PD-L1 TPS, the better the response rates and survival observed for the pembrolizumab arms of the study. Median follow-up was 12.8 months. For TPS of 50 percent or higher, overall survival (OS) was 20 months for the pembro arm vs. 12.2 months for the chemotherapy arm. Among patients with TPS of 20 percent or more, OS was 17.7 months vs. 13 months in favor of the pembro arm, and for patients with TPS of 1 percent or more, OS was 16.7 months vs. 12.1 months in favor of the pembro arm. The authors concluded that these data confirm the role of pembrolizumab

On the Podium continues on page 15

monotherapy as a standard first-line treatment for PD-L1-expressing advanced metastatic NSCLC.

The second study was the phase 3 CARMENA trial. Many previous studies supported cytoreductive nephrectomy (CN) as the standard of care for patients with metastatic renal cell carcinoma (RCC). The emergence of effective targeted therapies, however, has called into question the conventional standard of utilizing CN prior to sunitinib, an oral tyrosine kinase inhibitor that blocks the action of vascular endothelial growth factor (VEGF) and inhibits angiogenesis. In the trial, researchers randomly assigned patients with metastatic RCC to receive sunitinib after CN, or sunitinib alone, without CN. After a median follow-up of 50.9 months, overall survival of the non-surgical arm was not inferior to the group receiving CN, 18.4 months vs. 13.9 months (not significant). Overall response rate was identical in the two arms: 35.9 percent. The authors concluded that sunitinib alone is not inferior to CN followed by sunitinib in metastatic RCC, and that CN should not be the standard of care anymore when medical treatment for advanced disease is required.

The third presentation involved the use of low dose (metronomic) maintenance chemotherapy in rhabdomyosarcoma, a pediatric tumor, after completion of standard induction chemotherapy. This generally resulted in a high response and cure rate of 70 to 80 percent in these patients, but there was still a 20 to 30 percent relapse rate observed. 670 patients between the ages of 6 months to 21 years were randomized to stop therapy after the usual induction period (control arm), or to receive maintenance therapy with IV vinorelbine and oral cyclophosphamide. The five-year overall survival rate for the maintenance group was 87.3 percent vs. 77.4 percent for the control group. Toxicity was mainly

febrile neutropenia and neurotoxicity, which was noted to be manageable. The authors concluded that the addition of maintenance chemotherapy after standard treatment significantly improved overall survival in rhabdomyosarcoma.

The fourth and most talked-about study was the TAILORx trial with intermediate Oncotype-DX scores. In this study 10,253 women with node-negative, ER-positive breast cancer between the ages of 18 and 75 agreed to have their treatment according to the Recurrence Score (RS) of the Oncotype-DX assay on their tumor. Low RS (10 or less) patients were assigned endocrine adjuvant therapy only, and high RS patients (26 or more) were assigned to receive chemotherapy plus endocrine adjuvant therapy. This left the group with intermediate RS for analysis (6,711 patients). These patients were randomized to endocrine therapy alone, or endocrine therapy plus chemotherapy. Median follow-up was 90 months. Overall there was no difference in the disease-free interval or overall survival between the two groups, showing that chemotherapy in this situation did not benefit these women. Subgroup analysis did reveal

that women 50 years of age or less with RS of 16 to 25 did derive a slight benefit from adjuvant chemotherapy. It is not clear if this small benefit is due to the chemotherapy itself, or to the ovarian suppression induced by the chemotherapy.

This study is immediately practice changing. Seventy percent of node-negative, ER-positive breast cancer patients fall into the intermediate-risk category and until now oncologists were uncertain as to whether they derived any benefit from adjuvant chemotherapy. Now, it is clear that except for a few younger women with RS between 16 and 25, this group does not need adjuvant chemotherapy. Another trial utilizing this study design for node-positive patients is currently under way.

These were the four main topics of the Plenary Session at ASCO 2018. One of the most exciting aspects of oncology today is the fact that it is so evidence driven. The five days at ASCO clearly reflected this.



TED TENCZYNSKI, MD, CTR
Associate Director of the Memorial Hermann
Cancer Registry

Clinical Presentations

Boyce W, Moseley T, **Gonzalez Anneliese**, Wang X, He H. The Many Faces of Triple Negative Breast Cancer. Abstract accepted for presentation at the 2019 American Roentgen Ray Society Annual Meeting, to be held May 5-10, 2019, in Honolulu, Hawaii.

Gonzalez Anneliese. Topics in Breast Cancer Awareness. Presentation at the Media Alliance of Houston meeting about breast cancer awareness, Houston, Texas, Oct. 16, 2018.

Gonzalez Anneliese. Breast Cancer. Presentation at the South Central Metastatic Breast Cancer Conference

sponsored by the Komen Foundation, Houston, Texas, Oct. 27, 2018.

Gutiérrez Carolina, Karni Ron, Smith Heather. Interdisciplinary Approach to Head and Neck Cancer Care to Improve Outcomes. Presented at the American Congress of Rehabilitation Medicine 2018 Conference, Dallas, Texas, Sept. 30, 2018.

Mraz Kathryn, Rowe Julie, Gonzalez Anneliese, Cen Putao. A Need for Genetic Screening/Counseling Referrals in Breast, Ovarian, Colorectal and Endometrial Cancer. Presentation at the National Society of Genetic Counselors 37th Annual Conference, Atlanta, Georgia, Nov. 14-17, 2018.

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ABOUT MEMORIAL HERMANN CANCER CENTERS

Memorial Hermann offers the entire continuum of cancer care – education, prevention, screening, diagnosis, treatment, survivorship and rehabilitation. We do more than provide trusted medical care: we are 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, more than 20 breast care locations, 15 acute care hospitals and dozens of other affiliated programs.

Through partnerships and affiliations with community oncology providers, UTHealth, Mischer Neuroscience Institute at Memorial Hermann-Texas Medical Center, and TIRR Memorial Hermann, patients can be confident that oncology specialists are working together to ensure the best possible outcome for their cancer treatment. At Memorial

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

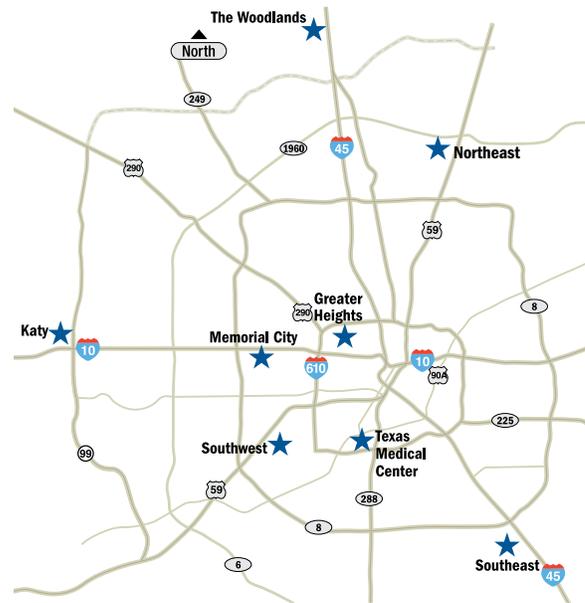
All Memorial Hermann Cancer Centers are accredited by the American College of Surgeons Commission on Cancer, and the Greater Heights Breast Cancer Center has been granted full, three-year accreditation by the National Accreditation Program for Breast Cancer.

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

- Memorial City:** 866.338.1150
- Northeast:** 855.537.0016
- Greater Heights:** 855.537.0019
- Southeast:** 855.537.0017
- Texas Medical Center:** 855.537.0013
- The Woodlands:** 855.537.0015

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1635 North Loop West
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Southeast
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Southwest
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Texas Medical Center
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The Woodlands
920 Medical Plaza Dr., Suite 100
Shenandoah, TX 77380

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