THE UNIVERSITY OF TEXAS
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Accolades

Winner dedicated to "not wasting patients' time"

Tech guru named July Heart of MD Anderson

– By Maxsane Mitchell

Mark Choate, MBA, ITIL, associate director of information services, has worked for MD Anderson for 19 years, starting with the two years he spent on the help desk before moving to the Division of Cancer Medicine. In that time, he's seen a few changes in the institution's technology needs and capabilities, and because of it, he has a unique perspective on how to turn techie tools into instruments that make a measurable difference in our patients' lives. That is why he was selected for the July

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Choate, *left,* accepts award from Division Administrator **Wendy Austin** and Division Head **Patrick Hwu, MD.**

Research and Education

Fellows bring world of experiences to program

– Erica Di Pierro

The start of July 2015 brought the newest wave of physicians setting off on the Division of Cancer Medicine's renowned three-year Hematology/Oncology Fellowship. The group is 16 strong, hailing from all corners of the globe and numerous training backgrounds. For this class, 436 applications were received and the admitted fellows were selected as the cream of the crop from an impressive pool of 73 interviewed candidates. Each fellow brings a unique story to the program, but all possess a shared devotion to advancing oncology from laboratory discoveries to administering novel therapeutics that improve patient quality of life and survival. We look forward to the great strides in translational research and clinical practice that this elite cohort will make during their tenure at MD Anderson.

Carl Gay, MD, PhD

MD/PhD: New York University School of Medicine, New York, N.Y.
Residency: The University of Texas Health Science Center, Houston, Texas

Gay grew up in a household that cherished baseball, a sport where perfection is often sought but realistically unattainable, much like treatment of malignances in his chosen medical profession. Instead of being intimidated by the challenging odds of finding new therapies for cancer patients, this physician-scientist in-training sees them as motivation and appreciates the incremental nature of translational research. During his graduate career, he contributed to the knowledge base of VEGF-dependent angiogenesis, and through his fellowship hopes to develop patient- and mutation-specific targeted therapies desperately needed by many cancer sufferers. His goal-oriented but realistic outlook will surely guide him well in his pursuit to improve treatment options.

Roman Groisberg, MD

MD: Tulane University School of Medicine, New Orleans, La.
Residency: Yale-New Haven Medical Center, New Haven, Conn.

Groisberg recognized his passion for oncology before starting medical school when he spent a year as a laboratory technician running blood samples on a mass spectrometer for early detection of prostate cancer. His conversations with patients after analyzing their individual samples established his desire to participate in the doctor-patient relationship as an MD. Experiences in the clinic

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Tech guru named July Heart of MD Anderson

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2015 Heart of MD Anderson Outstanding Employee Award. He accepted a $1,000 check, pink marble plaque, and a badge pin at a reception held in his honor on July 13.

Choate: "I love coming here every day."

Nominators say one of Choate's accomplishments was the implementation of radio frequency tags on employee badges in DoCM centers to track when staff enter and leave specific patient treatment rooms to help objectively assess room utilization. Results, starting first in the Ambulatory Treatment Center (ATC), showed a need to improve scheduling to more appropriately pair the complexity of patient chemotherapy with the workload of nurses and the availability of beds and chairs for duration of therapy, as on average, the ATC sees about 350 patients daily. To do this, Choate, with the help of division's IT applications team members, conceptualized and implemented the Treatment Excellence Through Resource Impact Scheduling (TETRIS) application. The program provides productivity snapshots of any unit, open time slots for day-of appointments, scheduling gaps, and identifies available staff who can be moved to other units that have delays. TETRIS links the ATC to the central hospital appointment system and provides a way to monitor the patient treatment process from beginning to end and its overall effect on resources and staffing. This has improved the patient experience by reducing wait times.

Part of what motivates Choate is a patient satisfaction response from a few years ago in which a frustrated patient wrote, "Please don't make me wait. I have such little time left." The TETRIS application has been so successful that institutional leaders approved the addition of an interface with the ATC pharmacy to make it possible for registered pharmacists and technicians to know when patients are approved and ready to receive chemotherapy, thus saving hundreds of thousands of dollars because some medications made in advance were going to waste due to unpredictable changes in patient availability. TETRIS was also adapted for various uses in the Pheresis Clinic, the Stem Cell Transplantation Center, the Clinical Center for Targeted Therapies (CCTT), the Lymphoma/Myeloma Center, the Good Manufacturing Practice (GMP) Lab, and the Cord Blood Bank.

Other information systems upgrades under Choate's direction include use of an interface with color-coded icons to allow employees with the Cord Blood Bank and the Stem Cell Transplantation Lab to electronically communicate about when blood draws are started and completed to improve processing time. This eliminates the need for repeated phone calls to the lab to obtain test results and frees up clinical employees' time to do other work directly related to patient care. Another system Choate developed, LabTracker, is credited with playing a huge role in handling increased volume in the Clinical and Translational Research Center (CTRC) with minimal strain on existing resources. He also oversaw his development team's creation of the WebSchedule application that replaced an existing Lotus Notes database. WebSchedule is used for time-off requests to verify that an employee actually has the time off that he or she requests, and to interact with KRONOS, which satisfies Human Resources and Payroll.

Choate oversaw the implementation of an IT staffing model to raise the bar in his own group. This involves a tool that logs response time to service requests and pairs it with attendance and training to ensure his team is providing the highest level of customer service. It also creates a small competition among the IT staff.

"Mark has deserved this award for so long," said **Wendy Austin, RN, MS, AOCN, NEA-BC, FACHE**, executive director of hospital and clinics. "He has a remarkable orientation to customer service, which is odd because when you think about IT people, you think about a team that only takes care of machines. But Mark has hired a team of people who share his service orientation that technology helps our employees take care of patients." She added that she appreciates Choate as someone who is industrious, creative, and never says no to improvement projects.

Brenda Brown, RN, MSN, OCN, NE-BC, clinical administrative director for the ATC, added that on the same day as his reception, Choate was helping her that morning to "put out fires" with a rollout of a new wrist-banding system that was implemented the day before. "Things didn't roll out as planned, but at 7:20 a.m. today Mark and I were on the same wavelength, working to fix problems to get our patients in and out in a timely way," Brown said. "Mark, we really appreciate you."

Choate thanked his nominators and attributed his success in large part to his team. "I love coming here every day, and I know my team does, too. We all have the same commitment, and it's nice to be involved with patients in our own way," he said.

Making a Difference

APL survivor remembers three life-changing dates

– By Maxsane Mitchell

Ravandi, left, says of Shahegh: **"We expect him to be one of the 'cured' patients."**

Oct. 26, 2014, will always be memorable for Amir Shahegh because that's the day he was diagnosed with acute promyelocytic leukemia (APL). It's a condition in which too many immature white blood cells accumulate in the bone marrow and crowd out healthy white and red cells and platelets that help fight off infection and catastrophic bleeding. Symptoms include fever, fatigue, unexplained infections, anemia, pale skin coloring, weight loss, pain in the bones and joints, increased susceptibility to bruising, and bleeding from the gums and nose. In the days and weeks before his diagnosis, Shahegh felt fine. He was still running for exercise and performing as a wireless network engineering manager—work that required him to drive two-and-a-half hours every other week from his home in Little Rock, Ark., to Memphis, Tenn., to meet with team members at that location. By his own description, the job was fun, but intense.

So how was the problem diagnosed? The discovery process started with Shahegh's annual physical and blood work in August of last year. The lab found his white blood count to be lower than usual; his platelets, too. The nursing staff asked him if he had any of the symptoms, and at the time he couldn't recall any. Months later, he remembered nosebleeds that started with a cold and continued beyond that illness, as well as a fungus on two toes that appeared out of nowhere and stayed around for a while. Shahegh's internist advised him to return in two weeks for a follow-up, which showed the numbers to be even lower, prompting a referral to an area oncologist who ultimately performed a bone marrow biopsy and sent the tissue to an out-of-state lab. Two days later, the oncologist called his home and asked his wife, Ladan, to come in with him that day. "Being the optimist that I am, I assured her that everything would be fine. But she's a realist, and assured me that 'it's never good news when the doctor calls directly,'" Shahegh said, also recalling how the specialist described the cancer. "He said the bad news was that I had the 'grizzly bear' of leukemias because it can cause life-threatening bleeding, but that the good news was that he had already found a place and a subspecialist for me—MD Anderson and Dr. Farhad Ravandi." Shahegh, his wife, and their 15-year-old son Alexander were on a flight to Houston the next morning and in his hospital room that evening.

Ravandi, a professor of Leukemia, and Maria "Cielo" Foudray, RN, research nurse specialist, enrolled Shahegh in a Phase II study of all-trans retinoic acid (ATRA) and arsenic trioxide as a front-line regimen. ATRA, a differentiation therapy that causes the immature APL cells to "grow up" and stop multiplying, makes it easier for other agents, in this case arsenic trioxide, to bring about intended cell death. Shahegh stayed in Houston from Oct. 27 to the weekend prior to Thanksgiving for the first of five cycles of treatment. "For the ATRA pills, I took four in the morning and five in the evening each day for two weeks on, two weeks off, and two weeks on again. At the same time, nurses placed a PICC line in my arm to administer the arsenic trioxide for five days on, weekends off, and five days on again for one month," he said.

Shahegh's numbers improved after the first course, and bone marrow aspiration results communicated to him on Nov. 19 found him to be in complete molecular remission—no evidence of disease. Upon hearing this news, he jumped up and hugged Foudray, bringing smiles to everyone in the room. However, he still had to complete the remaining regimen under the care of his local oncologist, returning only for a blood panel to measure cell and platelet counts, and a bone marrow exam. "It was tough; I started to have some fatigue, but because I was able to take off some time from work and have my wife as my at-home nurse, I was able to get through it," Shahegh said. Interestingly, when he started to feel better, he created a new exercise routine for himself. Instead of running, he walked, and walked, and walked for miles.

Fit before his diagnosis, Shahegh fine-tuned his nutritional regimen to now include more healthy foods. For example, his lunch might include a smoothie of kale, parsley, cilantro, celery, grapes, tomatoes, and apple, with other items such as iron-rich meats. "I went back to work in January, but with all of the medications, I wasn't fully my normal self. Fortunately, my team and bosses understood what was happening," he said. His treatment officially ended on June 28, 2015.

As for surveillance, the study requires bone marrow aspirations initially, but soon, he will just need peripheral blood monitoring. "We expect him to be one of the 'cured' patients. For the first year, we'll see him every three months, then every six months for a couple of years, and then once a year," said Ravandi. Shahegh says since he's been off the medications for a month, he feels that his mental sharpness has returned. He's grateful to his brothers and other relatives who visited and called to cheer him on through his nine-month process, and he shares advice with those who are newly diagnosed. "Of course, it's the worst news anybody can get as the word cancer itself puts chills in your heart and mind. It was scary, but I started thinking immediately about what I needed to do to battle it. That's an important thing to keep in mind, and also remember to do your part—work with the doctors and their team, ask questions, and follow their recommendations," Shahegh offered. "Also, I would say to anyone who hasn't been diagnosed with this disease—to be as physically fit as you can be throughout your life, because you never know when you'll get bad news. If you are fit, that'll help your chances."

Up and Coming Investigator

William seeks to stop oral cancer before it develops

– By Erica Di Pierro

William reviews scans with Waddell.

Much like the maladies they are designed to manage, cancer therapy strategies come in many forms. **William William, MD,** is a leader in chemoprevention of oral/head and neck malignancies, a field that focuses on therapies for the earliest stage of the cancer timeline to avert oncogenesis in high-risk patients. William completed his medical training in Brazil and joined the MD Anderson faculty as an assistant professor in Thoracic/Head and Neck Medical Oncology (THNMO) in 2008 after a six-month observership convinced him to continue his training here for postdoctoral and clinical fellowships. The recipient of several elite professional recognitions including an American Society of Clinical Oncology (ASCO) Young Investigator Award and ASCO Conquer Cancer Foundation Career Development Award, William's dedication to understanding the mechanisms behind oral oncogenesis has already led to several clinical findings vital to the field.

In some cases, it is possible to intervene before oral cancer develops due to the fact that many patients first develop characteristic precancerous lesions that are easily diagnosed by physical examination. However, not all patients presenting with such lesions progress to cancer, and William said there are few reliable molecular markers to identify those at highest risk. To worsen the situation, once a primary malignant focus develops, oral cancers are particularly susceptible to field cancerization, a phenomenon by which the entire oral mucosal epithelium suffers an increased risk for development of second primary malignancies. Prevention naturally comes to the fore as a means to combat these problems. With this in mind, William co-led the Erlotinib Prevention of Oral Cancer (EPOC) trial with **Vali Papadimitrakopoulou, MD,** professor of THNMO, and Scott Lippman, MD, former chair of THNMO and current director of the University of California San Diego Moores Cancer Center. This program enrolled patients from November 2006 through July 2012 and was first in the prevention clinical setting to select patients at risk for developing cancer based on a molecular marker. That marker, loss of heterozygosity (LOH) at specific chromosomal sites, was confirmed in EPOC as one of the most robust molecular prognostic determinants for oral cancer ever identified. LOH occurs when one of two parental copies of a gene is lost or mutated due to various genetic events, leaving the cell with only one functional allele. When this occurs at certain genetic loci in oral premalignant lesion cells, loss or mutation of the cell's second gene copy can promote malignant transformation.

William stressed that LOH alone is not a perfect marker for oral cancer risk, leading to the motivation behind his next major clinical efforts. One such program, funded by the Cancer Prevention Research Initiative of Texas (CPRIT), will involve extensive genomic and transcriptomic profiling of specimens collected during the EPOC trial to help uncover novel cancer risk markers and drug targets. Further, the intriguing finding that patients in the EPOC trial who developed a rash when treated with erlotinib had a very low risk for proceeding to cancer may steer William and oral/head and neck cancer treatment toward the blossoming field of immunotherapy. "Rash development is in part mediated by the immune system, so it got us to think that perhaps this phenomenon might be related to immune competency. Perhaps if we stimulate the immune system in the setting of an oral premalignant lesion, we might be able to prevent development of oral cancers," William explained. To explore this, EPOC specimens will undergo immune profiling to understand if certain cellular markers, especially T cell infiltration patterns and PD-L1 expression, can be associated with therapy success or risk for invasive cancer. While immune checkpoint inhibitors are being studied and employed across many cancer types, including early, advanced, and relapsed stages, this will once again be a first for the prevention arena, William's specialty.

"Chemoprevention is an area that is overlooked by a lot of trainees and medical oncologists, but if you think about it the clinical trial principles are actually very similar to those we use for drug development in invasive cancer," William said. Therapy advances in the last 20 years have made "reverse migration" plausible, using agents developed for advanced cancers at the prevention stage, a concept developed by **Waun Ki Hong, MD,** professor of THNMO and former Cancer Medicine division head. "You're not going to use cytotoxic chemotherapy for prevention, but now we have targeted agents and checkpoint inhibitors with reasonably safe side effect profiles, which can potentially be used early on to halt the initial phases of carcinogenesis."

At the end of the day, William is so deeply invested in the success of these projects because of the patients behind them. He said

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2015 Reuben Lotan Memorial Lecture

Unraveling the obesity-inflammation-cancer triangle

– By Erica Di Pierro

For years, America has been in the grip of a serious obesity epidemic that has resulted in the average adult weighing 20 pounds heavier than just 20 years ago. With this, many independent studies have shown that obesity increases the risk of numerous solid and liquid malignancies and is associated with worse clinical outcomes. The molecular mechanisms underlying these associations are under active investigation. One such mechanism is inflammation, a complex state that often accompanies obesity.

Andrew Dannenberg, MD, (pictured) professor of medicine and cardiothoracic surgery at New York's Weill Cornell Medical College, discussed his team's efforts to unravel the multitude of pathways that make up the obesity-inflammation-cancer triangle in breast and tongue cancers. He spoke June 9 at the annual Reuben Lotan Memorial Lecture, which was established to honor the late **Reuben Lotan, PhD,** revered former faculty member of the Department of Thoracic/Head and Neck Medical Oncology, unrivaled mentor, and compassionate friend. Lotan was a member of the MD Anderson faculty for 26 years, and over the course of his career authored 300 papers, 120 reviews, 60 book chapters, and garnered almost 15,000 citations. Lotan and Dannenberg were good friends and close collaborators with a shared passion for understanding the complex link between inflammation and cancer.

Dannenberg noted that obesity is commonly accompanied by low-grade systemic inflammation, which can promote molecular events leading to malignancy. In the context of breast cancer, inflammation is characterized by the presence of crown-like structures (CLSs), which form when dead or dying fat cells are encircled by macrophages. Dannenberg's research revealed that breast inflammation as manifested by CLSs was associated with obesity, metabolic dysfunction, and shortened recurrence-free survival in patients with recurrent breast cancer.

Having established a connection between CLSs and breast cancer pathology, Dannenberg and his team pushed on to the next challenge. Analysis for the presence of CLSs requires a large amount of adipose tissue from the patient to make a reliable diagnosis of inflammation. Therefore, identification of a breast inflammation-specific biochemical signature, such as a blood biomarker, would greatly simplify the process of assessing breast cancer relapse risk. The team developed a computational model that identifies a blood metabolite signature for breast CLSs and inflammation using data from a breast cancer metabolomics study, which may allow for development of a diagnostic blood test. Breast inflammation is a sentinel for the inflammatory state of other adipose deposits in the body, so the ability to detect it through changes in blood chemistry is all the more important. Dannenberg stated, "When you look at the breast, it's a reflection of what's going on systemically."

Interestingly, Dannenberg stressed that although breast inflammation is most common in obese women, it is actually not uncommon in women with a normal range body mass index (BMI). In these women, breast adipocytes are almost as large as those found in an obese woman's breast. Larger adipocytes are more likely to die, causing formation of CLSs. Further, women with a normal BMI exhibiting breast inflammation may also demonstrate elevated insulin levels, which an independent research team showed may increase their risk for developing breast cancer. As a result, Dannenberg asserted that classifying such women by BMI alone doesn't paint an accurate picture, as their breast inflammation status makes them "functionally obese." Ultimately, it seems they carry the same elevated disease risk as obese women.

Dannenberg and his team are also pressing hard to develop interventions for reversing breast inflammation. They have shown preclinically that calorie restriction in mice may reverse mammary gland inflammation brought on by a high fat diet. Whether the same effect will occur in humans remains to be seen.

He concluded the talk with a set of data that broadened the scope of his findings beyond breast cancer and into squamous cell carcinoma of the tongue, an area of interest he and Lotan shared. As with breast cancer, he discussed studies showing that an increase in BMI is associated with an increase in the amount of fat in the tongue. Likewise, obesity is associated with poor prognosis in patients with early stage tongue cancer. Dannenberg identified CLSs in tongue tissue, linking their presence with higher BMI, greater tongue thickness, vascular invasion, and a worse prognosis for tongue cancer. Regardless of the source organ, Dannenberg is resolute in finding a way to disrupt the obesity-inflammation axis to reduce the risk of disease and halt its progression.

13th Waun Ki Hong Visiting Professor

Umbrella protocols evolve to battle lung cancer

– By Erica Di Pierro

From left, **Drs. Bonnie Glisson, Herbst,** and **Hong**

Each year since 2002, a new investigator has received the honor of being named a **Waun Ki Hong** Visiting Professor in Cancer Medicine. The award was established to pay homage to this legendary physician, mentor, and clinical pioneer who recently retired as head of the Division of Cancer Medicine, but remains an active member of the MD Anderson community whose ideals and values will remain at the core of the institution for many years to come. Over the course of his 30-year tenure here at MD Anderson, Hong built an enormously impactful empire in the cancer world evidenced not only by his expansive list of clinical and research contributions, but also by the cadre of physicians who continue to benefit from his sage training. His career spanned numerous revolutions in cancer treatment, many of which he directly facilitated.

This year, Roy Herbst, MD, PhD, chief of Medical Oncology and associate director of Translational Research at Yale Cancer Center, was selected for this prestigious professorship. From 2001 to 2011, Herbst was chief of Thoracic Medical Oncology in the department of Thoracic/Head and Neck Medical Oncology at MD Anderson, during which time he worked closely with Hong to drastically revamp lung cancer clinical trial and treatment paradigms. Looking back on a gathering last year for Hong's send-off, Herbst recalled, "What I was struck by was that my situation is not unique. There was a packed room of people who have been mentored, guided, and inspired by him." Together, Herbst and Hong co-led the Biomarker-integrated Approaches of Targeted Therapy for Lung Cancer Elimination (BATTLE)-1 clinical trial, a game-changing program that used patient-specific biomarkers to determine the best course of treatment.

During his seminar on Aug. 4, Herbst explained that the BATTLE trials proved core biopsies to be accurate indicators of real-time tumor biomarker status, which can be used to match patients to appropriate targeted agents. A major strength of the BATTLE schema was adaptive randomization, which allowed for adjustment of treatment over the course of the trial as subsequent biopsies revealed new information about the tumor. This framework has inspired a handful of other umbrella protocols, where large collaborative efforts aim to develop the best biomarkers and innovative clinical trials to match patients with the ideal drug for their cancer.

Though these studies have changed the landscape of lung cancer treatment strategies, there remain a number of challenges to overcome, Herbst counseled. For one, most recent advances have focused on a small number of actionable mutations, leaving approximately 80% of lung cancers without specific therapies. Further, many targeted therapies are in a losing battle with constantly evolving tumor cells, which cause most patients to eventually develop resistance. So, where do we go from here? Given the highly mutagenic and therefore immunogenic nature of lung cancers, Herbst believes that immunotherapy is the next major treatment revolution for these diseases.

Indeed, preliminary attempts to boost and maintain CD8 T cell reactivity within lung tumors using PD-1/PD-L1 checkpoint blockade have produced strong, durable responses in some patients. However, Herbst explains that while immunotherapies are miracle drugs for some, it is difficult to predict their long-term benefits since they are still in infancy and, in reality, responses are quite varied. The goal, of course, is to identify which patients will respond optimally to this new generation

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In the tradition of mentorship established by Hong, Herbst takes time after the lecture to speak directly with the Hematology/Oncology fellows and take questions.

Umbrella protocols evolve to battle lung cancer

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of drugs and which will require alternative or combination options—a challenge begging for a biomarker-driven BATTLE approach. One such potential prognostic biomarker is PD-L1, a ligand expressed by tumor and immune cells that shuts down CD8 T cell responses when it engages receptor PD-1. Higher levels of PD-L1 expression are associated with longer overall survival when the PD-1/PD-L1 interaction is blocked using monoclonal antibodies in certain lung cancers. However, PD-L1 is plagued by several issues including dynamic, heterogeneous expression even within the same tumor, and lack of accepted standards defining a positive PD-L1 staining result. A recent effort within Herbst's group focused on pembrolizumab, an anti-PD-1 monoclonal antibody typically used to treat melanoma that is currently under priority review by the FDA for treatment of advanced non-small cell lung cancers (NSCLC). In support of this, an assay utilizing pembrolizumab showed that NSCLC patients with the strongest immunostaining profiles had dramatically improved survival at one year when compared with patients with the weakest staining. The ultimate aim of these umbrella studies is to gradually, therapy by therapy, identify and characterize the responders so the non-responders can be moved to the next trial.

Recently, Herbst participated in a large collaborative effort to test the new anti-PD-L1 antibody atezolizumab, including pre- and post-treatment biopsy collection. Phase Ia results demonstrated a 23% response rate that was rapid, durable, and accompanied by minimal drug toxicity in NSCLC patients. Typically, tumor cells are predominantly analyzed for expression of PD-L1, following the idea that upregulation of this ligand strikes down a mounting CD8 T cell response by engaging PD-1. However, immunostaining done alongside the atezolizumab clinical trial revealed that, while tumor cell expression of PD-L1 is important, patients whose immune infiltrate—T cells, macrophages, and dendritic cells—stained positive for PD-L1 had the best response rates. Ultimately, such staining seems to associate with success for this immunotherapy because it signals a vigorous, functional immune cell population that can traffic into the tumor where its activity is required.

Herbst accepts that biomarker identification is complicated, stating, "It's not like an EGFR mutation where you have it or you don't." Instead, it is a long road of trial and error to assign the best marker to each available treatment. With the recent acquisition of the Yale SPORE in Lung Cancer, Herbst has assembled a multidisciplinary lab to perform exhaustive genetic, immunologic, and bioinformatic analyses on biopsies from normal tissue, tissue treated with targeted therapy or immunotherapy, and treatment-resistant samples to get a complete picture of what's changing in the tumor environment at each stage—his very own BATTLE immunotherapy approach.

William seeks to stop oral cancer before it develops

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that while he loves to design and write protocols, the true joy comes in sharing the experience with his patients and seeing them get excited about participating. While chemoprevention is a crucial facet of his medical career, William is devoted to helping patients all along the cancer continuum. With a diagnosis of stage IV metastatic adenoid cystic carcinoma, his patient of over two years, Lisa Waddell (above), was resolved to get to MD Anderson from her home city of Tallahassee, Fla., in the hopes of finding a novel clinical trial. After carefully considering her options, William matched her to a Notch1 inhibitor protocol that has gradually stabilized her cancer. "He is so very thorough, he listens, and with him, no question is a stupid question," Waddell said, praising her doctor.

"It's everyone's battle to reduce the cancer burden, and when you have a patient who actually joins you in that and shares it, it's just amazing," William expressed sincerely.

Fellowship graduation

Experiences prepared fellows to care for the most vulnerable patients

– By Maxsane Mitchell

The 2015 graduating class

"You're entering a career that will always be exciting," said **Ethan Dmitrovsky, MD,** executive vice president and provost, as he addressed 14 physicians just moments before they would receive their certificates of completion from the Division of Cancer Medicine's Hematology/Oncology Fellowship Program. "For example, when I trained, melanoma used to be a metastatic disease for which we could only provide palliative care to our patients. But now, we have optimism. Now, we have Lazarus moments when we can treat patients on their sick beds and then give them back to their families better. In the future, research—some being conducted by the people in this room—will give us more advances." He congratulated the group at their June 19 graduation ceremony and thanked their families for years of support. "None of you got here alone. Your families are so proud of you, and so are we. It's a privilege for me to be here with you at this moment," said Dmitrovsky.

Hwu: **"Education is a high priority at MD Anderson and for the division."**

Division Head **Patrick Hwu, MD,** thanked the executive fellowship committee for their hard work. "Education is a high priority at MD Anderson and for the division. I'm thankful to the committee members who work hard on your behalf and even meet once a week at 6:45 a.m. because they want to see you succeed," Hwu said. He also thanked **Michael Davies, MD, PhD,** associate professor of Melanoma Medical Oncology and co-principal investigator for the T-32 training grant, which was recently renewed. It earned the highest possible impact score of 10, and funding was approved for seven trainees.

Robert Wolff, MD, fellowship program director, shared some thoughts about the trainees before presenting their certificates. **Jonathan Brammer, MD,** spent only his third year of training in the program to grow his talent in the area of stem cell transplantation. "He's already developing a clinical trial, which he hopes to carry out at MD Anderson as part of our Advanced Scholar Program," Wolff said. **Diogo Bugano Diniz Gomes, MD,** "set our world on fire in many ways, including helping our program to earn the best score on the recent ASCO In-Training Exam." The six-hour assessment is given to second- and third-year fellows to test their medical knowledge up to that time. It is used as a self-evaluation tool.

Wolff recalled that **Jennifer Goldstein, MD,** joined the program with a passion for caring for pancreatic cancer patients and for making sure women in medicine have an influential voice in the field. **Marc Hoffman, MD,** was described as "the real deal" who looked at things differently and was particularly interested in patient safety, quality improvement, and helping patients gain access to cancer care sooner. Wolff, whose home department is Gastrointestinal Medical Oncology, said that he was excited to become colleagues with **Daniel Halperin, MD,** who will join their group to continue the work he's started in endocrine tumor translational research. "I also appreciate that Dr. Halperin has become really good at MedAptus, which will come in handy as we make an 'Epic' transition in the next year," said Wolff. He acknowledged **Jin Im, MD, PhD,** as having big ideas. "When she applied for fellowship, we considered her a strong physician-scientist track candidate. We were right. She's now working with our faculty to develop immunologic approaches that are over my head, and I believe she will someday help us cure hematologic malignancies," said the program director. **Lori Leslie, MD,** was described as an outstanding doctor and great fellow who served as hematology chief and made numerous presentations to applicants about how to make the most of their fellowship. In their souvenir booklet, Leslie wrote, "How exciting to finally graduate from the 26th grade," referencing the years from first through 12th grade, four years of undergraduate studies, four years of medical school, three years of residency, and three

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Fellowship graduation

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From left: **Wolff, Goldstein, Hwu,** and **Rieber**

years of fellowship. Wolff mentioned that **Ravin Ratan, MD,** was the fellow who truly demonstrated interest and leadership in medical education. He served as a chief fellow for two years, earned a master's degree in education, and accepted a position with Sarcoma Medical Oncology, where he will also devote time to working with incoming Hematology/Oncology fellows.

The graduates also acknowledged administrators and faculty whom they believe made a crucial impact on their experience. Recognized were **Wendy Austin, RN, MS, AOCN, NEA-BC, FACHE; Richard Champlin, MD,** associate division head and professor of Stem Cell Transplantation and Cellular Therapy; and Michael Kroll, MD, professor of Benign Hematology and executive steering committee member, whom they especially wanted to salute for always responding to their emails. "It was exciting to know that Dr. Kroll would always answer our emails promptly—and with one to 200 reference PDFs," said Leslie to the delight of the audience who heard a similar story from last year's graduates! **Alyssa Rieber, MD,** assistant professor of General Oncology and faculty associate program director, was recognized for demonstrating compassionate communication with patients. "I recall my first day at LBJ, when Dr. Rieber walked into the room carrying several boxes of tissues. She thought it was great that she could get her hands on that many," said Hoffman, who later learned that Rieber goes through several boxes while speaking to patients and their families about the need for hospice care as opposed to curative treatment. "When I asked her how she's able to have these intensely emotional moments with patients and then turn around seconds later to teach us something, she told us, 'Faith, listening to NPR, and a little red wine.' " As an appreciation gift, the fellows gave Rieber a bottle of Texas red wine and a pink NPR wine-holder. The group also thanked **Michael Davies, MD, PhD,** for making time for them despite his immense schedule. On behalf of his peers, **Matthew Campbell, MD,** said they were fortunate to have completed their training at MD Anderson, where legends in the field were still working and sharing insight. "Among them, **Dr. Hong,** who helped to change the course of treatment for laryngeal cancer patients by introducing other treatment approaches that spared patients radical surgery and allow them to speak and talk normally. There's also **Dr. Emil Freireich,** who changed the course of leukemia care," Campbell said, adding that he and his peers also considered their time at LBJ invaluable. "That experience truly got us ready to care for patients at their most vulnerable. Helping them face medical challenges and assess obstacles is something none of us will forget."

Chief fellows for 2015-2016

Chief:
John Livingston, MD

LBJ Chief:
Aron Rosenstock, MD

Hematology Chief:
Luis Baez Vallecillo, MD

Education Chief, for MD Anderson:
Amishi Shah, MD

Education Chief, for UT Residents:
Andrew Shaw, MD

Graduation: Celebrating outstanding fellows

The Division of Cancer Medicine usually hosts the Hematology/Oncology Fellowship Awards during a time normally set aside for a Grand Rounds lecture, but this year the event was quite literally a washout. Tropical Storm Bill caused severe flooding that prevented many faculty and employees from coming to work, forcing division leadership to then present the awards at the beginning of the June 19 graduation ceremony and dinner.

Campbell, *right,* accepts Humanitas Award from **Theriault**.

Richard Theriault, DO, MBA, medical director of MD Anderson's Physician's Network and retired professor of Breast Medical Oncology, presented the Humanitas Award, which he established several years ago to recognize a fellow for providing exceptionally mindful, empathetic, and reflective practice. "There is so much more knowledge about science and biology than when I was a fellow, but you're still caring for patients at their most vulnerable. So, your charge must always be to cure their disease when possible, and when it's not, you must still help ease suffering at the end of life," he said. "Let me encourage all of you to continue to develop the skill of being 'present' for your patients, their families, and your colleagues. This is the human being part of care." He presented the award to two graduates this year: **Matthew Campbell, MD,** and **Lori Leslie, MD.**

The program presented several other honors:

- **Robert Orlowski, MD, PhD,** *ad interim* chair of Lymphoma/Myeloma, Mentor of the Year
- **David Ramirez, MD,** assistant professor of Breast Medical Oncology, Teacher of the Year; and the Vicente Valero Lyndon Baines Johnson (LBJ) Clinician Educator Award of the Year, recognizing efforts specifically at that campus
- **General Oncology,** Teaching Department of the Year
- **Christopher Logothetis, MD,** chair of Genitourinary Medical Oncology, Distinguished Alumnus of the Year
- **Richard Champlin, MD,** associate division head, Honorary Fellow of the Year
- **Michael Davies, MD, PhD,** associate professor of Melanoma Medical Oncology, Leadership in Education
- **Tina Cascone, MD, PhD,** the Clifton D. Howe Award, honoring first-year fellows for outstanding clinic performance

Wolff, *right,* congratulates **Cascone** for winning the Clifton D. Howe Award.

- **Daniel Halperin, MD,** the Waun Ki Hong Achievement in Clinical Investigation Award
- **Jennifer Goldstein, MD,** and **Jin Im, MD, PhD,** the Waun Ki Hong Achievement in Basic Science Research

Additionally, program leadership recognized the contributions of the five chiefs who were responsible for components of the group's training: **Drs. Luis Baez, Andy Livingston, Aron Rosenstock, Amishi Shah,** and **Andrew Shaw.** Second- and third-year fellows, Drs. Amishi Shah and Marc Hoffman, were noted for strong performance at LBJ, where they cared for patients in continuity clinics under faculty supervision.

Where are they going?

Nearly half of all our 2015 fellowship graduates will continue their careers at MD Anderson. They are:

Jonathan Brammer, MD, Advanced Scholar in Stem Cell Transplantation and Cellular Therapy
Matthew Campbell, MD, Assistant Professor in Genitourinary Medical Oncology
Jennifer Goldstein, MD, Advanced Scholar in Gastrointestinal Medical Oncology
Daniel Halperin, MD, Assistant Professor in Gastrointestinal Medical Oncology
Jin Im, MD, PhD, Advanced Scholar in Stem Cell Transplantation and Cellular Therapy
Ravin Ratan, MD, Assistant Professor in Sarcoma Medical Oncology

Joining other programs are:

Diogo Bugano Diniz Gomes, MD, Albert Einstein Hospital in Sao Paulo, Brazil
Marc Hoffman, MD, University of Kansas Cancer Center in Overland Park, Kan.
Ryan Jacobs, MD, Levine Cancer Center in Charlotte, N.C.
Michael Lee, MD, University of North Carolina in Chapel Hill, N.C.
Seung Tae Lee, MD, PhD, University of Maryland in Baltimore, Md.
Lori Leslie, MD, John Theurer Cancer Center in Hackensack, N.J.
Yanyan Lou, MD, PhD, Mayo Clinic in Jacksonville, Fla.
Brian Thomas, MD, Allegheny Health Network Cancer Institute in Pittsburgh, Pa.

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and with patients during his residency at Yale Medical Center pushed Groisberg toward developing immunotherapy treatments for metastatic melanoma. During his residency, he designed a study combining ipilimumab with XRT that forced him to navigate statistical, ethical, and emotional hurdles. He also gained clinical research experience while studying antibiotic resistance in *Acinetobacter baumannii* as well as aspirin adjuvanticity in treatment of *Clostridium difficile.* In the end, Groisberg has grown into his role as a clinician with great strength in both clinical trial implementation and patient care who hopes to push the boundaries of cancer therapeutics during his budding career.

Prateek Gulhati, MD, PhD

MD/PhD: The University of Texas Medical Branch School of Medicine, Galveston, Texas
Residency: The Mount Sinai Hospital, New York, N.Y.

During his adolescence, Gulhati witnessed a close family friend succumb to ovarian cancer after a prolonged battle, which hooked him emotionally to the disease. He transformed this tragic experience into a lifelong drive to improve quality of life for those suffering from cancer. Gulhati became an exceptionally compassionate clinician who treats patients as he would a member of his own family, and administers care from emotional, physical, and mental angles. No stranger to the lab bench, Gulhati published an impressive body of research during his PhD studies including one of the most cited articles of 2011 in the journal Cancer Research demonstrating the role of mTOR kinase activity in colorectal cancer metastasis. He then went on to track the clonal origin and dissemination route of prostate cancer metastases during his residency. According to his mentors, Gulhati's appreciation of basic science discoveries has endowed him with the ability to "integrate basic science and clinical concepts as they apply to patient problems and revise hypotheses accordingly." This aspiring physician-scientist is poised for a fruitful career translating laboratory discoveries into novel therapies to ease the suffering of his patients.

Boyu Hu, MD

MD: Case Western Reserve University School of Medicine, Cleveland, Ohio
Residency: Hospital of the University of Pennsylvania, Philadelphia, Pa.

During residency, Hu was faced with a challenging case that required him to confront the potentially toxic side-effects of Hodgkin's lymphoma treatment in a suffering patient, who sadly succumbed to drug-related hypoxic lung injury. Already on the way to becoming a physician, Hu had found his calling in this experience: how to approach cancer treatment such that toxicity is minimized and cures are optimized. In response to this situation, he created a useful database for associating PET/CT imaging results with clinical outcome in Hodgkin's lymphoma. Hu is thrilled to be in an environment where he can combine his research interests in lymphoma and leukemia, transplant medicine, health disparities, and social competency with a diverse patient population to develop into a well-rounded care provider.

Paul Koller, MD

MD: The University of Texas Medical School, Houston, Texas
Residency: Baylor College of Medicine Affiliated Hospitals, Houston, Texas

While Koller has drawn inspiration from many figures in his life, none have surpassed his father, who shared the oncologist profession but tragically passed away from the malady he dedicated his life to understanding. Koller's father captivated him with the interplay between cellular metabolism and onco-genes through his high school years, but pushed Koller to choose whichever career fulfilled him. Luckily, oncological medicine proved to be a perfect fit as experiences in residency convinced him to become an expert in managing cases complicated by underlying cancers. During medical school, Koller prepared an expansive chart review and manuscript for publication outlining the impact of prior malignancy on chronic myeloid leukemia patients being treated with tyrosine kinase inhibitors. It is clear that Koller's care for patients and passion for getting to the core of a complex ailment have prepared him to thrive as an academic hematology/oncology physician.

James (J.T.) Link, MD, PhD

MD: Stanford University School of Medicine, Stanford, Calif.
PhD: Columbia University and Sloan-Kettering Institute for Cancer Research, New York, N.Y.
Residency: University of California, San Diego, Calif.

Link arrived at the interface of medicine and research via highly productive graduate, postdoctoral, and professional experiences in synthetic organic chemistry and drug discovery. His interest in fighting cancer was evident in his research accomplishments including anticancer natural product syntheses, highlighted by the protein kinase inhibitor staurosporine and taxol, as well as efforts to deliver siRNA to treat hepatocellular carcinoma. He was also a key member of pharmaceutical teams that discovered three clinical candidates, including leading an effort that progressed to clinical evaluation. During this period, he also mentored doctoral chemistry students and associate chemists by assisting with publications and national conference preparations. A close relative's diagnosis with lymphoma and their relationship through treatment and recurrence convinced Link to make a career change to have a direct impact on patients navigating the frightening road of cancer diagnosis and therapy. Professional experiences have motivated Link to return to chemistry research as he embarks on the hematology/oncology fellowship. He has decided to focus on developing anti-cancer therapeutics via medicinal chemistry in the lab and to see patients as a gastrointestinal oncologist. This chemist and physician-scientist in training also plans to participate in clinical trials, learning from the diverse patient population at MD Anderson.

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Research and Education

Hossein Maymani, MD
MD: University of North Carolina at Chapel Hill School of Medicine, Chapel Hill, N.C.
Residency: University of Oklahoma Health Sciences Center, Oklahoma City, Okla.
Implementing bone marrow transplants and elucidating the biology of acute leukemia and lymphoma are Maymani's primary goals as he begins the hematology/oncology fellowship. Experiences as chief resident at the bedside allowed Maymani to recognize that even the best clinical judgment cannot save a patient who requires novel therapies. Thus, he decided to split his time between establishing relationships with patients and driving discoveries at the lab bench with a career in translational research. In line with this, he earned an esteemed American Society of Hematology "Hematology Opportunities for the Next Generation" award to fund a translational study using asparaginase in treatment of "double-hit" diffuse large B cell lymphomas. Throughout his medical career, Maymani has also been an active advocate for medical education, representing residents and medical students in several organizations to advance positive policy and education changes.

Meredith McKean, MD, MPH
MD/MPH: University of Iowa Roy J. and Lucille A. Carver College of Medicine, Iowa City, Iowa
Residency: University of Colorado, Aurora, Colo.
McKean was engendered with a rock-solid work ethic early in life growing up on a farm in rural Iowa where she helped raise and care for livestock among many other activities. She took to running and committed herself fully to it, earning a university athletic scholarship. Personal interests brought McKean to medicine, and her thirst for knowledge and dedicated spirit earned her awards for research and public health initiatives in diabetes and breast cancer screening in underserved communities. Not only did she excel on a personal level, McKean was also heavily involved in advocating for students in medical school as a delegate to the Association of American Medical Colleges. Residency bolstered this physician's love of oncology and hematology, the patient-physician relationship, and molecular research. During this time, she spearheaded an IRB-approved protocol to study androgen receptor expression in male breast cancer. No doubt McKean will dive into her fellowship with the same fervor she has shown in many life endeavors.

Pavlos Msaouel, MD, PhD
MD/PhD: University of Athens School of Health Sciences, Athens, Greece
Residency: Albert Einstein College of Medicine/ Jacobi Medical Center, New York, N.Y.
An earnest desire for far-reaching, life-long learning has inspired Msaouel on his path to become a jack-of-all-trades in oncological medicine. Hailing from Greece, Msaouel has been behind the wheel of many noteworthy efforts during medical school and as chief resident: a high-impact study using an engineered oncolytic measles virus strain to fight prostate cancer; an educational program to ensure understanding of advanced clinical statistics by his fellow residents; a founder of several websites and peer reviewer of many reputable journals; and a strong proponent for teaching, collaboration, and dissemination of information among medical colleagues. In recognition of his exceptional mentoring skills, he was inducted in May 2014 as a member of the Leo M. Davidoff Society of the Albert Einstein College of Medicine of Yeshiva University for Outstanding Achievement in the Teaching of Medical Students. The combination of his doctoral studies and medical training resulted in an extensive list of publications that attest to his passion for knowledge. During his time in the hematology/oncology fellowship, Msaouel hopes to put his myriad research and clinical experiences to use, striking a balance among patient care, research, and clinical teaching.

Maliha Nusrat, MBBS
MBBS: Aga Khan University Medical College, Pakistan
Residency: The University of Texas Health Science Center at Houston, Houston, Texas
Nusrat knew from an early age that she wanted to be a physician like her mother, and it was her father's passing from lymphoma that pushed her toward a career in translational research in oncology. A summer scholarship during medical school took her to King's College in London where she built and transduced expression vectors to study in vitro stem cell proliferation. In her residency, Nusrat was awarded a 2013 American Society of Hematology Abstract Achievement Award for investigating outcomes among high and standard risk multiple myeloma patients after autologous stem cell transplantation. Her residency experiences were enlightened by the guidance of several MD Anderson faculty and fellows, who inspired her to return to this institution for her own fellowship. Nusrat is eager to make the best of her fellowship by learning the laboratory and clinical skills needed to be an independent translational researcher.

Amanda Parkes, MD
MD: University of Wisconsin School of Medicine and Public Health, Madison, Wis.
Residency: Massachusetts General Hospital, Boston, Mass.
Probably a very small percentage of physicians can claim that polka dancing was a significant driving force behind their career trajectory. Within that group is Parkes, whose grandfather captivated her with his spirited polka dancing from the time she was a child through to adulthood. While training to become a physician, Parkes helped her grandfather to navigate difficult cancer diagnoses and to ultimately stop treatment, transitioning into end-of-life care. Parkes' grandfather engendered in her a passion for oncology and a broadened perspective on treating cancer that she says encouraged her to look beyond a cure towards a wider interpretation of success. Her medical career thus far has been filled with basic and clinical research, establishment of a nonprofit organization promoting healthy lifestyles in primary and secondary schools, service to and representation of her fellow physicians in various local and national groups, and intensive patient care and guidance. Parkes aims to focus on solid tumor oncology and development of innovative clinical trials as she continues to follow the passion her grandfather's dancing feet helped her to recognize.

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Research and Education

Christine Parseghian, MD

MD: Tufts University School of Medicine, Boston, Mass.
Residency: UCLA Ronald Reagan Medical Center, Los Angeles, Calif.

Parseghian connected with her passion for hematological cancer therapeutics here at MD Anderson during a summer internship with **Drs. Hagop Kantarjian** and Jean-Pierre Issa. This experience inspired her to pursue a competitive medical school program that allowed one year of intensive research. Parseghian studied a newly identified JAK2 kinase mutation present in most myeloproliferative neoplasms (MPN) in the context of a mouse model. The results of these efforts, published in Cancer Cell, demonstrated that hematopoietic stem cells possessing this new mutation could independently initiate MPN disease and were resistant to treatment with typical JAK2 inhibitors. Parseghian is particularly fascinated by developments in next-generation sequencing that will bring unprecedented advances to the cancer therapy arena in coming years. While excited about these forward strides, Parseghian is also focused on challenges that remain in the field, such as how to treat tumors with loss-of-function mutations or how to deal with drug-resistant tumors. Rigorous training has prepared her for the physician-scientist track, where she will be able to address these challenges in the lab and the clinic.

Patrick Pilie, MD

MD: Duke University School of Medicine, Durham, N.C.
Residency: University of Michigan, Ann Arbor, Mich.

Often, cancer with the same anatomical origin behaves very differently from one patient to the next. This fact attests to the impact of a patient's unique genetic makeup on cancer prognosis and could be a gateway to personalized treatment—crucial points that have inspired genetics buff Pilie to study oncology during his journey through medical education. Pilie nurtured his interest in genetics through his undergraduate education and into a dedicated year of translational research preceding medical school where he studied epigenetic and genetic changes of early mammary carcinogenesis in a group of women at high risk for developing breast cancer. He continued to study breast cancer as a Howard Hughes Medical Institute research fellow in medical school then shifted to genetic and molecular profiling of early-onset hereditary prostate cancer during his residency. Pilie's residency years also helped him develop a holistic approach for management of cancer diagnosis, treatment, and side effects, allowing close connection with patients. Having dealt with cancer's devastation within his own family, Pilie is very well prepared to walk with his patients through the challenging experience of cancer diagnosis.

Gustavo Schvartsman, MD

MD: Universidade Federal de São Paulo, São Paulo, Brazil
Residency: Universidade Federal de São Paulo, São Paulo, Brazil

As the newest member of the division's International Medical Oncology Program, Schvartsman joins the group for one year at the conclusion of an internal medicine residency in Brazil. As a result of his training, Schvartsman has contributed to the publication of a paper on predicting the need for red blood cell transfusions in critically ill patients, a book on caring for arthritis patients, and book chapters on oncology emergencies and sepsis. He has also developed a Smartphone application that generates evidence-based recommendations for health prevention measures. Further, strong leadership values have served him as a preceptor for medical students during residency, where he provided guidance and discussed clinical cases. During medical school, Schvartsman attended a two-week observership at MD Anderson, which was a large factor in his decision to cross the globe for fellowship training here. This physician will bring a unique world view and medical skill set to the program as he seeks to advance the oncology field.

Shiraj Sen, MD, PhD

MD/PhD: The University of Texas Medical School at Houston, Houston, Texas
Residency: The University of Texas Southwestern Medical Center at Dallas, Dallas, Texas

Sen began his medical studies focused on the cardiovascular system with much of his graduate research centered on cardiac health and stress. However, studying metabolic regulation of the mTOR signaling pathway and cooperating mutations in BRCA1 breast cancers convinced him to transition into oncology. Fascinated by tumor growth dysregulation and metastasis, he participated in a residency that allowed him to fill gaps in knowledge and associate clinical outcomes with diagnosis techniques in rare and aggressive cancers. Sen also came to realize in this time how much he, as a physician, could learn from cancer patients and how much he admired their strength. With a strong research portfolio already under his belt, Sen is poised for a successful fellowship and career in which he can affect novel therapeutic advances that offer hope to his patients and their families.

Patrick Williams, MD, CM, PhD

MD/PhD: McGill University Faculty of Medicine, Montreal, Canada
Residency: University of Maryland Medical Center, Baltimore, Md.

Harnessing basic science discoveries for innovative therapies, translating and implementing clinical research literature, and treating patients as individuals: these qualities are the making of a successful physician-scientist. Williams embodies each of these qualities as the result of dedication, passion, and a highly productive medical education. His doctoral research focused on implementation of autoimmunity to battle cancer, and his efforts resulted in the production of novel cytokine fusion peptides that could ultimately prime immune cells for reaction against tumor specific antigens. Williams has published widely, contributed to several patents, and traveled the world presenting and earning awards for his research. In the end, all of his exertions are motivated by a sincere desire to connect personally with patients and their families as they navigate the uniquely challenging and intimidating experience that comes with a cancer diagnosis.

Moon Shot Program updates

– By Erica Di Pierro

MD Anderson's landmark moon shot programs are collaborative, multidisciplinary research and clinical efforts designed to bring about rapid progress in cancer patient quality of life and survival. Six moon shot teams, each representing different types of cancer, were rolled out in February 2013: Breast and Ovarian Cancers, Chronic Lymphocytic Leukemia, Lung, Melanoma, Myelodysplastic Syndromes and Acute Myeloid Leukemia, and Prostate. During Fiscal Year 2015, six additional teams were launched, representing B Cell Lymphoma, Colorectal, Gliobastoma, High Risk Multiple Myeloma, HPV-Related, and Pancreatic cancers.

Three primary criteria were considered during selection of the moon shots: the current state of scientific knowledge in the field considering the full cancer continuum from prevention to survivorship, the strength and scope of the investigators involved, and the likelihood for rapid translation of laboratory discoveries into reduction of cancer deaths. The success of these lofty endeavors is supported by 10 infrastructural platforms ranging from a group devoted to efficient decoding of big data to a community-focused faction promoting social and policy changes for cancer prevention.

At the core of each moon shot are flagship projects that distill and focus the energies of these dynamic groups into definable benchmarks toward their ultimate goals. The teams regularly report their progress to the MD Anderson community. Following are recent developments for three of the original six moon shots, focusing on contributions of division faculty.

Chronic lymphocytic leukemia: "Cancer advance of the year"

Leaders: **Michael Keating, MD,** clinical professor of Leukemia, and **William Plunkett, PhD,** professor of Experimental Therapeutics

With four new approved therapies in one year, therapeutic progress for chronic lymphocytic leukemia (CLL) has taken such a giant leap forward recently that the American Society for Clinical Oncology singled it out as the "cancer advance of the year" in its 2015 Annual Report on Progress Against Cancer. Updates from the CLL Moon Shot were presented on January 23 at Institutional Grand Rounds, starting with a brief overview from **Michael Keating, MD,** clinical professor of Leukemia and co-leader of the moon shot. CLL is the most common leukemia in the western world, leading to dysfunctional, immortal lymphocytes that compromise function of the entire immune system. While this disease is typically slow growing and easily controlled with established therapy regimens, almost half of CLL patient deaths are associated with additional, often aggressive malignancies that are worsened by their co-occurrence with CLL. Therefore, refinement of frontline therapies like those that have been recently approved is increasingly important in extending patient survival. The CLL Moon Shot is a collaborative group of investigators committed to this precise goal: continually developing, improving, and understanding treatment options to better the lives of those suffering from this malignancy.

Alessandra Ferrajoli, MD, professor of Leukemia, spearheads the study of second malignancies within the CLL Moon Shot. Statistics in the medical literature on the incidence of additional cancers in CLL patients are murky at best, with various studies reporting a range of 3 to 27% of patients with CLL having one additional cancer. What is clear is that the cancers that accompany or follow CLL tend to be aggressive, and prognosis is worse for those patients who develop one of these cancers after or in conjunction with CLL. To clarify the numbers for themselves, Ferrajoli and her team performed a retrospective review of just over 1,300 patients who received treatment for CLL and followed up after five years. Within this cohort, 24% of patients had one or more other cancers after five years, with a majority occurring after treatment for CLL. Most common was non-melanoma skin cancer followed by prostate cancer and melanoma. Also, individuals with deletion of the long arm of chromosome 11, a cytogenetic aberration commonly found in CLL, were more likely to develop a second malignancy. Finally, the presence of additional cancer led to an average decline of four years in life expectancy. A study with follow-up at 10 years yielded similar statistics, this time showing a higher frequency for melanoma, leukemia, and head and neck cancers when compared with the general population. These numbers illuminate the clear connection between CLL and development of other cancers, and pave the way for understanding why these trends exist and how to prevent them. Future directions will likely include genomic and immunologic analyses to determine the contributions of CLL and host factors in bringing about additional malignancies.

On the clinical side, **Jan Burger, MD,** associate professor of Leukemia, is working to elucidate the mechanism by which ibrutinib, a newly approved targeted therapy for CLL that inhibits Bruton's tyrosine kinase (Btk), reduces the CLL cancer burden. Btk functions downstream of the B cell receptor, helping to propagate incoming activation signals. Burger found that within a few weeks of treatment with ibrutinib, tumor lymphocytes rapidly redistribute from the lymph nodes to peripheral blood, many dying either on the way due to cytotoxic effects of the drug or soon thereafter due to separation from the pro-survival tumor microenvironment. A follow-up study had patients drink

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"Cancer advance of the year"

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isotopic water, which labels dividing tumor cells and was used to illustrate that ibrutinib completely halts CLL cancer cell proliferation. This observation emphasizes the importance of signaling downstream of the B cell receptor in driving continued proliferation of CLL cells. Combined, Burger's results suggest that ibrutinib treatment brings about remission both by stifling B cell receptor signaling and by removing CLL cells from the tumor microenvironment, leading to massive cell death. In terms of his experiences in the clinic, Burger and others have observed that patients with certain chromosomal abnormalities tend not to have durable responses, often relapse, and rarely achieve remission when treated with ibrutinib. These abnormalities can include deletion of the short arm of chromosome 17, an alteration associated with particularly recalcitrant CLL, in combination with other anomalies. Resistance to ibrutinib treatment is associated with several known mutations of the Btk protein sequence, but the exact mechanisms underlying resistance development and poor responses of these patients with irregular karyotypes remain to be fully understood. Burger emphasizes that, when possible, allogeneic stem cell transplants are a good option for patients with problematic cases.

Immune checkpoint inhibitor therapies have seen success in a number of liquid and solid malignancies. As a cancer characterized by defective immune cell function and cell-to-cell interactions, CLL is also proving amenable to intervention with immunotherapies. **Nitin Jain, MBBS,** assistant professor of Leukemia, is developing monoclonal antibodies against several cellular targets, including PD-1 and PD-L1, which shut down T cell responses crucial for anti-tumor activity. Jain explains that PD-1 may be overexpressed in T cells of CLL patients, leading to limited anti-tumor responses in these cells and ultimately lower patient survival. Similarly, PD-L1 is overexpressed in B cells of CLL patients, which decreases reactivity of these cells and the overall immune response as well. In line with this, Jain and colleagues have proposed a Phase II trial for combination of nivolumab, a PD-1 blocker, and ibrutinib. The hope is that this combination will be particularly potent in treating refractory CLL cases and converting ibrutinib partial responses to complete responses. Jain and team are also pursuing a second angle of attack: boosting the activity of natural killer (NK) cells to enhance the antibody-dependent cellular cytotoxicity induced by the primary therapy rituximab, which targets CD20 on B cells. Several monoclonal antibodies developed to this end, including anti-CD137 urelumab and anti-KIR lirilumab, are currently in clinical trials in combination with rituximab. Correlative studies will take place alongside these trials to determine molecular predictors of response, treatment efficacy, and immune profile. Jain's contributions to CLL immunotherapeutics are crucial in moving the field forward, understanding the immune profile of the disease in response to treatment, and widening the range of treatment options for CLL patients with difficult cases.

Lung: Progressing from stagnant treatment paradigms

Leaders: **John Heymach, MD, PhD,** chair of Thoracic/Head and Neck Medical Oncology, Stephen Swisher, MD, head of the Division of Surgery, and Jack Roth, MD, professor of Thoracic and Cardiovascular Surgery

Heymach: Project aims to profile every actionable mutation, even those at 1% frequency.

Up against the number one cause of cancer fatalities in the United States, the Lung Cancer Moon Shot program faces a uniquely difficult battle. However, an expansive and coordinated attack has been underway since the initiation of the program in 2013, aimed at bringing about swift advances in prevention, detection, and development of new therapies. The driving force behind innovative treatments is the Genomic Marker-Guided Therapy Initiative (GEMINI), one arm of the moon shot that integrates high-throughput, data-driven target and drug discovery with clinical implementation. Speaking at Institutional Grand Rounds on April 10, **John Heymach, MD, PhD,** chair of Thoracic/Head and Neck Medical Oncology (THNMO) and co-leader of the Lung Moon Shot, explained that personalized molecular profiling, targeted therapy, and immunotherapies have ushered in a new age for lung cancer treatment regimens, finally allowing progress from stagnant paradigms of the last 40 years. Current standards profile patients for two well-characterized lung cancer mutations, EGFR and EML4/ALK, both of which can be targeted by effective therapies. However, resistance to these therapies is virtually inevitable, and beyond these two, many other known and unknown driver mutations exist for which therapies do not yet exist. This is where GEMINI enters the picture.

Lung cancer patients enrolled in GEMINI undergo deep molecular profiling to determine the genetic nature of their cancer, which can inform treatment and clinical trial enrollment depending on the outcome. Importantly, information from each patient's molecular profile is then sent to a database and analyzed along with data from all other patients on the GEMINI protocol. Since January 2014, data from over 900 patients has been captured by the database. Recently, patient-specific clinical data has also been integrated into the study. The mass of information collected will ultimately help instruct drug discovery for existing lung cancer subsets and new groups that emerge as a result of computational analysis. Heymach says the aim of the project is to profile every actionable mutation resulting in lung cancer, even those occurring at 1% frequency. An expansive drug screening program is underway in collaboration with the Gulf Coast Consortium to identify compounds that can deliver such

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Lung: Progressing from stagnant treatment paradigms

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actions to patients. At the core of GEMINI drug development, more than 100 cell lines representing the full spectrum of lung cancer genotypes will be probed with over 1,200 potential drugs to find mutations associated with specific drug sensitivities. Each screen yields data including full exome sequencing, proteomic profiling, and methylation status, resulting in a wealth of information about positive hits that will allow rapid progress toward clinical trials. While screening is still underway, results so far are promising, with examples of compounds proceeding from positive hit all the way to the clinic for patient treatment.

Ferdinandos Skoulidis, MD, PhD, assistant professor of THNMO, has been at the lead of a noteworthy story emerging from GEMINI's molecular profiling efforts. KRAS is the strongest oncogenic driver mutation across many types of cancer, and lung cancers characterized by KRAS mutation remain the largest subset lacking effective treatment. To tackle this problem, Skoulidis and team analyzed numerous molecular profile data sets to determine that KRAS-mutated lung cancer consistently divides into three subgroups based on the presence of specific mutations that co-occur with KRAS: p53, STK11/LKB1, and CDKN2A. The STK11/LKB1 mutation interrupts function of a kinase, leading to deregulated energy metabolism and excessive oxidative stress. The GEMINI drug screen turned up a positive hit for an ATP-depleting drug commonly used to treat leukemia that was able to kill LKB1 and KRAS-mutated lung cancer cells. In all, this story represents how new insight gleaned from big data analysis can provide a novel perspective and unexpected therapy avenues for a refractory cancer subgroup.

Lung cancer has a striking propensity to metastasize, which it can do at early stages to numerous distant sites. The epithelial-to-mesenchymal transition (EMT) is a process of cellular de-differentiation that promotes mobilization and tissue invasion, enabling carcinoma cell metastasis. **Don Gibbons, MD, PhD,** assistant professor of THNMO, explained that molecular changes underlying this switch are difficult to study in patients since a majority arrive for their first clinical visit already presenting with metastases.

To study this process, a number of mouse models have been engineered based on the most common mutations seen in lung cancer patients, namely KRAS mutants and KRAS/p53 double mutants. As is the case in humans, the KRAS mutant mouse epithelial cells are hyperproliferative and form adenocarcinomas, but do not tend to invade or metastasize. Conversely, KRAS/p53 double mutant tumors are invasive and metastatic. Gibbons' previous work elucidated that such KRAS/p53 tumor cells suffer from inappropriate activity of the microRNA200-Zeb1 regulatory axis. This cascade normally functions to maintain an epithelial cell phenotype, but when improperly regulated as in these tumor cells, promotes mesenchymal transition. Recent extension of this work through the Lung Cancer Moon Shot has shown that this same regulatory axis also controls recruitment and phenotype of CD8 T cells within a tumor, such that affected KRAS/p53 tumors have low levels of CD8 cells, most of which display an exhausted phenotype, and KRAS only tumors have high levels of healthy CD8 T cells. It turns out that, in the process of inducing EMT, the microRNA200-Zeb1 axis also promotes upregulation of checkpoint ligand PD-L1 on tumor cells, ensuring immune suppression within the tumor microenvironment. The silver lining to this finding lies in the possibility of using PD-1/PD-L1 immune checkpoint inhibitors to combat this suppression, an endeavor that Gibbons has been granted a CPRIT Individual Investigator Award to pursue. So far, blockade of PD-L1 appears to restore CD8 T cell function and limit tumor growth and metastasis in KRAS/p53 mouse tumors, providing mechanistic justification for monoclonal antibody PD-L1 treatment in patients. Future efforts will involve study of anti-PD-L1 resistance, combination therapies, and exploration of other lung cancer genotypes.

Melanoma: Algorithm developed to predict outcomes

Leaders: Jeffrey Gershenwald, MD, professor of Surgical Oncology and **Michael Davies, MD, PhD,** deputy chair of Melanoma Medical Oncology

Jeffrey Gershenwald, MD, professor of Surgical Oncology and co-leader of the Melanoma Moon Shot, kicked off Institutional Grand Rounds on June 5 with an overview of the current state of melanoma disease, prefacing an update from the moon shot on recent advances in treatment and prevention. Melanoma is a force to be reckoned with, a diverse and often aggressive cancer responsible for more than 75% of skin cancer deaths, killing about 9,000 people annually, or just over one per hour, in the United States. A defining characteristic of the cutaneous form of this disease is the frequency with which it occurs in young and otherwise healthy individuals. Troublingly, while incidence of some cancers is on the decline, melanoma incidence continues to crawl upwards at about three percent per year, with the rate of new cases doubling from 1982 to 2011. Ultraviolet (UV) radiation is responsible for more than 90% of cutaneous melanoma cases in the United States, stressing the need for an awareness campaign in the general public that explains the dangers of UV exposure and offers prevention strategies. Further, while targeted and immunotherapies exist for treatment of melanoma, patient responses are unpredictable in terms of efficacy and durability due to the lack of biomarkers associated with therapy benefit or toxicity. In line with this, two primary flagship projects have been developed for the moon shot: personal disease management strategies to tailor therapies to individual patients, and prevention efforts to reduce ultraviolet

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Melanoma: Algorithm developed to predict outcomes

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exposure in youths. The Melanoma Moon Shot is comprised of about 100 investigators from across the institution whose efforts are essential to bring us closer to eradicating this aggressive cancer.

Recent progress in the personalized disease management flagship was discussed by **Scott Woodman, MD, PhD,** assistant professor of Melanoma Medical Oncology, and Jennifer Wargo, MD, MMSc, associate professor of Surgical Oncology. The only good thing about melanoma is that it is immunogenic, meaning the immune system can be primed to recognize melanoma cancer cells and eliminate them. This is because melanoma has an extremely high mutation rate, leading to frequent production of neoantigens. These antigens arise from random novel mutations within tumor cells that make the tumor appear as a foreign, attackable target to T cells of the immune system. As a result, several groundbreaking immunotherapies designed to keep T cells active have been developed that can be extremely effective, but responses are heterogeneous and not always durable.

Woodman's research suggests that a higher tumor mutation (and therefore neoantigen) load may lead to improved responses to immunotherapies that prevent T cell responses from being shut off. One way to determine mutation load is to perform whole exome sequencing (WES), which provides a list of all mutations in protein-coding genes of the tumor cell genome, which can extend into the tens of thousands with a mutation rate of 17 per megabase of DNA. This method is expensive in terms of labor and time, however, so Woodman and collaborators developed an algorithm that generates the predicted total mutation load (PTML) for a given sample using the sequences of only about 200 genes. Based on its individual mutation status, each gene is assigned a weight, which gets figured into the PTML value for the sample. Validation with WES data from several melanoma samples proved that the PTML value could closely approximate the actual tumor mutation load for a given sample. This algorithm has also been validated in another highly mutated cancer, lung adenocarcinoma, suggesting that it could be applicable to a range of cancer types. The most important test of the algorithm has been its ability to generate a PTML that correlates with clinical immunotherapy outcomes. For instance, high mutation load predicted increased progression free survival (PFS) in a cohort of stage IV melanoma patients treated with ipilimumab (anti-CTLA-4) and increased PFS and overall survival in patients who received tumor infiltrating lymphocyte therapy. Further, the PTML generated with the small set of about 200 genes proved capable of closely approximating WES-generated data on therapy response, clinical benefit, and PFS in a cohort of non-small cell lung cancer patients treated with pembrolizumab (anti-PD-1). In all, this algorithm has promise as a tool for predicting individual therapeutic outcomes via tumor mutation load in a way that drastically reduces the time and financial investment usually required for this task.

Wargo's work in the moon shot is focused on understanding how chemoresistance develops against both targeted and immunotherapies, how to get around it, and how to tailor therapies for individual patients. Melanoma targeted therapy is commonly directed against BRAF, a kinase that promotes cell growth and proliferation and is mutated in half of all melanoma cases. BRAF inhibitors are often effective initially but resistance tends to develop after some time. Through analyses of longitudinal tumor and blood samples from patients undergoing BRAF therapy, Wargo and her team have described an immunologic arms race between the tumor and immune system that arises in response to BRAF therapy. Tumor cells are forced to express an antigen recognized by CD8 T cells within two weeks of treatment, making them visible to the immune system. In response, a sizable CD8 T cell infiltrate arrives for battle, but the tumor hits back by upregulating PD-L1, a ligand that subsequently shuts down the T cell response. This is but one example of how cancer cells can learn to get around targeted therapies and the immune system. Understanding how individual tumors think and develop resistance is the first move in staying one step ahead of them; progress toward this goal is being made daily in Melanoma Moon Shot laboratories like Wargo's.

Wargo and her team are also trying to understand why some patients respond to immunotherapy while others don't. Their hope is to someday reach a point where the optimal course of treatment can be selected for a patient at different stages of disease just by analyzing a blood sample. Current moon shot studies utilize samples from melanoma patients who undergo CTLA-4 blockade with ipilimumab, and then receive anti-PD-1 treatment if they progress. Samples collected from trial participants are subjected to WES and immune profiling to find clues as to why certain individuals responded or progressed at each stage. Initial results suggest that a biopsy shortly after initiation of anti-PD-1 therapy can be highly predictive of whether or not a patient will respond based on a sizable immune infiltrate containing CD8, CD4, and innate immune cells that is pervasive in responders but minimal in progressors. As a result, Wargo suggests that immune profiling of biopsies performed after initiation of immune checkpoint blockade seems to more accurately reflect patient response than pre-treatment biopsy profiling. "I think we're really onto something, and it's because of the power of the moon shot," Wargo said of the major collaborative effort. Next on the docket, Wargo and team hope to understand why CD8 T cell infiltrates are absent from patients undergoing targeted therapy but present in patients undergoing immunotherapy at time of progression. These studies could help clinicians select the best treatment option at this pivotal moment in the disease course.

Research retreats

Department faculty establish goals for future

– By Claire Blondeau

In order to establish our divisional strategy over the next five years, Division Head **Patrick Hwu, MD,** requested that all departments conduct a retreat to determine areas of clinical, research, and educational focus. "Let's take advantage of the power that comes from getting together and getting organized so that we can change the future for our patients," Hwu said. Following is a summary of recent department retreats.

General Oncology

The General Oncology research retreat took the form of a roundtable dinner with 16 attendees on June 22. Participants included faculty from the Houston-area locations (HALs) (previously referred to as Regional Care Centers, or RCCs) in the Bay Area *(pictured),* Katy, and The Woodlands; the Lyndon B. Johnson Hospital oncology service; and the main campus. Each participant was asked to raise an issue for discussion, and suggestions centered around faculty support, the vision for and organization of the HALs, bringing clinical research to the HALs, and general topics concerning the Lyndon B. Johnson General Hospital (LBJ).

Vision and organization

Faculty requested clarification for MD Anderson Network strategic plans and vision, specifically about plans for subspecialization. Among the questions raised were, "What is required for a practice to be considered a subspecialty," and "Are subspecialties based on common cancers or patient distribution at each HAL?" And, are subspecialties based on common cancers, or patient distribution at each HAL? **Celyne Bueno-Hume, MD,** an assistant professor based at the Bay Area HAL, would like a clearer understanding of the institutional vision for the care centers, especially for determining market needs before interviewing candidates and placing surgeons where they are most needed. Hwu asked the group to create an organizational chart that clearly delineates everyone's responsibilities at the HALs. He asked that the General Oncology faculty think institutionally and fiscally, and gain a shared understanding of the present state – he mentioned that a large part of the HALs' success has been due to breast cancer treatment – and the desired future state. Hwu recommended that HAL faculty meet regularly to share interests, prioritize issues, clarify the vision, and plan strategically.

Clinical research

Hwu agrees with faculty that clinical research should be enhanced in the HALs, and will be working with Thomas Burke, MD, executive vice president of the MD Anderson Cancer Network, with the assistance of **Sue Davis, MBA, MMS,** director of research planning and development, to evaluate strategies to facilitate extending trials to these locations. Assistant Professor **Sunil Patel, MD,** from the Katy HAL, suggested that staffing may need to be ramped up to successfully implement clinical trials. Hwu stated that the Cancer Network will pay for the clinical research staffing, and a model needs to be put together and an infrastructure put in place, but there must be a clearer definition of what the HAL research vision is before that can happen. Hwu suggested meeting with Susie Bullock, RN, MPH, OCN, CCRP, associate director of the clinical research support center, to review network and institutional support for clinical research associates (CRAs) and clinical nurses on site, and noted the necessity of identifying medical oncology-based trials appropriate for rolling out at the HALs. Hwu also is seeking data on accruals at the HALs, and proposed comparing accrual data before and after CRAs are brought on board.

Faculty support

The staffing at the HALs tends to be rather light, so when a faculty member is out on leave or vacation a coverage plan is needed. Although division faculty from the Texas Medical Center would be happy to fill in when needed, they may not have admitting privileges at the HALs, and patients who need treatment may not want to travel to the main campus. The Woodlands HAL Medical Director **Douglas Nelson, MD,** brought up the need for a mechanism to cover when faculty are out, and Associate Professor **Amy Hassan, MD,** from the Bay Area HAL, would like help with call coverage.

LBJ

Assistant Professor **Alyssa Rieber, MD,** would like to see multidisciplinary care improved at LBJ, where she is the site director. Hwu mentioned that building interdisciplinary relationships presents challenges because the medical oncologists are from MD Anderson, the surgical oncologists are from UT Health, and the radiation oncologists are from Baylor College of Medicine. Regarding research at LBJ, Hwu acknowledged that there is a large potential to reduce health disparities by offering more trials, but clinical faculty are too overloaded with patient care for research to be extended. Hwu also requested data on LBJ payers to be able to more thoroughly evaluate possibilities.

Sarcoma Medical Oncology

The Sarcoma Medical Oncology (SMO) retreat held on June 20 was a multidisciplinary interactive team event attended by others from Pediatrics, Breast Surgical Oncology, Experimental Radiation Oncology, Surgical Oncology, Pathology Administration, Genomic Medicine, and Orthopedic Oncology. The discussion was structured around working group updates, tissue banking, research updates and novel concepts, and grants and funding opportunities and updates.

Working group updates

The **rhabdomyosarcoma (RMS)** discussion was led by Winston Huh, MD, associate professor of Pediatrics. RMS is the most common soft tissue sarcoma in children (50%) and rare in adults (3%), and there are only about 350 cases per year in the United States. Between 2000 and 2014, 644 RMS patients were seen at MD Anderson. Histological subtypes include embryonal (70%), alveolar (15-20%), pleomorphic (20% of adult cases), and the remainder not otherwise specified. Preclinical studies were discussed, with a focus on muscle development, genomics especially of pleomorphic RMS, and immunology comparing phenotype between sub-cohorts. Future goals include establishing a database from cohort data to identify subgroups of interest and to catalog immunophenotype subgroups, and to establish clinical correlative data for pleomorphic RMS. An action step for the team is to identify labs willing to fully characterize cell lines of the various sarcoma subsets.

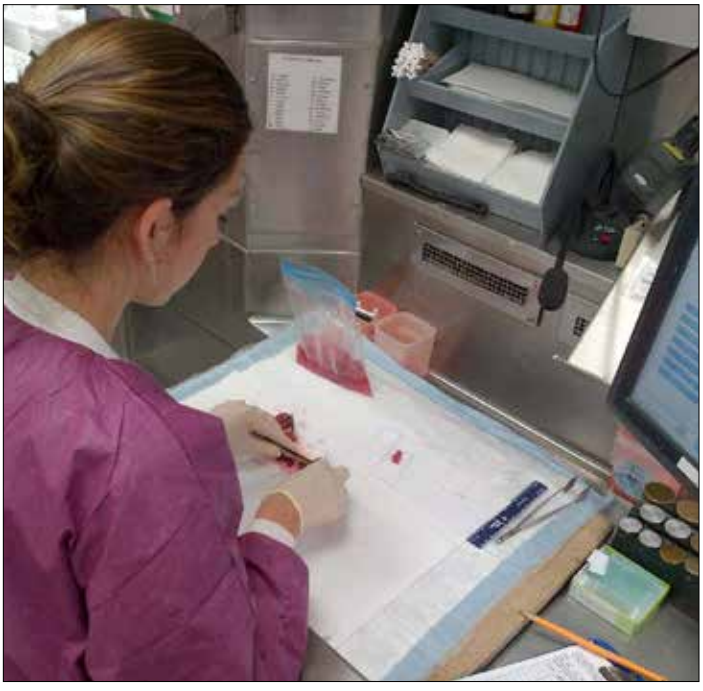
The **leiomyosarcoma (LMS)** working group update, presented by Khandan Keyomarsi, PhD, professor of Experimental Radiation Oncology, and Kelly Hunt, MD, chair ad interim of Breast Surgical Oncology, began with a review of cell cycle aberrations, and a summation of FDA-approved agents and compounds in clinical trials and their targeted pathways. Several slides focused on Rb pathway regulation and palbociclib, which was originally developed to treat ER-positive and HER2-negative breast cancer and is now shown to induce a reversible G1 arrest in SKLMS-1 cells. Additionally, illustrations depicted that sequential combination treatment of palbociclib and MK1775 is synergistic in Rb positive cells, and palbociclib plus Wee1 kinase inhibitor is synergistic in vivo. Sarcoma PDX lines can be stratified based on Rb status, and the next priority for PDX development was identified as chondrosarcomas. Hunt will consider the feasibility of developing PDXs, and Hwu will try to identify funding for this effort.

Najat Daw Bitar, MD, professor of Pediatrics led the discussion of **Osteo/Ewing's sarcoma.** Three trials for Ewing's sarcoma were presented, detailing the one-year timeline for each. Funding for the first, YK-4-279, is anticipated following a scheduled meeting with the FDA in September, with possible activation by the end of 2015. Second, an IGF-1/mTOR inhibitor, needs independent funding. Hwu will discuss with Ferran Prat, PhD, JD, vice president of Strategic Industry Ventures, potential agreements. Lastly, the agent PM01183 is being developed in collaboration with Patrick Grohar, MD, PhD, from Vanderbilt University. Partial funding has been identified, and clinical grading is anticipated by the end of 2015. Additional slides detailed Phase I trials – one currently underway with aerosol IL2 and another soon to open with aerosol gemcitabine, both for pulmonary metastases.

Neeta Somaiah, MBBS, assistant professor of Sarcoma Medical Oncology, reviewed several potential targets for **liposarcoma,** one of the most common soft tissue sarcomas. She detailed the eight recurrently mutated genes in myxoid liposarcomas, which occur mostly in the limbs. Somaiah also presented results of a Phase I study of the vaccine LV305, which helps T cells target sarcomas, melanomas, and other tumors. In the study, eight of 12 participants showed stable disease following the first restaging at day 84 and at median duration of 212 days. One patient had tumor regression of 13.8%.

Sarcoma tissue bank

Goals for the sarcoma tissue bank were presented by Alexander Lazar, MD, PhD, associate professor, and Wei-Lien Wang, MD, assistant professor, both from Pathology Administration. Goals are to complete the inventory of bank contents, to improve prospective collection of sarcoma tissue, to facilitate tissue use for translational research, and to integrate tissue collection with database efforts. Several slides were shown that detail the tissue collection process and the bank itself, along with a graph that shows we are progressing in gaining front-door consent for sample collection. Lazar emphasized the need for immediate feedback to surgeons regarding quality of tissue, especially for bone sarcomas.



A technician prepares samples for storage in the tissue bank.

Research and Education

Genomic Medicine

Andrew Futreal, PhD, chair ad interim of Genomic Medicine, gave an overview of the states of completion of the nine sarcoma subtypes that are being sequenced: Ewing's sarcoma, giant cell bone tumors, malignant peripheral nerve sheath tumors, myxoid liposarcoma, osteosarcoma, pleiomorphic liposarcoma, pleiomorphic rhabdomyosarcoma, synovial sarcoma, and well-differentiated and de-differentiated liposarcoma. He proposed developing a sarcoma-focused team within Center for Co-Clinical Trials (CCCT) to expedite building the knowledge base in sarcomas.

Database, Epic, DNA sequencing

Vinod Ravi, MD, associate professor of Sarcoma Medical Oncology, discussed the objectives of the Chimera database he and others developed. Clinical aims include measuring how well we are doing over time, and research aims include identifying novel predictors and prognosticators, such as drivers of survival, reasons for differing patient response, and documenting which therapies work best in specific populations. The project has met its projected timeline, and future milestones are dependent on the Epic go-live in March 2016. He also presented to the group the current progress in the EHR OneConnect/Epic go-live timeline and showed screenshots of Epic's Haiku app for mobile devices. Regarding our sequencing effort, DNA from a total of 540 patients had been sequenced on a number of platforms (Foundation Medicine, T200, CMS46, CMS50, and CMS 400) as of April 2015. Heat maps for somatic mutations in sarcoma were displayed to demonstrate the difference in output from each platform.

Research updates and novel concepts

Keila Torres, MD, PhD, assistant professor of Surgical Oncology, began this part of the retreat with a presentation on **malignant peripheral nerve sheath tumors (MPNSTs),** otherwise known as malignant schwannomas or neurofibrosarcomas. The most common symptom is pain, which usually prompts a biopsy. MPNSTs are primarily located in the extremities (59%) and trunk (32%), with a small percentage in the head and neck (9%). They are primarily deep-seated in the brachial plexus, lumbar/sacral plexus, or sciatic nerve, and median age at diagnosis is about 40 years. This is an aggressive disease for which surgery is the primary curative modality. Despite multiple modality treatments including radiation and systemic chemotherapy, response rates are poor. Because of the rarity of this disease, there is limited clinical knowledge and standard of care. The majority of MPNST patients develop metastases, and 80% die from this sarcoma. Patients with sporadic MPNSTs have better outcomes than those with radiation-induced MPNSTs. A greater mutation burden is seen in neurofibromatosis patients vs. sporadic MPNST patients. The current goal is to identify driver genes responsible for the transition of neurofibromas to MPNST. The multidisciplinary effort includes teams approaching the disease from several angles: examining samples in the sarcoma tissue bank, analyzing genomic sequencing data, exploring genetic variations through bioinformatics support, and mining the clinical database.

New gene fusion detection capacity

Lazar described the new gene fusion detection capacity being set up with the Institute for Personalized Cancer Therapy (IPCT) and Cancer Genomics Laboratory (CGL). He reviewed common techniques and pre-analytical problems in molecular testing, and discussed the pros and cons of several of the techniques.

Healthcare Outcomes Platform (HOP)

Justin Bird, MD, assistant professor of Orthopedic Oncology, presented on the **Healthcare Outcomes Platform (HOP),** which aims to put important healthcare data in patients' and providers' hands when they need it. HOP will facilitate data delivery to patients and clinicians by providing visual analytics obtained from patient and clinician-reported outcome measures. HOP's mission is to use real-time, high-quality, patient-centered data to improve healthcare outcomes. The initiative's first aim is to identify what information is important, and from whom and when the data will be collected. Then, create an automated electronic process for real-time data collection (second aim) and for real-time data sharing using visual analytics (third aim) using an Oracle backbone and Tableau interface with data from REDCap (Research Electronic Data Capture).

Grants and funding opportunities, updates, and announcements

Hwu suggested a later meeting with Hunt, Lazar, Futreal, Keyomarsi, and others as applicable to discuss which projects have sufficient data to consider funding mechanisms – among them R21s, collaborative R01s and CPRIT grants. Keyomarsi suggested considering applying TRIUMPH program funds to postdocs currently undertaking novel translational work. **Anthony Conley, MD,** and Somaiah, both assistant professors of SMO, briefed the team on recent interaction with MedImmune, AstraZeneca's biologics research and development arm.

The session ended with an open discussion of future directions.

Palliative, Rehabilitation, and Integrative Medicine

The Department of Palliative, Rehabilitation and Integrative Medicine's retreat took place on May 2. The retreat was organized around major discussion topics where most faculty could contribute and identify areas for further research and collaboration. **Eduardo Bruera, MD,** department chair, provided an introduction on the way they could organize faculty from each of the three sections in the department as well as contributors from the clinical and basic science departments at MD Anderson around each of the main topics. This introduction was followed by presentations of 15 minutes and discussions for approximately 45 minutes on rehabilitation and function, pain, diet and nutrition, fatigue, delirium, mood, spirituality, and overall well-being.

In each of the presentations, particular emphasis was made on understanding some of the pathophysiological mechanisms that might be common to many of these symptom areas and on the identification of physical and psychosocial distress associated with both cancer as well as novel targeted and immunological therapies. During the retreat, several faculty members were able to understand how they could integrate existing methodologies for the assessment and management of symptom complexes. For example, it became clear that many of the fatigue studies could benefit from existing methodologies in the measurement of body composition, indirect calorimetry, and exercise interventions that are being used by cachexia and rehabilitation. It also became clear that many interventions used by the Supportive Care team could integrate quite well with the Integrative Medicine and even Rehabilitation existing interventions in areas such as mood, spirituality, and overall well-being.

Senior faculty in the department including Bruera and **Lorenzo Cohen, PhD,** meet monthly with assistant professors to evaluate the progress of each of their research projects. The research logistics meeting takes place every week during which research proposals are evaluated, and brainstorming around possible research projects and funding opportunities occurs. In those meetings, generally only one or two subjects are addressed by all participants for a period of approximately one hour so as to allow for some depth in the discussion. This initial retreat will be followed by another quarterly meeting to discuss progress among the two to three initial projects that were identified.

*Contributed by **Julio Allo, MPH, CCRC, CCRP,** Palliative Care Medicine administrative director of protocol research*

Faculty receive grants to study novel therapies, targets, and processes

Katy Rezvani, MD, PhD, professor of Stem Cell Transplantation and Cellular Therapy, received $792,000 from the American Cancer Society (ACS) for a 4-year grant for research in "Adoptive Immunotherapy for Leukemia Using Cord Blood Derived NK Cells" effective Sept. 1, 2015. The funds will be provided to ACS by the Marcus Foundation. Anticipated outcomes of the research are to evaluate whether infusion of ex vivo-expanded cord blood-derived NK cells in the setting of double unrelated cord blood transplant is both feasible and safe and can improve anti-leukemic immunity, and whether NK cell efficacy can be enhanced by the expression of transgenic antigen receptors and cytokines.

Marina Konopleva, MD, PhD, associate professor of Leukemia, garnered a $600,000 three-year grant from the Leukemia and Lymphoma Society for research on "Targeting apoptosis in ALL with venetoclax and cytotoxic chemotherapy." The funding runs from Oct. 1, 2015, through Sept. 30, 2018.

Lauren Byers, MD, and **Don Gibbons, MD, PhD,** both assistant professors of Thoracic/Head and Neck Medical Oncology, received a $600,000 LUNGevity Targeted Therapeutics Award for "Axl as a target to reverse EMT, treatment resistance and immunosuppression." This three-year grant, which runs from Aug. 1, 2015, through July 31, 2018, will allow them to build on their previous work that demonstrated the epithelial-mesenchymal transition (EMT) is a unifying mechanism that drives tumor progression, metastasis, resistance to standard therapies and immune suppression. Their work showed that Axl and PD-L1 are overexpressed on tumor cells in the setting of EMT in NSCLC and that targeting either Axl or PD-L1 results in preclinical efficacy in lung cancer models. This award will fund preclinical investigations to determine the role of Axl in driving EMT, identify predictive markers of response to Axl inhibition, and investigate the clinical efficacy of combination therapy with an Axl inhibitor and an immune checkpoint inhibitor, anti-PD-L1.

Koichi Takahashi, MD, assistant professor of Leukemia, received a one-year grant of $197,660 from MD Anderson's McCombs Institute Center for Global Cancer Early Detection for his research entitled, "Clonal hematopoiesis in cancer patients predicts development of therapy-related AML/MDS." Progress will be presented in symposia held six and 12 months after the June 2015 award.

From the Chair: Introducing the Department of Palliative, Rehabilitation and Integrative Medicine

Eduardo Bruera, MD

Ever meet someone, strike up a conversation, and before long you realize you have some of the same goals? Then, after you get to know each other better, one of you pops the question: "Would you merge with me so we can better support each other in pursuit of our common interests?" Outside of MD Anderson, that might be the beginning of a marriage, but inside the institution, it was the beginning of a new department within the Division of Cancer Medicine. Sort of. Effective April 1, 2015, the **Department of Palliative Care and Rehabilitation Medicine** became the **Department of Palliative, Rehabilitation and Integrative Medicine** to reflect a commonality of clinical, psychological, and research interests. Currently many of our faculty are housed in the Faculty Center and Pickens Tower, but by the end of Fiscal Year 2016, all of our people will be relocated to the fifth floor of the Pickens building. Each group provides clinical services, but specific work in **Supportive and Palliative Care** involves research to diminish distress in advanced cancer patients. We work to reduce treatment side effects and improve communication with them and their families, particularly at times of great distress, such as when end-of-life and hospice care decisions need to be discussed. We conduct anticipatory interventions with family members prior to the death of their loved ones, and we believe they are having a positive impact on how surviving relatives cope. Additionally, we are assisting to help relieve treatment side effects, such as those experienced by patients who are administered some of the new checkpoint inhibitors for melanoma, and combination therapies such as chemotherapy and radiation for head and neck patients.

PRIM: New acronym for the Department of Palliative, Rehabilitation and Integrative Medicine.

The **Rehabilitation** group helps patients with loss of function due to their disease or treatment by providing physical therapies for musculoskeletal pain, spasticity, and lymphedema management, as well as support for return to work and issues involving muscle control that may have been altered following surgery or radiation. Research in this area is very exciting as we are examining the role of aggressive rehabilitation before patients undergo aggressive treatments such as stem cell transplantation and combination treatments that pair surgery with chemotherapy and radiation. Our studies will tell us if this type of rehabilitative intervention including exercise, nutrition education, and symptom management prior to stem cell transplantation can result in better outcomes. I call this "prehabilitation." Faculty from the departments of Stem Cell Transplantation and Cellular Therapy, Gastrointestinal Medical Oncology, and Surgery are working with us on these initiatives.

In **Integrative Medicine,** the focus is on how lifestyle changes, such as nutrition, exercise, and stress reduction can help patients during treatment and survivorship. In this area, we help our patients make good decisions about supplements they are taking during treatment, and our allied health providers work with modalities that are not part of traditional medicine but can offer great benefit, including mind-body techniques such as yoga, meditation, tai chi, certain exercises, acupuncture, massage therapy, and music therapy.

We recently expanded the clinical arm of our department, the **Supportive Care Center,** to three sites to meet increasing demand, and we now provide inpatient consultation services—evidence that our long campaign to encourage clinicians at MD Anderson to include us in their patients' care plans is working. As fiscal year 2016 approaches, we're recruiting two faculty members for our prehabilitation efforts in physical medicine and rehabilitation, and one new physician for supportive care work. In fiscal year 2017, we will recruit another physician to join us in Integrative Medicine. We continue to experience success with our bus rounds tour in which oncologists from our group travel with nurses and allied health professionals and others from the Houston area – including social workers, psychologists, and religious representatives – to visit hospice patients typically of underserved backgrounds to assess their conditions and make recommendations to their providers as to what could be done to improve their circumstances. In May 2015, our department was awarded a two-year grant from the Milbank Foundation to support the training of 50 similar teams from around the world on how to conduct bus rounds in their communities.

We're excited to put on our 19th Annual Supportive Care, Hospice and Palliative Medicine Conference from Oct. 16 to 17 at the Hickey Auditorium, where just a few days prior we will host an intensive, two-day physician board review course. We are invigorated by our work, yet challenged to provide more answers and assistance for our patients and their families. There is still a lot to do.

Division bids farewell to longtime administrator

Austin takes role on institutional Operations Administrative Team

– By Claire Blondeau

When Executive Director and Division Administrator **Wendy Austin, RN, MS, AOCN, NEA-BC, FACHE,** walked in the door on Aug. 1, 1997, there was no Division of Cancer Medicine (DoCM) and there were no department administrators. Exactly 18 years later, she has taken on a new role as an executive director for Hospital and Clinics, providing administrative leadership for four divisions: Cancer Medicine, Internal Medicine, Prevention, and Pediatrics.

She was originally recruited as administrator of the Division of Medicine, which encompassed what would become the Division of Cancer Medicine's 15 departments and 10 patient care centers. During the interview process, she realized that the division needed organizational infrastructure for her to effectively manage it, and she took the bold step to share her vision with the hiring manager and then-division head Robert Bast, Jr., MD, vice president of Translational Research. "Wendy has always been a gifted administrator, a consummate professional and a person of absolute integrity who cares deeply about MD Anderson," Bast commented, and he put his trust in Austin to restructure. Recalled Austin, "I envisioned something much more decentralized with authority, accountability, and responsibility being put in the hands of the functional units in the patient care centers and departments, rather than being maintained at division level."

One of the first things she did was to create the department administrator (DA) job title, which previously did not exist at MD Anderson. Then she went about the tough work of recruiting DAs who could support her in evolving the division into what it is today. "I needed to know that there would be people there so when I tossed the ball there would be someone to catch it," she said.

Creating a structure for success

Additional infrastructure followed, in the form of positions that were created to oversee clinical research operations: research nurse manager, midlevel provider manager, operations manager, associate director, and others. Similar models have since been replicated in several other divisions across the institution. The division's success has been on an upward trajectory under Austin's watch, with 160% growth in the number of full-time employees, a 48% increase in professional activity and a 460% leap in grant and contract funding.

"The vast majority of that growth has to do with the outstanding physicians and faculty we have here, midlevels and providers, all the people who are touching patients," she said. "But there's also a component that has to do with the fact that there's now a structure that enables, a structure that facilitates, that wasn't there before."

Others agree. Said **Waun Ki Hong, MD,** the former division head who characterized working side-by-side with Wendy from 2001 to 2014 as an "incredibly rewarding journey": "I must say that Wendy single-handedly made a huge impact on the Division of Cancer Medicine to make it what it is today. I am so grateful for her dedication and hard work for the best interests of the division."

Austin created the infrastructure for the division's information technology (IT) and communications functions, and the fellowship office. The IT team has evolved from desktop support into applications development and programming, while still keeping abreast of desktop support for the core business. The team has evolved with the division as well as with the institution, changing course and objectives to remain in line with strategic initiatives. Her goal was for division leadership to be a resource to serve the departments and patient care centers, to be called upon to "take down barriers and find ways around walls, and facilitate the ability of the DAs and CADs (clinical administrative directors) to do their jobs."

Austin is pleased that programs created for the division have been adopted outside by others, such as WebSchedule and the TETRIS patient scheduling and tracking system. "Not having any kids, these things are like my children," she said. "And to see them be wanted as much as they are by other components of the organization is just great."

Influence through mentorship

Austin says she will miss the daily interactions with her direct reports, the day-to-day, one-on-one problem solving and mentoring, but what will continue in her new job is that she'll keep seeing people with whom she's worked accomplish their goals and expand their careers.

Austin boasts when speaking of employees who grew beyond their roles in the division and succeeded elsewhere as well. (See sidebar on next page.) This is fitting, as Austin views her career in the context of widening spheres of influence, just as throwing a rock into a pond makes an ever-expanding ripple of concentric circles. Just as she has held progressively influential positions – from staff nurse to charge nurse at the Johns Hopkins Hospital Regional Oncology Center in Baltimore, Md., then from nurse manager to director of nursing to director of patient care services at the University of Maryland Cancer Center in Baltimore, the position she held when she was recruited here – she has had an effect on the institution in the form of the people who developed their careers in the division and then moved up.

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Division bids farewell

She has witnessed the field of oncology care make great strides since entering the field. In the mid-1980s when Austin was a staff nurse, a celebratory moment arose when the anti-nausea drug Ondansetron came out. "People weren't throwing up anymore. That was a major thing," she said. At the time, therapies were just starting to turn the corner from toxic to tonic. "People were on death's door, and then two people would be cured! To see that we've gone from being excited about a new drug for nausea to knowing what chemotherapy works on what specific molecular marker in what type of tumor is pretty extraordinary. And it will be very interesting to see how far we've come in the next 10 to 15 years."

In college, when Austin entered her oncology nursing rotation, she never expected to fall in love with the field, but she was awed by the courage, bravery, strength, and gratefulness that she witnessed. Austin thrived on the unanticipated life lessons, such as a conversation with a wife who came back to visit the hospital a few months after her husband passed away. "I remember her saying, 'It used to make me so mad when I would come home and his shoes would be by the back door and his tie would be over the kitchen chair and his shirt would be hanging over the railing to go upstairs,' and then she said, 'Now I would do anything in this world to come home and find his shoes sitting by the back door.' When you're 22 years old, that's some pretty heavy stuff, but provides long-lasting life lessons."

To Austin, there is nothing more rewarding than making a difference for people at the most difficult and trying time in their lives. She spoke of an experience early in her career when she stayed with a patient who died in her arms – a woman only two years her senior –until the family arrived hours later. "I'll never forget being there holding her, and her family forever knowing that she didn't die alone. Where do you get to do that in life?" Austin asked. "Being present for another human being, this work is beyond amazing. You lose that as you get into administration, but you always have to remember to stay rooted in the patient experience."

Austin originally thought that she'd stay in nursing administration and become a chief nursing officer. But MD Anderson's unique environment attracted her, with the ability to keep one foot firmly planted in clinical operations and another in academic and research. In most academic medical settings, there is a hospital and a separate medical school, but MD Anderson is different. "I don't think there are many places where the clinical operations and research academic operations are so inextricably linked," she said. Here, she saw the chance to have accountability and responsibility for both. "That's what made this opportunity such a rich one and why it's been so fun to stay." Austin also credits the strength of her dedication to cancer care to her brother, who died in 2014 at age 55 just five days after being diagnosed with AML. "I couldn't imagine doing anything else," she said.

Wendy Austin's legacy

Following are just a few of the countless people Austin brought on board with the division who have moved into positions of increasing authority at MD Anderson and elsewhere.

- Toni Abbasi, DNP, MBA, executive director, Projects and Operations, previously CAD of the Lymphoma/Myeloma Center
- Debra Adornetto-Garcia, DNP, MSN, RN, CNL, AOCN, NEA-BC, chief nursing officer, Banner MD Anderson Cancer Center, Gilbert, Ariz., formerly CAD of the Stem Cell Transplantation Center and Apheresis Center, and Executive Director of Nursing Professional Practice. Adornetto-Garcia was the division's 2009 Exemplary Employee.
- Kristin Anderson-Wing, MA, Finance/Administrative Officer, College of Medical Sciences, Washington State University-Spokane, formerly DA of Experimental Therapeutics
- Andrea Armstrong, MBA, director, MD Anderson Physicians Network, previously DA of Gastrointestinal Medical Oncology and General Oncology
- Candace Baer, MHA, FACHE, assistant vice president of ambulatory operations, NYU Langone Medical Center, formerly director of division administration. Baer, recipient of the division's 2015 Distinguished Service Award and a Heart of MD Anderson in 2006, was first brought to MD Anderson as an administrative fellow.
- Corliss Denman, MS, CHE, FACHE, executive director, Clinical Operations and Perioperative Services, formerly DA of Stem Cell Transplantation and Cellular Therapy
- Eric Doescher, MS, Office of Chief of Staff, School of Medicine, NYU Langone Medical Center, formerly DA of General Oncology
- Joel Helmke, MS, FACHE, vice president of oncology services, WellStar Health Systems, Atlanta, Ga., previously division administrator of Internal Medicine, division administrator of Cancer Prevention and Population Sciences, DA of Gastrointestinal Medical Oncology, and center business manager in the Gastrointestinal Center/Endoscopy Center
- Paula Lewis-Patterson, DNP, MSN, RN, NEA, executive director of Cancer Survivorship, formerly ATC CAD
- Christopher Loertscher, MA, Director for Program Planning and Development, University of California San Diego Moores Cancer Center, formerly DA of Thoracic/Head and Neck Medical Oncology
- Cynthia Powers, DNP, MSN, RN, director of Ambulatory Work Standardization, previously CAD of the Leukemia Center
- Martha Salas, MBA, MSW, division administrator of Cancer Prevention, formerly DA and clinical business manager of Genitourinary Medical Oncology
- Barbara Summers, MSN, PhD, recently retired vice president of Nursing Practice and chief nursing officer, originally hired as CAD of the Hematology Center
- Kay Swint, RN, MSN, CHPN, director, Patient Experience, started as CAD of the Supportive Care Center

Knowledge transfer: Baer heads north to executive role at NYU

–By Maxsane Mitchell

From left: **Austin, Dr. Richard Champlin, Baer, Wolff,** and **Grimm**

"I came to Houston in 1999 for a one-year administrative fellowship and never had any intentions of staying in the city beyond that. But then, I fell in love with the place, and I had an amazing career that exceeded anything I could have possibly imagined," said **Candace Baer, MHA, FACHE,** former director of Division of Cancer Medicine Administration, at a July 2015 reception held 16 years after her arrival. Baer accepted an exciting new role as assistant vice president of ambulatory operations at New York University's (NYU) Langone Medical Center in New York City.

Before joining MD Anderson, she held administrative positions at three hospitals and worked in two laboratories performing molecular genetics and automated DNA sequencing experiments. After Baer's fellowship, she served as clinical business manager for the Lymphoma/Myeloma Center, where she discovered revenue mapping and charge capture issues. The improvements she implemented reversed the center's revenue losses and turned it into a profitable enterprise. Baer then became the department administrator for Lymphoma/Myeloma, where her successes included implementing inpatient and outpatient clinical revenue enhancement processes that resulted in the doubling of gross revenue and creating the largest profit margin of any institutional service line at the time; developing an automated reporting system for detailed revenue analysis of professional fees and physician productivity; developing a midlevel provider staffing model; and implementing an external review of the department to ensure optimal productivity—a model that is now used as a template for external advisory board meetings throughout the division.

She joined the division office in 2005 as a senior management analyst and was promoted several times. Baer was named the Heart of MD Anderson in 2006 and was presented with the DoCM Distinguished Service Award this year. Areas of accomplishments include budgetary modeling that accurately predicted the division's gross revenues and expenses annually, serving as a resource for departmental administrators and clinical administrative directors concerning business analytics, representing to institutional executives the division's needs on issues such as Resource One, and serving as a mentor to center business managers throughout the division.

"All I've ever wanted to do was make some sort of a meaningful difference in the organization and to do my part to help bring cancer to an end in some shape or form. I hope that my contribution has aided in the battle that our patients face every day," she said. She recalled that during her fellowship, the chief medical officer explained to her that MD Anderson's business was not just curing cancer, but that it was knowledge creation and transfer because we can't touch every single patient. "He said we're only going to be successful if with share what we know with others. So, I like to think of me going off to New York as part of that. I'm looking forward to taking what I know and what we've accomplished here to help other people," Baer said.

Wendy Austin, RN, MS, AOCN, NEA-BC, FACHE, said that because Baer has gotten incredible exposure to the clinical, research, and administrative aspects of healthcare management, she is now well prepared to assume this new role. "It's an amazing accomplishment and we should all be so proud that one of us is going on to do something so meaningful, and carry all of this work beyond us. That is part of our mission."

Elizabeth Grimm, PhD, deputy division head for research affairs and professor of Melanoma Medical Oncology, said that she shares a hallway with Baer and her team, and that she'll miss the hum of conversation and meetings that go on in the area, as well as the precise and scientific presentation of financial data that the division has come to rely on.

Robert Wolff, MD, deputy division head and professor of Gastrointestinal Medical Oncology, acknowledged the reception venue was filled to capacity because people really wanted to be there to give Baer a good send-off. "As I was coming over here, I started to think about Candace and how her brain works. I started getting this image of a flipchart up there, a whiteboard, and maybe an Excel sheet. Whatever's rumbling around up there, she's really smart, and the institution has greatly benefited from her," he said. "It's been our past hope that Candace would continue to rise at the institution. We're all saddened that won't be the case, but we do wish you all the best and know that we're really rooting for you."

Mary Silverstein, BS, department administrator for Leukemia, brought the crowd to laughter with her good luck wishes. "Candace, over the years, we've had a wonderful relationship, and I appreciate the fact that you've taken all of my hard knocks and complaints with a good spirit," she said. "I'm always going to remember that whether you agreed with my positions or not, our conversations were always fun. So, just please don't embarrass us when you get up there!"

Administration

Reception honors departing CAD

Sherry Sorensen, DNP, RN, OCN, CPHQ, NEA-BC *(left),* former clinical administrative director for the Genitourinary Cancer Center, shares a laugh with **Maria Salinas,** lead services coordinator, during an Aug. 19 reception honoring her 14 years of service to MD Anderson. Sorensen left the institution at the end of the month to return to her home in New Orleans, where she will spend more time with her parents and pursue other leadership opportunities in healthcare. Sorensen, the 2011 Division of Cancer Medicine Exemplary Employee of the Year, first joined MD Anderson in 2001 as a nurse manager in the Apheresis Clinic, was later promoted to the rank of patient care nurse manager, and also served as the *ad interim* clinical administrative director for the Stem Cell Transplantation Center. During that time, colleagues praised her for establishing a call system to remind patients of their scheduled visits, improving the transition of allogeneic transplant patients from the Ambulatory Treatment Center (ATC) to the outpatient center at an earlier point in their care, working with the patient access team to improve their patient referral process, implementing a 10-hour shift rotation for registered nurses to better meet the needs of clinical flow, and encouraging staff to pursue more specialized certifications and advanced degrees. Sorensen earned her doctorate in nursing practice in 2013 while working in her most recent role.

More confidence for patients: Cord Blood Bank reaccredited

The Cord Blood Bank (CBB) received a three-year reaccreditation from the Foundation for the Accreditation of Cellular Therapy (FACT) and Netcord, effective July 16, 2015. The certification specifically applies to unrelated and related cord blood collection, banking, and release for administration. This great news comes after a thorough inspection of the bank and processing facility on Old Spanish Trail, two partner collection sites in Houston, and one location in Detroit, Mich.

Elizabeth Shpall, MD, professor of Stem Cell Transplantation and Cellular Therapy, serves as vice president of FACT-Netcord. All participation in the organization is voluntary, but assures patients with leukemia, lymphoma, or other life-threatening diseases that staff and facilities have been inspected by leaders of the field who are qualified by training and experience to understand the unique needs of the patients, that employees working in the facilities have the education and training to safely recruit donors, collect, test, process, store, and provide the potentially life-saving cord blood products to the transplant facilities. Congratulations to the entire team!

Sue Armitage, BS, Cord Blood Bank assistant director, points out features in the facility.

Accolades

Weber receives "Making Cancer History Patient Care Award"

Congratulations to **Donna Weber, MD,** professor of Lymphoma/Myeloma and Lymphoma and Myeloma Center medical director, who is the second recipient of the new Making Cancer History Patient Care Award. Weber, pictured with **Robert Orlowski, MD, PhD,** *ad interim* chair of Lymphoma/Myeloma, (left) and Thomas Buchholz, MD, executive vice president and physician-in-chief, is known as an advocate for her patients, coming in when she's not on call to assist patients and families with difficult choices, such as transition into hospice. Weber helped establish an advanced practice provider clinic with less wait time for patients on maintenance therapy. She also is an accomplished researcher, and her work led to FDA approval of lenalidomide and dexamethasone for previously treated multiple myeloma patients. Her nominators noted that she's always asking questions and looking to learn more to ensure optimal care for patients, and she says she's fortunate to have a team that strives to provide patients with the highest level of all aspects of care. Weber joined MD Anderson in 1994 after completing the Hematology/Oncology Fellowship Program. **Wen-Jen Hwu, MD, PhD,** professor of Melanoma Medical Oncology, was the first recipient, named in June. The Making Cancer History Patient Care Award, a complement to MD Anderson's Faculty Honors Convocation, will be presented one more time this year to recognize a faculty member who exemplifies patient care excellence and has at least 25% clinical activity. Each winner will receive a $2,000 cash prize and reception to celebrate with their colleagues.

Hortobagyi voted "Giant of Cancer Care"

Gabriel N. Hortobagyi, MD, professor of Breast Medical Oncology, was named one of 12 Giants of Cancer Care by OncLive in May 2015. This is the third year the awards program has been held to honor pioneering oncology researchers and physicians. The 63 nominees were evaluated on their body of work, including clinical impact, significant contributions, and overall accomplishments.

Hortobagyi, a 40-year veteran of MD Anderson, is widely known for a landmark study he initiated in 1974, in which presurgical chemotherapy was administered to patients with widespread disease. This research concluded that many large tumors could be reduced up to 50% and then surgically removed. He also led a 10-year study examining a three-drug regimen given before surgery and radiation that benefited patients with advanced disease. Hortobagyi led the clinical development of several drugs (anthracyclines and taxanes) in the breast cancer field and led the definitive studies that established the role of bisphosphonates in the management of bone metastases from breast cancer.

Over the course of his career, he has authored more than 1,000 scientific articles, served as president of the American Society of Clinical Oncology (ASCO) and the International Society of Breast Diseases, and chaired numerous committees, including those at the Susan G. Komen Foundation and the Breast Cancer International Research Group.

Hortobagyi has received countless international honors, including the Brinker International Award for Clinical Research, the Japanese Surgical Society Medal, the Sir Peter Freyer Medal in Galway, Ireland, the Jill Rose Award, and the William L. McGuire Award. He was named Chevalier of the Order of la Legion d'Honneur de France in 2001, and he was named to ASCO's list of luminaries in 2014.

Other 2015 recipients from MD Anderson are Robert Bast, Jr., MD, vice president of translational research, and Emil J. Freireich, MD, a professor in the Department of Medical Education.

Accolades

IT manager has 5,000 followers – Not on social media

– By Claire Blondeau

When **Toni Glover, MBA, MSS, PMP, ITIL, MCP,** isn't creating information technology (IT) solutions for Cancer Medicine, she is Col. Glover, brigade commander over an organization almost twice as large as the division, consisting of approximately 5,000 Soldiers and civilians in the Army's 650th Regional Support Group (RSG) based in Las Vegas, Nev. Glover took command of the unit in June 2015.

Glover, manager of systems analyst services, has been living a double life as a U.S. Army Reserve commissioned officer her entire career. In May 2000, Glover started her job as the IT manager for MD Anderson's Division of Surgery, a position she vacated when her unit was called for active duty a year after the 9/11 terrorist attacks. "In December 2002, I was notified that I had 72 hours to report to Fort Sam Houston" in San Antonio, she said. For the next six and a half years, she helped stage Soldiers for deployments in support of Operation Noble Eagle, Enduring Freedom and Iraqi Freedom. "It changed my world," she said. "I was praying for a change, and God put me on active duty and sent me all over the world." In 2008, she was very happy to return to MD Anderson with her previously held title but in the Division of Cancer Medicine.

Glover joined the Air Force Reserve Officer Training Corps (ROTC) as a high school freshman to follow her father's footsteps as a Soldier. "From ninth grade, I knew this was for me," she said. "I absolutely loved the discipline, respect, integrity, and leadership, and the expectation they put on you to achieve and be the best." Her dad retired from the Armed Forces in April 1989, the same month she was commissioned as a 2nd Lieutenant in the United States Army. Glover was commissioned after earning a bachelor's degree in computer system science from the University of West Florida in Pensacola, Fla.

Because she attended college on an Army ROTC scholarship, when she graduated she was given the option of completing four years of active duty or eight years in the United States Army Reserves, and she chose the latter "with the intention of doing my time and getting out." Her military occupation is "90A Multifunctional Logistics"–highway, rail, aviation, and overseas transportation –a specialty for which the Army trained her. In 2003, she earned her master of business administration in Electronic Commerce from Our Lady of the Lake University in San Antonio, and she was promoted to Colonel below the zone when she finished her master of strategic studies degree in leadership from the U.S. Army War College in Pennsylvania in 2013.

The RSG she commands has a wartime mission to deploy and provide contingency and expeditionary base operations support, with responsibility for managing facilities, providing administrative and logistical support of Soldiers, and ensuring the security of personnel and facilities on a base camp. The RSG provides Command and Control of assigned units during Homeland Security, Homeland Defense, and Civil Support missions within the United States, to include managing the reception, staging, onward movement, and integration of supporting forces. When not deployed, the RSG provides command and support of assigned units. In other words, "We take a piece of land and make it a home for soldiers," she said. Like other logistics units she has been a part of, the RSG brings in all equipment and stages it, so Soldiers have everything they need to work, live, eat, and sleep, and then move on to wherever they are needed.

Glover is on the road at least once a month to visit different companies under her leadership. "Vegas is headquarters, where my flag is, but I am not there often," she said. She is responsible for battalions in several western states and conducts a readiness check conference call with a different unit every Tuesday. In addition to the seven people she supervises on the application development team, over 100 Soldiers directly report to her. "It is a lot of evaluations to write, but that's OK," she said.

Glover was recognized at the 2013 division employee recognition awards for Excellence in Communications, Education, and Information Services for her work on Web Schedule, the Language of Caring initiative, and a few other notable projects. She is an MD Anderson Ambassador for Life and relishes the opportunity to speak to schoolchildren about leadership at career day.

For he's a jolly good fellow!

Congratulations to **Kent Walters, MBA, CMPE,** Stem Cell Transplantation and Cellular Therapy medicine department administrator (DA), who passed the test and is now a fellow of the American College of Healthcare Executives (FACHE). Eligibility is based on years of experience in the field, continuing education, and participation in healthcare-related community/civic events, as well as references from current fellows.

ACHE is a 40,000-member professional society of hospital, healthcare system and other healthcare organizational leaders. The FACHE credential is the industry-recognized board certification in healthcare management. Walters is the second DA in the division to earn the credential: **John Randall, MHA, FACHE,** DA for Lymphoma/Myeloma and *ad interim* DA for Gastrointestinal Medical Oncology, earned the FACHE credential in 2012.

Just last year, Walters received the Healthcare Financial Management Association's Founders Medal of Honor in recognition for outstanding service to the profession. Walters also is active with the American Society for Blood and Marrow Transplantation and has co-authored articles on pharmacoeconomics and transplant issues. A 10-year MD Anderson employee, Walters participates at an institutional level with global partnerships.

Accolades

CAD earns advanced certification

Penny Phillips, RN, MBA, MSN, BSN, clinical administrative director (CAD) of the Lymphoma/Myeloma Center, recently earned board certification as an Advanced Nurse Executive (NEA-BC) from the American Nurses Credentialing Center (ANCC). This certification ensures the clinical knowledge and skills of nurses who managed the daily operations of a unit or service line. Applicants are required to have a master's in nursing or a bachelor of science in nursing and a master's degree in another field, plus continuing education in nursing management. ANCC is the credentialing arm of the American Nurses Association (ANA). There are only two other division CADs with this advanced certification: Toni Eby, RN, MBA, BS, NEA-BC, Gastrointestinal Cancer Center CAD, and **Sherry Sorensen, DNP, MSN, RN, CNA, CPHQ, NE, OCN, NEA-BC,** former CAD for the Genitourinary Cancer Center.

Phillips came to MD Anderson in December 2014 after 27 years with the University of Alabama Birmingham (UAB) Health system.

She earned her bachelor of science degree in nursing and master of business administration from UAB, and her master of science in nursing degree from Auburn University.

Grateful patient spurs Melanoma nurse's honor

Melanoma Medical Oncology Professor **Wen-Jen Hwu, MD, PhD,** has had all kinds of experiences during her decades of clinical practice, but it was a first even for her when one of her patients gave her instructions, rather than the other way around. When Hwu entered the examining room where he was waiting, the patient handed her a copy of the *Houston Chronicle,* showed her the page describing its 2015 "Salute to Nurses" program and campaign to recognize Houston's top 150 nurses, and told her: "You need to nominate Karen." He was referring to Medical Oncology Research Nurse **Karen Mae Perdon, RN,** *(pictured)* whom he had come to know and appreciate as a patient participating in a clinical trial led by Hwu. Hwu was delighted to oblige her patient by filling out the newspaper form nominating Perdon, describing her as "one of the hardest-working and most productive" individuals with whom she'd ever worked – high praise indeed from Hwu, who is well known for those traits. In April, Perdon received an email from an MD Anderson official that she had been selected as one of the Chronicle's "Top 150 Nurses in Houston."

*Contributed by **Leslie Loddeke, BJ,** Melanoma Medical Oncology publications coordinator*

Surprise reception honors Silverstein's 40th anniversary

When you've worked with a group of people for 40 years, you think you know all of their moves. But late in the afternoon on Wednesday, Aug. 26, Leukemia Department Chair **Hagop Kantarjian, MD,** knocked on the door of **Mary Silverstein, BA,** department administrator, and told her he needed her to go someplace with him right away. She obliged and got escorted into the conference room where there was a gigantic cake in the middle of the table and dozens of other faculty and employees yelling "Surprise!" They were celebrating her 40th anniversary with the institution.

From left, son Kyle, husband Fred, Silverstein, son Ben, and his wife, Meredith, who works in Cardiology

Jeff Guidry, MBA, associate department administrator, presented a slideshow that paired photos of people Silverstein has worked with throughout the years with music from the 1970s. Adding to the event, her two sons and her husband, Fred, a high school physical education teacher and coach at St. Mark's Episcopal School, walked in the room about 30 minutes later.

Coworkers brought in Silverstein's favorite: carrot cake from Three Brothers Bakery

Silverstein joined the institution in August 1975, shortly after moving to Houston to find work. At the reception, she joked about hiring a job agency to help her find work, and subsequently paying the company her first month's salary once hired. Some of her roles have included working as a staff assistant and project coordinator in the former Division of Medicine, administrative manager in Sponsored Projects, and her current role which she has held since 1999. Silverstein received the 2005 DoCM Exemplary Employee Award and MD Anderson's 2012 Distinguished Mentor Award.

Grand Rounds

– By Erica Di Pierro

In case you missed them, following are summaries of recent presentations at DoCM Grand Rounds. Other lectures are summarized in the moon shot updates and Research and Education section.

July 7: Michael Kroll, MD, "Cancer and Venous Thromboembolism"

Michael Kroll, MD, chief of Benign Hematology discussed venous thromboembolism (VTE), a life-threatening condition associated with several forms of cancer. Tumors often secrete compounds including tissue factor and mucins that promote a state of hypercoagulation in blood vessels, leading to formation of a thrombus, or clot. Clots can subsequently be dislodged, allowing mobility through the bloodstream and introducing a serious risk for pulmonary embolism and death. Kroll emphasized that prophylaxis is key for prevention of VTE in hospitalized cancer patients. However, current "one size fits all" guidelines used to determine the need for preventive anticoagulation may be standing in the way of decreasing the incidence of VTE for cancer patients. Kroll discussed evolution of such recommendations that now seek to stratify patients by risk for VTE, using major abdominal or pelvic surgery as the predominant factor for cancer inpatients and myeloma therapy and/or immunomodulation therapy for outpatients. Historically, one of the primary agents for prophylaxis has been heparin, which blocks pro-thrombotic mucin interactions with and induces release of a tissue factor inhibitor from the vascular endothelium, directly diminishing the triggers for thrombosis. Low-molecular weight versions of heparin have been shown to significantly reduce the risk of recurrent VTE when compared with warfarin, another common anticoagulant. Newer treatment options can be administered orally as opposed to injected (as is required with heparin) and also have the lowest bleeding risk of all available agents. However, there is currently no way to reliably monitor or reverse their activity, and Kroll advises that we must fully consider their safety and efficacy through clinical trials before widely accepting them. Other topics of discussion included use of thrombolytic therapy for massive pulmonary embolism (PE), and pros and cons of inferior vena cava filters for prevention of PE.

July 21: Marina Konopleva, MD, PhD, "Biology and Targeting of Leukemia Microenvironment"

The leukemic bone marrow microenvironment was the topic of discussion during today's DoCM Grand Rounds, presented by **Marina Konopleva, MD, PhD,** associate professor of Leukemia. Konopleva divided her seminar among three main topics, all involving interruption of molecular pathways that promote acute myeloid leukemia: 1) testing the efficacy of a second generation stromal cell derived factor 1 (SDF-1α)—CXCR4 interaction inhibitor in leukemia treatment, 2) investigating the role of hypoxia in the pathology of leukemia, and 3) blockade of PI3K/mTor signaling within the leukemic bone marrow niche.

Bone marrow stromal cells produce chemokine SDF-1α, a small cellular messenger that binds and activates chemokine receptor CXCR4 on leukemic cells. This interaction causes the cells to exit vascular circulation and home to the bone marrow, where they enter a growth-and-survival-promoting microenvironment nurtured by the stromal cells. This is particularly problematic in the case of leukemic stem cells, which localize in safe haven marrow tissue niches protected from traditional chemotherapies. As a result, the bone marrow leukemic microenvironment ensures constant regeneration and perpetuation of the cancer. Konopleva's first story focused on a new peptide that selectively blocks SDF-1α from binding to and activating downstream signaling of CXCR4 more potently and for a longer duration than its predecessor drug. Results from her lab show that, even as a single therapeutic agent, this new inhibitor extends survival and reduces tumor burden in a leukemia mouse model by durably inducing circulation of leukemia cells and preventing their migration to the bone marrow. This effect is thought to occur by changes in gene expression that induce a mobilized as opposed to bone marrow resident phenotype, promote differentiation, and limit survival of leukemic cells. Clinical trial preparations are underway.

Second, Konopleva discussed studies supporting the idea that excessive oxygen consumption by the leukemia microenvironment leads to hypoxia and resultant stabilization of hypoxia inducible factor 1 (HIF-1α). This transcription factor activates genes promoting cell survival, tumor invasion, and angiogenesis. In a high oxygen environment, however, HIF-1α is degraded. A novel small molecule identified through the Institute for Applied Cancer Science (IACS) blocks oxidative phosphorylation by inhibiting complex I of the electron transport chain, leading to accumulation of oxygen and degradation of HIF-1α. So far this inhibitor has shown promise in extending survival of leukemic mice, reducing hypoxia and leading to death of leukemic cells. A phase I trial is slated for early 2016 with applications/collaboration in pancreatic, colon, and renal cancers as well.

Finally, an inhibitor of the pro-proliferation, survival, and angiogenesis PI3K/mTOR signaling cascade was discussed. This pathway is heavily activated in leukemia stem cells, particularly those that are chemoresistant due to their tight association with stromal cells. This mTOR kinase inhibitor is also on its way to clinical trial. Within this discussion, Konopleva showcased a new method for labeling and analyzing intra- and extracellular marker expression, including those like mTOR, in large cell populations. This method, called CyTOF, combines flow cytometry with mass spectrometry, allowing identification and analysis of up to 100 markers per cell at once.

continued on next page

Events

July 28: Robert Orlowski, MD, PhD, "Novel Approaches to Multiple Myeloma Therapy"

Robert Orlowski, MD, PhD, chair *ad interim* of Lymphoma/Myeloma presented an overview of developments in diagnosis and staging criteria as well as therapeutics in the multiple myeloma field. Orlowski discussed the need for clarification of mechanisms behind progression of pre-malignant monoclonal gammopathy of undetermined significance (MGUS) and asymptomatic smoldering multiple myeloma (SMM) to symptomatic forms. Currently, changes in the immune microenvironment are an area of heavy focus, such as higher expression of PD-L1 on plasma cells increasing the risk for development of symptomatic disease. Findings in the last 10 years have redefined primary therapy regimens for both transplant eligible and ineligible patient groups to include various combinations of immunomodulatory drugs and proteasome inhibitor, bortezomib. However, high risk myeloma cases still have poor outcomes, and major efforts are underway to find new therapies that will address this disparity. For example, the multiple myeloma pilot moon shot has started churning away at development and tweaking of immunotherapies like PD-1 and CD38 monoclonal antibodies that can help activate the immune system and destroy myeloma plasma cells, respectively. Also on the moon shot's radar are SLAMF7 and neutrophil-derived peptide PR-1, which have both been shown to mediate destruction of myeloma cells when targeted with monoclonal antibodies. Pro-apoptotic mediators like proteasome inhibitor carfilzomib and histone deacetylase inhibitor panobinostat show promise in treating relapsed and refractory myeloma when combined with bone marrow transplant and traditional immunomodulators, although the latter comes with a set of toxicities that must be addressed. Additionally, development of designer drugs that target myelomas with the two most common refractory mutations, loss of p53 and 1q21 amplification, are underway. Genomic and proteomic profiling of these problematic cases should also help by allowing identification of resistance mechanisms and biomarkers to guide combination therapy approaches. With an arsenal of novel targets, only some of which have been mentioned here, the field is poised to improve therapies for relapsed and refractory multiple myeloma cases starting here at MD Anderson.

Aug. 25: Eduardo Bruera, MD, Suresh Reddy, MD, David Hui, MD, and Sriram Yennu, MD, "Supportive and Palliative Care Processes and Outcomes at MD Anderson"

This morning's Grand Rounds was divided among four faculty members essential to the success of the Palliative, Rehabilitation, and Integrative Medicine department and Supportive Care Center: **Eduardo Bruera, MD,** Chair; Suresh **Reddy, MD,** professor; **David Hui, MD,** assistant professor; and **Sriram Yennu, MD,** associate professor. Following a name change from Palliative Care, the Supportive Care program has widened its focus to include patients at earlier stages of disease and in doing so has generated overwhelming growth over the last few years. Bruera explained that cancer can manifest in all aspects of a person's life, from physical to social, emotional, spiritual, and mental, and this confluence of symptoms must be addressed to manage disease burden. Reddy discussed the bustle of the six mobile care teams of the outpatient clinic, which distribute a daily load of 65 to 75 patients, presenting with a range of symptoms. At the inpatient clinic, patients are typically admitted for acute or intractable physical symptoms or complicated psychosocial or family issues. The rapid growth that has accompanied increased demand has stretched the resources of this program thin, which is bringing about the need for restructuring and expansion. Hui provided an overview of several major areas of research within the department. He stressed that MD Anderson is in a unique position, having a palliative inpatient unit as well as an outpatient clinic, the latter of which only half of cancer centers in the country can claim. Areas under investigation include use of dexamethasone, opioids, BiPAP, oxygen, and air in treatment of dyspnea; identification of symptoms that indicate impending death; and finding better drug combinations to manage delirium. Yennu extended the research conversation, discussing the optimization of dexamethasone, panax ginseng, and multidimensional treatment approaches in alleviation of cancer-related fatigue, as well as the use of testosterone in cachexia management. In all, the supportive care program and research department are made up of strongly collaborative teams that work together to improve patient quality of life at both late and early stages of disease.

Upcoming Grand Rounds

DoCM Grand Rounds are held from 8 to 9 a.m. Tuesday in the Hickey Auditorium. Following are some of our upcoming speakers and events. Watch your email and follow @CancerMedMDA on Twitter for schedule announcements.

October 6
Barnett Kramer, MD, PhD
Director, Division of Cancer Prevention
National Cancer Institute
"Cancer Screening: The Clash between Science and Intuition"

October 20
Nancy E. Davidson, MD
Director, University of Pittsburgh Cancer Institute
University of Pittsburgh Medical Center

November 3
Ahmed Kaseb, MD
Associate Professor, Gastrointestinal Medical Oncology
MD Anderson Cancer Center
"Personalized Hepatocellular Carcinoma Management: Recent, Advanced and Future Outlook"

December 1
Division of Cancer Medicine
Faculty Awards Program

December 15
Division of Cancer Medicine
State of the Division: FY'15: Year in Review

DoCMessages

THE UNIVERSITY OF TEXAS MD Anderson Cancer Center
Making Cancer History®

Competitive effort spurs teams to put food on table

Matthew Hernandez, TCNA, senior administrative assistant in Stem Cell Transplantation and Cellular Therapy, proudly shows off his vehicle loaded with goods to help Houston area residents in need.

The Department of Lymphoma/Myeloma collected 3,392 pounds of bottled water, canned foods, rice, cereal, pasta, sodas, and other non-perishable items as part of the Texas Medical Center Food Drive in July! The group, made up of faculty and employees in their clinics, administrative offices, and South Campus labs held competitions among themselves to make such a large donation to the Houston Food Bank, which feeds about 800,000 people each year through its member agencies. Lymphoma/Myeloma really got involved by giving their teams motivational names, including Hunger Games, Souper Crew, and Guardians of the Grub. The Department of Experimental Therapeutics collected 2,355 pounds—also by competing in teams, with winning teams earning a free breakfast or lunch each week and bragging rights. A few people generously donated money, which **Aaron Walton, MPAff,** department administrator, used to purchase provisions at area grocery stores. The Clinical and Translational Research Center (CTRC) and the CTRC Lab amassed 1,847 pounds. They encouraged each other by competing and charting their efforts throughout the month. **Shakara Randle,** administrative assistant, produced a video—complete with music—documenting the final collection and transfer into the truck. The Department of Palliative, Rehabilitation and Integrative Medicine collected 1,246 pounds. Organizers in that department posted construction paper faces with frowns that had to be "turned upside down" into smiles thanks to team generosity. They also came up with a friendly competition between faculty and "the rest of us." The Department of Stem Cell Transplantation and Cellular Therapy collected 665 pounds of goods. All told, the division turned in 18,334 pounds of food, about six pounds per person. That's a nice contribution to the effort and to the institution's total of 163,372 pounds! Good job, everyone.

DoCMessages is a publication of MD Anderson's Division of Cancer Medicine.

Head, Division of Cancer Medicine	Patrick Hwu, MD
Associate Division Head	Richard Champlin, MD
Deputy Division Head for Clinical and Educational Affairs	Robert Wolff, MD
Deputy Division Head for Research	Elizabeth Grimm, PhD
Deputy Division Head for Global Oncology	Merrill Kies, MD
Executive Director and Division Administrator	Wendy Austin, RN, MS, AOCN, NEA-BC, FACHE
Director, Cancer Medicine Administration	Candace Baer, MHA, FACHE
Director, Research Planning & Development	Suzanne Davis, MBA, MMS
Associate Director, Information Services	Mark Choate, MBA
Associate Director, Graduate Medical Education Program	Catherine Butler-Gunn, JD
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FY'15 Team Anderson Goal: We made it!

As of Aug. 26, almost 97% of the division's eligible employees had completed the Team Anderson goal of Fundamentals of Quality Improvement course series, surpassing the 95% threshold. Now, the division must meet its annual operating expense budget to trigger the payout. If met, the award will be paid out on Oct. 20 for employees paid semimonthly and Nov. 1 for employees paid monthly. The payout amount can range from $300 to $600.