Cover Story
Survivorship: Care Beyond a Cure

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Summer 2017
Every summer we celebrate Cancer Survivor’s Day on the first Sunday of June. This is a day to celebrate our patients who have been treated for cancer, as well as honor those we have lost along the way. In the U.S. alone, there are estimated to be 15.5 million cancer survivors currently, a number that is predicted to grow to 20.3 million in the next decade.

We aim to not just help patients live after a cancer diagnosis, but live well. In this issue, you will learn about some of our clinical and research efforts aimed at improving survivorship and quality-of-life for cancer patients. Great strides have been made in understanding some of the issues faced by young cancer survivors, for example, as well as identifying those factors that predict treatment side effects. You will also learn about our new Center for Supportive Oncology, housed on the 6th floor of the Duchossois Center for Advanced Medicine, and meet our new American Cancer Society patient navigator who leads the Cancer Support Center in the Center for Supportive Oncology. We hope that our patients and their families are as excited about these valuable resources as we are. And, as always, we are proud to share our new faculty, member honors, and clinical trials with you.

Thank you for your support, and we hope you have a wonderful fall!

Regards,

Michelle M. Le Beau, PhD
Director,
The University of Chicago Medicine Comprehensive Cancer Center; Arthur and Marian Edelstein Professor of Medicine
Unraveling the Genetic Basis of Treatment Toxicities

Often times, a cancer patient has to live with the debilitating side effects of treatment long after their cancer is in remission or even cured. This is particularly devastating for children or young adults with a lifetime ahead of them. Severe toxicities include hearing loss or deafness, ringing or buzzing in the ears (tinnitus), and neurotoxicity (causing damage to nervous tissue), such as peripheral neuropathy that presents as tingling or numbness in the hands or feet.

How does an individual’s genetic makeup impact the side effects and toxicities they experience with treatment? M. Eileen Dolan, PhD, professor of medicine, is a world-renowned expert in chemotherapy-induced toxicities and is leading efforts in pharmacogenomics (see sidebar) to identify the genetic variants that make individuals more susceptible to treatment side effects. This is especially important for improving the quality-of-life of the growing population of cancer survivors—now more than 28 million worldwide.

Dr. Dolan has been studying permanent adverse effects in adult cancer survivors after receiving cisplatin, a chemotherapy drug that is commonly used against many different cancers but can cause severe, often permanent tinnitus and hearing loss. In a large clinical trial published in the Journal of Clinical Oncology in 2016, Dolan and colleagues from several other institutions found that almost one in five testicular cancer survivors treated with cisplatin had severe to profound hearing loss, and two in five had tinnitus that was also correlated with reduced hearing over a range of frequencies. The team is now validating genes associated with cisplatin-induced ototoxicity as a follow up to the most comprehensive genome-wide association study (GWAS) in adult testicular cancer survivors that was published in Clinical Cancer Research in 2016. They will then use information about the genetic variants and genes to develop drugs to prevent or treat hearing loss and tinnitus induced by cisplatin.

Cisplatin and related drugs (carboplatin and oxaliplatin) and other types of chemotherapies, such as taxanes (paclitaxel and docetaxel) and vinca alkaloids (vincristine), also cause long-term debilitating peripheral neuropathy and adversely impact cancer survivors’ quality of life. Dolan and her research team have developed key laboratory models and are participating in several large, multicenter clinical trials in many different cancer types to identify the underlying causes of chemotherapy-induced neurotoxicity.

In a recent study published in Clinical Cancer Research, Dolan and her collaborators conducted a GWAS study and found several clinical and genetic factors associated with cisplatin-induced peripheral neuropathy in testicular cancer survivors, including lower expression of the RPRD1B gene. Because the protein encoded by this gene is involved in DNA repair and cell cycle control, it may serve as a target for drug development, a hypothesis that will be tested back in Dolan’s laboratory.

“Identifying genes contributing to chemotherapy-induced hearing loss, tinnitus or peripheral neuropathy is a critical step in the development of new drugs to prevent or treat these devastating side effects,” said Dolan. “We found that genes linked to permanent hearing loss from cisplatin treatment are also important in inherited disorders that cause deafness, which means that drugs against these targets could impact 360 million people (5% of world’s population) who live with disabling hearing loss.”

Pharmacogenomics is the study of how genes affect a person’s response to drugs. It combines pharmacology and genomics to develop effective, safe medications and doses that will be tailored to a person’s genetic makeup.
As a result, there are currently more than 380,000 survivors of cancer in the U.S. who were diagnosed when they were under the age of 20, according to a 2015 study based on NCI SEER data. This population often faces complex, long-term health problems associated with cancer treatments during childhood.

“These are patients that are going to live for decades afterwards, so understanding these health effects became critical,” said Tara Henderson, MD, MPH, associate professor of pediatrics and director of the University of Chicago Childhood Cancer Survivors Center. Henderson, who also attended medical school at the University of Chicago, had always imagined a career in oncology focused on end-of-life care. But, during her fellowship she was introduced to the new and burgeoning field of cancer survivorship research and knew she’d found her calling.

“I loved everything about it,” she said. “I loved the patient care aspect. I loved the research and thinking about how to identify what were risk factors for patients, and how to develop guidelines for their care.”

In 2005, Henderson returned to her alma mater, which offered her the autonomy to build a childhood cancer survivors program from the ground up.

In the U.S. in 2017, more than 10,000 new cases of cancer will be diagnosed among children from birth to 14 years of age, according to an estimate from the National Cancer Institute (NCI). However, due to great strides in treatment over the past few decades, now more than 80 percent of patients survive childhood cancers.

As a result, there are currently more than 380,000 survivors of cancer in the U.S. who were diagnosed when they were under the age of 20, according to a 2015 study based on NCI SEER data. This population often faces complex, long-term health problems associated with cancer treatments during childhood.

“In survivorship, we educate each patient about their treatment, the side effects and risks, and track them to get the right kind of healthcare they need for both surveillance of their previous cancer and for other health effects that are associated with the treatment of their cancer for the rest of their life,” Henderson said.

Today, the University’s Center sees hundreds of patients each year. Each patient has access to psychologists, social workers, physical therapists, and a variety of pediatric and adult subspecialists, including cardiologists, endocrinologists and pulmonologists, to name a few. In addition, patients are enrolled in a registry database that allows Henderson and her team access to their information for research purposes, including clinical trials.
Henderson often collaborates with Sonali Smith, MD, Elwood V. Jensen Chair, Department of Medicine, professor of medicine and director of the Lymphoma Program, and Wendy Stock, MD, Anjuli Seth Nayak Professor in Leukemia and co-director of the Adolescent and Young Adult (AYA) Oncology Program to enhance current survivorship programs and to develop new ones.

“I’m seeing more and more survivors of adult leukemia, and we want to use that as a prototype for survivorship across the board,” said Henderson, who is working to establish an adult survivorship program that should be launched in the near future.

Currently, Henderson and colleagues in the Children’s Oncology Group and adult Intergroup for Clinical Trials in Oncology are developing a clinical trial to mitigate long-term effects of radiation exposure in both adult and pediatric Hodgkin lymphoma patients.

Henderson is also a Principal Investigator of the Childhood Cancer Survivor Study (CCSS), a collaborative, multi-institutional research study of more than 35,000 childhood cancer survivors diagnosed with cancer between 1970 and 1999.

“The Childhood Cancer Survivor Study has really driven a lot of what we all know about cancer survivorship because we’ve been following these patients since 1994,” Henderson said. “I think that these data are invaluable to understanding patients’ risk. More recently, we’ve been learning how changes in therapy are impacting the morbidity and mortality of these patients.”

In a recent study, the CCSS found that a reduction in dosage of radiation therapy has led to a decreased risk of second cancers, or malignancies, among childhood cancer survivors. About 77 percent of childhood cancer patients received radiation therapy in the 1970s versus 33 percent of patients in the 1990s.

The study looked at 23,603 survivors of childhood cancers including acute lymphoblastic leukemia, Hodgkin lymphoma, and brain tumors. The researchers followed up with patients after about 20 years and found that those treated in the 1970s had a greater risk for second malignancies—breast and thyroid cancers being the most common—than those treated in the 1990s.

However, radiation isn’t the only risk factor. In one high-impact study, Henderson found that women who survived childhood cancer are four times more likely to develop early breast cancer as adults than those who did not have cancer as a child, even if they did not receive radiation therapy to the chest.

The increased risk was attributed to two classes of chemotherapy: anthracyclines and alkylators. But, Henderson is also interested in understanding any genetic factors at play. The CCSS is undertaking whole-exome DNA sequencing in patients who supplied biological samples in order to understand how patients’ genetic makeup plays a role in second cancers.

And, as new treatments emerge, Henderson said it’s important to continue to study long-term effects of therapies. In 2015, she was awarded a $500,000 per year, 5-year grant from the St. Baldrick’s Foundation to study survivors of high-risk neuroblastoma, a cancer that used to have poor survival outcomes. However, advances in therapies, like immunotherapies, have led to better survival rates. Still, we know little about how new drugs will impact a child’s health down the road.

“You have to think of cancer patients from prevention through survivorship,” Henderson said. “It’s no longer just figuring out the next new drug. It’s our mission to take care of the patients across the cancer-care spectrum. And, I think we’re fortunate to have a Cancer Center that appreciates that.”

To learn more about our pediatric and AYA survivorship program, visit: www.uchicagokidshospital.org/specialties/cancer/survivors/

1 Phillips et al., Cancer Epidemiol Biomarkers Prev 24:653-663, 2015.
Adolescent and Young Adult Oncology Program

Each year, about 70,000 patients aged 15–39 in the U.S. are diagnosed with cancer, according to the National Cancer Institute, with blood cancers making up 20 percent of those cases.

In 2012, University of Chicago Medicine Anjuli Seth Nayak Professor in Leukemia Wendy Stock, MD, and Jennifer McNeer, MD, associate professor of pediatrics and director of the University of Chicago Pediatric Hematology and Oncology Fellowship Program, collaborated on the development of the Adolescent and Young Adult (AYA) Oncology Program to address the unique challenges that face this population during treatment.

The program was the first of its kind in the Midwest, and was established based on research conducted by Stock, Richard Larson, MD, and the late James Nachman, MD. Their research found that AYA patients newly diagnosed with acute lymphoblastic leukemia (ALL) had more successful treatment outcomes when treated in pediatric centers using pediatric treatment protocols than adult treatment regimens administered in adult treatment centers.

“The difference in survival rate was 30 percent,” Stock said. “It became a focus of my clinical work to explore this disparity. We suspected that the entire approach to treatment, not just the treatment, has an impact on patient outcomes.”

AYA patients often don’t have the support necessary to cope with a cancer diagnosis and treatment, as well as certain physical and mental health problems that can arise in cancer survivors. It can be a challenge to ensure that AYA patients adhere to their treatment and follow-up.

“Compliance can become an issue in the AYA population, when they miss appointments, forget to take their medicine, or they don’t want to take medicine because their friends don’t take medicine,” McNeer said.

If family or social support is lacking, the patient faces an additional hurdle that needs to be overcome for successful treatment. “Many of our patients have these incredibly fractured lives and have these challenging illnesses,” Stock said. “To get them through the treatment is really, really difficult and requires a comprehensive approach.”
Unlike other AYA clinics, the University of Chicago’s AYA program brings together adult and pediatric oncology, and uses a multidisciplinary, team approach. The two programs collaborate on each case to determine the best course of care for each individual patient.

“Our program meets every week to discuss each patient’s upcoming clinic visits in detail, including the supportive care issues that may include seeing the physical therapist, the psychologist, or the social worker,” Stock said. “The whole environment, not just the treatment, is part of the success here. Our use of pediatric treatment models allows for more time spent with patients, in terms of financial, psychological, and educational support.”

Both doctors look forward to seeing the program grow. McNeer sees a future with new, innovative treatment protocols. “Immunotherapies and targeted therapies are going to be game changers for our patients,” she said. “While they’re on these therapies, patients feel better and are able to keep up with normal activities such as going to school, seeing friends, and working.”

Dr. Stock and Dr. McNeer are joined by leukemia expert Emily Curran, MD, clinical instructor of medicine, lymphoma expert Sonali Smith, MD, professor of medicine, and pediatric cancer survivor specialist Tara Henderson, MD, MPH associate professor of pediatrics, as well as a group of specialized and dedicated advanced practice nurses. In the future, they hope to add experts that offer specialized treatment protocols for other malignancies like sarcomas and testicular cancer, and they are working to add more support staff.

Teen Lounge

Life as a teenager can be hard. It can be especially challenging when coping with cancer. Oftentimes, teens have extended stays in the hospitals due to cancer treatment and don’t have a place to call their own that offers some freedom. The University of Chicago Medicine, with the support of Teen Cancer America, has created a beautiful new lounge for teens and their loved ones.

The bright and cozy 240-square-foot Teen Lounge is located on the second floor of the University of Chicago Medicine Comer Children’s Hospital. The planning team worked with Comer’s Teen Advisory Board, a group of teens comprised of current and former patients, to provide input and feedback on the vision and purpose of the room, and to devise design concepts.

“These kids had wonderful ideas about what the space should be,” said Natasza Naczas, facilities planner. “They came up with the color schemes and even provided insight on the artwork that should be in the space. It was a very fun process.”

A unique Chicago skyline mural dominates the space, along with artwork by acclaimed South Side graffiti artist Hebru Brantley, whose work has been purchased by several celebrities, including hip-hop mogul Jay-Z.

While lounging on the colorful modern furniture, patients can enjoy Xbox and Playstation gaming systems. They are also able to access the GetWell Network in the room and stay connected to their treatment and care plans.
Brittany Valdez joined the University of Chicago Medicine in 2017 as an American Cancer Society patient navigator. Valdez, who recently earned her Master’s degree in clinical/medical social work, serves as a resource for patients and families as they navigate the healthcare system.

Explain your role as an American Cancer Society (ACS) patient navigator.
I aim to provide proactive and personal guidance for cancer patients, their families, and their caregivers to help them through their cancer experience with a focus on identifying and overcoming barriers to treatment and care, and an overall goal of improving patients’ health outcomes.

Patients and caregivers are faced with many psychosocial, financial, and emotional concerns during a cancer diagnosis. I help connect patients and their loved ones with the most appropriate programs and services to ease their cancer burden, which may include ACS programs or other resources available in the community.

Whether it is getting patients and caregivers the information they need to make treatment decisions and better understand their disease, helping with the day-to-day challenges of living with cancer (i.e., transportation, lodging, and insurance issues) or connecting them with community resources, I am there to offer free help from the time of diagnosis through treatment and into survivorship.

Why is patient navigation an important part of the care experience?
Patient navigators are dedicated to assessing patients’ needs and connecting them with appropriate resources. We strive to build relationships with each cancer patient, survivor, and caregiver by providing continual support and information to meet their evolving needs along their cancer journey.
Patient navigation does not simply assist patients through the healthcare maze in a more timely fashion; it plays a critical role in improving the patient’s psychological well-being and quality-of-life, giving patients the tools and resources they need to be active participants in their own care.

**What or who inspired you to choose this career path?**
I have always wanted to work in the healthcare system ever since I can remember. Many of my family members have or still work in the healthcare system, and I grew to have the eagerness to want to do the same. I know this is going to sound cheesy or overstated, but I have always wanted to help people in some way whether that be big or small. That is exactly what a career in patient navigation gives me: the ability to help people during their illness and recovery.

**What is the most rewarding part of your job?**
As long as I get to put a smile on a patient’s face, I have done my job.

**Why did you come to the University of Chicago? What do you love about working at this institution?**
Of course, UChicago has a top cancer program—being an NCI-designated Comprehensive Cancer Center and being accredited by the American College of Surgeons Commission on Cancer—and they have a large population of cancer patients. But, importantly, University of Chicago Medicine is an incredible partner to ACS. We both share in the commitment to reach out to those most in need to ensure they have access to information, services, and resources.

**What are your favorite hobbies outside of work?**
I love trying new workout classes such as SoulCycle and Title Kick Boxing. I also like to try different restaurants around the city.

**What is one thing on your bucket list?**
I have two items on my bucket list that I want to accomplish this year. I would like to go skydiving and run a half marathon by the end of 2017.

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You can find Valdez in the Cancer Resource Center in the Coleman Foundation Supportive Oncology Outpatient Care Suite on the 6th floor of the Duchossois Center for Advanced Medicine (DCAM), Room 6504: http://www.uchospitals.edu/specialties/cancer/crc/

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**Research Highlights**

**Racial Differences in Breast Cancer Molecular Features and Outcomes**

Black women are more likely to die from breast cancer compared to white women, despite the risk of developing the disease being nearly identical for the two groups. Some of this racial disparity—or unequal burden of cancer incidence or mortality—is due to racial differences in the distribution in specific tumor subtypes, including the high rate of aggressive, triple-negative breast cancer in women of African ancestry. However, it is unknown whether other genomic differences contribute to disparities in survival.

Using a large data set from the National Cancer Institute’s The Cancer Genome Atlas (TCGA) of 930 patients with breast cancer, a multicenter team led by Olufunmilayo Olopade, MBBS, Walter L. Palmer Distinguished Service Professor of Medicine and Human Genetics, and Dezheng Huo, MD, PhD, associate professor of public health sciences, sought to identify racial differences in breast cancer molecular features and survival, and estimate the heritability of breast cancer subtypes. The investigators compared breast cancer-free intervals, tumor molecular features, and genetic variants among patients of African ancestry and European ancestry.

Compared with white patients, black patients had a worse breast cancer-free interval, and a higher likelihood of basal-like (a subgroup of triple-negative breast cancers) and HER2-enriched subtypes based on their tumors’ gene expression profiles. Additionally, more mutations in the TP53 tumor suppressor gene were found in blacks, as were fewer mutations in the PIK3CA gene. Importantly, after adjusting for the subtype frequency differences among blacks and whites, the research team uncovered a modest number of genomic differences but significant clinical survival outcome differences. They also estimated that more than 40 percent
of breast cancer subtype differences could be explained by genetics. These findings provide the basis for developing targeted therapies to improve clinical outcomes for breast cancer subtypes that disproportionately affect black women, and underscore the need for personalized risk assessment and optimal treatment for these women. (Huo et al., *JAMA Oncol* May 4 Epub ahead of print, 2017)

**Novel therapeutic target for leukemia precursor**

The myelodysplastic syndromes (MDS) are a group of bone marrow disorders in which immature blood cells do not mature properly to become healthy blood cells and sometimes develop into acute myeloid leukemia (AML). Some of the cytogenetic (i.e., number and structure of chromosomes in cells) abnormalities of MDS have been identified and incorporated into MDS diagnostic and prognostic classification. Deletion of part of the long arm of chromosome 5—del (5q)—is the most common recurring cytogenetic abnormality in MDS and occurs also in 40 percent of therapy-related MDS/AML patients. One of the genes on 5q implicated in MDS and AML is the *adenomatous polyposis coli (APC)* tumor suppressor gene, the product of which is an important regulator of the Wnt signaling pathway.

Extending their previous studies showing that mice with a deletion of one copy of *Apc* developed MDS, Michelle Le Beau, PhD, Arthur and Marian Edelstein Professor of Medicine and director of the University of Chicago Medicine Comprehensive Cancer, and Jason Cheng, MD, PhD, assistant professor of medicine, tested whether MDS in this animal model could be prevented by Wnt pathway blockade.

The research team found that deletion of one copy of *Ctnnb1*, encoding the major Wnt pathway effector β-catenin, prevented MDS development in Apc-mutant mice, and that altered Wnt signaling in the bone marrow microenvironment is necessary for the disease. Moreover, the Wnt small molecule inhibitor pyrvinium delayed MDS in these animals, even when symptoms were already present. Because increased nuclear localization of β-catenin (a readout of Wnt pathway activity) has been observed in stromal cells from many MDS/AML patients, this work suggests that blocking the Wnt pathway may be a potential new strategy for treating patients with MDS, therapy-related MDS/AML, and high-risk AML. (Stoddart et al., *Blood* 129:2959-70, 2017)

**Mechanisms of Immune Cell Trafficking in Tumors**

Although immunotherapy has become an important part of the anti-cancer arsenal for some hard-to-treat cancers such as melanoma, not all patients respond, and resistance to these therapies can develop. Understanding how and why some tumors develop resistance to immunotherapies is critical to turning non-responders into responders.

Tumor-specific effector T cells are immune cells capable of recognizing and killing cancer cells. The laboratory of Thomas Gajewski, MD, PhD, AbbVie Foundation Professor of Cancer Immunotherapy in Pathology, has previously characterized genetically engineered mouse melanoma models that mimic human tumors with a T-cell-inflamed tumor microenvironment (i.e., those tumors that are responsive to immunotherapy) and those with a non-T-cell-inflamed microenvironment (i.e. non-responsive). Recent work from Dr. Gajewski’s team sought to identify key mechanisms by which some tumors escape the immune system and may be resistant to immunotherapy. Specifically, they addressed whether adoptive transfer of tumor-specific effector T cells would overcome the non-T-cell-inflamed tumor microenvironment using these models and specialized imaging that can track cells inside the animals.

The investigators found that non-inflamed tumors lack the accumulation of a cell type that provides the major source of T cell-recruiting signals, called CD103-positive dendritic cells. These dendritic cells are required for trafficking of activated T cells into the tumors and promoting immunotherapy responsiveness. Therefore, this work provides mechanistic insights that may help to develop strategies to overcome immunotherapy resistance, perhaps through modulation of this dendritic cell population and driving T-cell trafficking to tumors. (Spranger et al., *Cancer Cell* 31:711-723, 2017)
Clinical Trials

As a NCI-designated Comprehensive Cancer Center and a lead site for the National Clinical Trials Network, we provide national leadership in developing clinical trials, which offer more options for patients. With more than 300 open therapeutic trials available, we enroll nearly 1,000 patients each year. For a full listing, visit clinicaltrials.uccrc.org.

Spotlight: Survivorship

- Key Adverse Events After Childhood Cancer, IRB 14717B
- Umbrella Long-Term Follow-Up Protocol, IRB 16719A
- Neuropsychological, Social, Emotional, and Behavioral Outcomes in Children with Cancer, IRB 16698A
- Longitudinal Assessment of Ovarian Reserve in Adolescents with Lymphoma, IRB13-1496
- LEAHRN (Late Effects After High-Risk Neuroblastoma) Study, IRB17-0167
- Childhood Cancer Survivor Study (CCSS), IRB 16680B
- A University of Chicago Adolescent and Young Adult Oncology Survey Protocol, IRB14-1098

Upcoming Events

The Changing Face of Oral Cancer

FRIDAY, SEPTEMBER 15, 2017
1 p.m. to 5 p.m.
University of Chicago Gleacher Center
450 N Cityfront Plaza Dr, Chicago, IL 60611
To register, visit uchospitals.edu/OralCancer2017
Supportive Oncology Makes Support Services An Integral Part of Treatment

Cancer patients and their families are often faced with challenges far beyond coping with treatment, from physical side effects to the logistics of getting to and from the hospital. The field of supportive oncology has grown recently as cancer clinicians recognize the need to provide patients with additional support during and after treatment.

“Supportive oncology is the care that patients require to reduce challenges and obstacles to have the best possible outcomes,” said Christopher Daugherty, MD, professor of medicine and director of the Center for Supportive Oncology (CSO) at the University of Chicago Medicine. “It means bringing in other disciplines and integrating those specialties into patient care in a truly multidisciplinary way.”

The CSO is a first step in efforts to contribute to the University of Chicago Medicine’s plan to develop a comprehensive survivorship program for adult patients that builds off the university’s already robust pediatric survivorship program, led by Tara Henderson, MD, MPH, associate professor of pediatrics and director of the University of Chicago Childhood Cancer Survivors Center (see feature article on page 2).

“The Suite, which was made possible by philanthropic support from the Coleman Foundation, provides an inviting and comforting space for patients and their loved ones to receive supportive services during and after cancer treatment, including physical and occupational therapy, psychosocial support, nutrition services, and palliative care.

Patients also have access to CSO services outside of the Suite, including psychology and psychiatric services, and smoking cessation programs.

“All of these services shouldn’t just be for patients with terminal diseases,” Daugherty said. “It’s about providing these services for all patients along that spectrum of their disease journey.”

To learn more about supportive oncology services, visit: http://www.uchospitals.edu/specialties/cancer/supportive-oncology/
Faculty Awards and Honors

Olufunmilayo I. Olopade, MBBS, FACP, Walter L. Palmer Distinguished Service Professor of Medicine, received the American Society of Clinical Oncology’s 2017 Humanitarian Award at the ASCO Annual Meeting in June. Dr. Olopade was also recently asked to join the Komen Scholars—an advisory group of distinguished leaders in breast cancer research.

Thomas Gajewski, MD, PhD, AbbVie Foundation Professor of Cancer Immunotherapy in Pathology, was named as one of OncLive’s Giants of Cancer Care, a program that celebrates the achievements of leading physicians and researchers who have devoted their time, talent, and resources to improving care for the many patients affected by cancer.

Karen Kim, MD, professor of medicine, was recently appointed Associate Director for Community Engagement and Cancer Disparities for the Comprehensive Cancer Center. Dr. Kim is expanding her focus on enhancing the Center’s community-based cancer disparities research portfolio, and building the pipeline of underrepresented minority trainees and early-stage investigators interested in cancer research.

Sonali Smith, MD, professor of medicine, was recently honored with the Elwood V. Jensen Chair, Department of Medicine. Dr. Smith is director of the lymphoma program.

ASCO Annual Meeting Brings Cancer Researchers to Chicago

More than 30,000 cancer leaders, physicians, researchers, and trainees gathered in Chicago in early June for the Annual Meeting of the American Society of Clinical Oncology (ASCO), the leading international professional organization for the clinical oncology community. A complete listing of UChicago presentations is available at cancer.uchicago.edu/2017/06/12/asco-annual-meeting-brings-cancer-researchers-chicago/
New Faculty

For more information about our new faculty, visit uchospitals.edu/physicians.

Jean Bao, MD, assistant professor of surgery, is a board-certified general surgeon who specializes in the treatment of men and woman with breast cancer, benign breast disease and a genetic predisposition or strong family history of breast cancer.

Bethany Slater, MD, assistant professor of surgery, is a pediatric surgeon who provides care to children of all ages who suffer from a wide spectrum of conditions, including congenital malformations, anorectal malformations and pediatric cancers.

Lixing Yang, PhD, assistant professor in the Ben May Department for Cancer Research, is working to develop new computational methods to integrate large-scale genomic, transcriptomic, epigenetic, and clinical data to understand the mechanisms of pathogenesis to discover new drug targets.

Immunotherapy drug effective in triple-negative breast cancer

Rita Nanda, MD, recently presented results from the I-SPY 2 trial at the ASCO annual meeting showing that adding the checkpoint blocker pembrolizumab (KeytrudaTM) to standard therapy dramatically improved response rates for patients with invasive triple-negative breast cancer. To read more, visit http://sciencelife.uchospitals.edu/2017/06/05/immunotherapy-drug-effective-in-triple-negative-breast-cancer/
Like Daughter,
Like Mother

When Margaret Harrigan was diagnosed with stage 4 colorectal cancer at age 73, she knew exactly where she needed to go for treatment—the University of Chicago Medicine.

Harrigan’s daughter Debby Thompson had been a patient at UChicago Medicine in the early ’90s when she battled acute lymphoblastic leukemia (ALL) at age 34. Thompson was rejected by multiple hospitals before a doctor at UChicago Medicine agreed to take her case. In February 1991, she received a bone marrow transplant and went from near death to complete remission.

Nearly twenty years later, Thompson found herself back at UChicago Medicine with her mother to consult with Blase Polite, MD, associate professor of medicine, and Manish Sharma, MD, assistant professor of medicine.

Sharma had recently developed a clinical trial for metastatic colorectal cancer that tested how patients tolerate higher doses of certain standard chemotherapy treatments. In the trial, patients received a higher dose of the chemotherapy drug irinotecan, along with two other types of chemotherapy and the drug bevacizumab, which works by blocking the growth of new blood vessels.

Harrigan qualified for the trial and began a regimen of chemotherapy treatment every two weeks. She continued treatment for eight months before she was given a break to allow her body a chance to rest. Remarkably, Harrigan’s cancer kept responding.

“The tumors kept shrinking and shrinking and then finally were gone,” Sharma said. “It’s extremely rare.”

Harrigan’s recovery was so incredible that Sharma and his colleagues decided to make her the subject of a research study, which was recently published in the journal *JCO Precision Oncology*.

By sequencing Harrigan’s biopsy tissue, Sharma and colleagues discovered that her tumor had many more mutations than the average colorectal cancer patient—what they call a hyper-mutated phenotype. And, she also had an unusual POLD1 mutation that wasn’t in her germline. The researchers found a similar pattern of mutations in other colorectal cancer patients by analyzing data in The Cancer Genome Atlas (TCGA).

“We think the POLD1 mutation and the associated phenotype may have something to do with her great response to the chemotherapy,” said Sharma, adding that future studies will need to be done to confirm this hypothesis. He hopes the study will inspire other researchers to further investigate the correlation.

Both Harrigan and Thompson have been actively involved in patient advocacy and want to help others by sharing their stories.

“It’s very, very life changing,” Thompson said. “But I have found, and so has my mother, tremendous positives. If I get to talk to people and one person gets inspiration or looks in the mirror and says, ‘If she can do it, I can do it,’ then it was worth it.”

Read the full story online: http://www.uchospitals.edu/specialties/cancer/patient-stories/margaret-colorectal.html.

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1 Sharma et al., *JCO Precision Oncology*, 1-12, 2017.
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