Setting the Stage. In 1988, a $41 million gift from Dallas businessman Harold Simmons and his wife, Annette, provided seminal funds to transform cancer research and care at UT Southwestern. In 1991, the Harold C. Simmons Comprehensive Cancer Center was established.

Pioneering work by Drs. John Minna and Adi Gazdar opened the door in 1996 for Simmons Cancer Center to receive a flagship Specialized Program of Research Excellence grant—a highly competitive award in lung cancer that continues today.

In 2000, the 27,000-plus-square-foot Simmons Cancer Center Clinic was established in the Seay Biomedical Building, providing a central location for oncology services and related care. Dr. James K.V. Willson was named Director in 2004. He launched a five-year plan to develop a “matrix” cancer center, building bridges among disciplines to ensure translation of cancer discoveries to patient care.
Simmons Cancer Center’s bone marrow transplant program, deemed a National Center of Excellence by major national insurance carriers, performs the 1,000th transplant in its 16-year history.

Simmons Cancer Center is designated a “Comprehensive Cancer Center,” the highest ranking awarded by the National Cancer Institute. The designation recognizes exceptional depth and breadth in cancer research, as well as innovative teamwork among scientists to better understand cancer and improve patient and community care.

A $4.8 million Cancer Prevention and Research Institute of Texas award to Moncrief Cancer Institute, the largest grant the agency has awarded, funds the Colorectal Screening and Patient Navigation program. The program provides free colon cancer screening and assistance with follow-up care for patients in Tarrant and 20 surrounding rural counties.

UT Southwestern’s Harold H. Simmons Comprehensive Cancer Center—Fort Worth, encompassing more than 23,500 square feet in Moncrief Cancer Institute, is dedicated, offering the latest in clinical care and access to clinical trials to residents of Tarrant and 10 other counties.

Moncrief Cancer Institute and the Simmons Cancer Center roll out a $1.1 million, custom-designed Mobile Cancer Survivor Clinic to deliver follow-up care and screening services to underserved, uninsured cancer survivors.

The PROSPR Center mission expands its focus to curvilinear cancer prevention and detection, studying HPV vaccination and screening in under- and uninsured women.

A formal research affiliation with the Dallas Regional Campus of the University of Texas School of Public Health enhances Simmons Cancer Center’s public health research expertise and faculty.

An anonymous donor provides $10 million to establish the Eugene P. Frenkel Program for Endowed Scholars in Clinical Oncology to promote the recruitment and support of the next generation of clinical leaders in cancer care.

A $54.8 million award from the Cancer Prevention and Research Institute of Texas props the UT Southwestern Medical Center to promote colorectal cancer screening, a unique cancer prevention and detection effort that assists people who lack insurance or are underserved.

A new, 4,000-plus-square-foot cyclotron facility begins operations at Simmons Cancer Center, expanding scientists’ ability to use a new positron emission tomography to see events inside the body as they occur, and to discern details of cancer and other diseases that may aid in the selection of more effective, individualized therapies.
For cancer care in North Texas, 2005-2015 has been a defining decade. Ten years ago, Simmons Comprehensive Cancer Center set the loftiest of goals—to meet the community’s many and varied cancer-related needs through 1) outstanding achievement in biomedical research; 2) exceptional patient care; 3) a rich training environment for the physicians and scientists of tomorrow; and 4) aggressive outreach to provide more North Texans with lifesaving prevention and early detection.

In just five years, Simmons Cancer Center earned National Cancer Institute (NCI) designation recognizing achievement in those areas, a milestone that also has opened some of the most advanced national clinical trials to local cancer patients. And now, after just another five years, Simmons has been awarded “comprehensive” designation from the NCI, becoming one of only three such top-tier institutions in the state and the only one in North Texas. The designation recognizes superior cancer care and prevention programs, along with pacesetting science and technology.

Those strides testify to the commitment of the Cancer Center’s 173 members—the people behind the ideas, inspiration, industry, and innovation that have propelled a decade of progress in the lab, the clinic, and the community. And this decade of achievement would not have been possible without a vanguard of visionaries who set in place the cornerstones upon which today’s Cancer Center has been built.

The center itself—designed with the goal of transforming cancer care and research at UT Southwestern—was established in 1991 through the generosity of local philanthropists Harold and Annette Simmons and shepherded with the commitment of UT Southwestern leadership. Around that time, Dr. John Minna began building a research framework focused on conveying basic-science discoveries to patients’ bedside care. And his work with longtime collaborator Dr. Adi Gazdar, probing the biology of lung cancer, brought the Cancer Center its flagship and long-running multi-investigator grant, a Specialized Program of Research Excellence (SPORE) award.

By the middle of the last decade, more support from the Simmonses, a five-year plan to build a “matrix” cancer center to foster scientific teamwork, and institutional dedication of resources and talent propelled the dynamic era that continues today. Scientific leadership by Drs. Steve McKnight, Melanie Cobb, Luis Parada, and Dr. Minna bridged departments and disciplines, bringing together investigators with a wide range of technical and medical expertise. These collaborations coalesced into scientific programs designed to tackle cancer’s complicated challenges and to deliver impactful science to patients and the public. Then, the Cancer Prevention and Research Institute of Texas (CPRIT), an agency set in motion by a 2007 statewide referendum, began fueling new discovery with its first research grants in 2010.

Since then, a new cadre of scientific leaders at the Cancer Center—such as Drs. Celette Sugg Skinner, David Boothman, Mike White, and Deputy Director Joan Schiller—has helped build novel translational research interactions. At the same time, a critical mass of UT Southwestern clinical leaders focused on cancer—including Drs. Hak Choy, David Johnson, Michael Choti, Stephen Skapek, and Jim Malter—are helping to create multidisciplinary patient-care teams that are bringing broad expertise to bedside care. These efforts not only promise to benefit patients and others at risk but are attracting scientific recognition, including an NCI National Clinical Trials Network Lead Academic Participating Site award, designed to promote large, leading-edge cancer clinical trials.

Numbers also tell the story of the Cancer Center’s journey to NCI comprehensive status. For instance:

- Since 2005, the center’s peer-reviewed funding has more than doubled, and the number of multi-investigator projects has leapt from just three to 23;
- UT Southwestern has been awarded more research dollars from CPRIT—$316 million in total—than any other institution in Texas;
- The Cancer Center fills more than seven times the physical space it did 10 years ago, and has a budget more than 14 times the size.

New facilities such as the cyclotron and the Cell and Nanoparticle GMP facility, and fresh talent—including 36 CPRIT Scholars recruited over the last half-decade—infuse extra energy into an already fast-moving engine of discovery. Meanwhile, in the past decade, the Cancer Biology Ph.D.-granting program has accelerated from zero to nearly 60. Under the leadership of Dr. Jerry Shay, the doctoral program, approved in 2009, has grown to include 58 full-time students as well as about 50 faculty trainers. Moreover, by traversing interdisciplinary bridges within the Cancer Center, the program provides a broad knowledge base upon which the next generation of cancer scientists can build their own careers and discoveries.
Patient care programs also are flourishing. Multidisciplinary clinics and conferences are bringing together disease specialists to individualize patients’ treatment and compare notes on their care. Advanced molecular testing is helping to ensure more patients are likely to receive the most effective therapies. A growing portfolio of clinical trials is available at all stages of disease, and since 2005, the number of patients enrolled in the Cancer Center’s therapeutic clinical trials has increased an estimated twelvefold. Cutting-edge care and clinical trial access is available at the new William P. Clements Jr. University Hospital, in state-of-the-art Simmons Cancer Center facilities at Moncrief Cancer Institute in Fort Worth, and at UT Southwestern’s partner sites, including Parkland and Children’s Medical Center.

Over the past decade, the Cancer Center’s patient care has earned important national recognition. The Foundation for the Accreditation of Cellular Therapy has accredited the adult bone marrow transplant program and, jointly with Children’s, the pediatric bone marrow transplant program. Last year, University Hospitals received the highest level of accreditation, Three-Year with Commendation at the Gold Level, from the American College of Surgeons’ Commission on Cancer. The hospitals were also among only about 15 percent of cancer programs reviewed nationwide to earn the commission’s Outstanding Achievement Award.

Simmons is also breaking new ground in community outreach with novel, evidence-based programs aimed at cancer prevention and early detection among North Texans who lack easy access to medical care. Leading the way is the NCI-funded Parkland-UT Southwestern PROSPr Center, which is tapping the talents of a team of population science and health services researchers to ensure more efficient and effective screening for colon and cervical cancers.

The latest NCI recognition is an occasion to celebrate these and many more accomplishments of the past decade. It also represents a moment to look ahead. While important new achievements can be seen on the horizon—and other breakthroughs are yet to be conceived—the Cancer Center’s objective remains the same: to generate innovative and impactful science, translated to ensure ever-better patient care, and disseminated to benefit all patients at risk.
Dallas’ Medical District, about two miles west of downtown, is home to UT Southwestern Medical Center, including its Simmons Comprehensive Cancer Center and a number of facilities that support the Cancer Center’s mission, as well as several key partners in community cancer care.

Parkland Memorial Hospital, a new 862-bed facility, is the primary teaching institution for UT Southwestern. Parkland Health & Hospital System is a vital partner in assessing health needs in a diverse community, investigating how best to deliver services and reaching out to improve cancer care and prevention throughout Dallas County.

Children’s Medical Center, the primary pediatric teaching facility for UT Southwestern, recently opened new inpatient and outpatient cancer facilities and is the only academic medical center in North Texas that offers stem cell transplantation to children.

University of Texas School of Public Health Dallas Regional Campus broadens the reach of downtown, is home to UT Southwestern, and provides services including chemotherapy, as well as several key partners in community cancer care.

William P. Clements Jr. University Hospital, opened in 2014, has an entire floor devoted to oncology, including a 32-bed, state-of-the-art bone marrow transplantation unit.

UT Southwestern’s North Campus is home to the Simmons Cancer Center Clinics, Cancer Center administrative offices, the Children’s Medical Center Research Institute, the Advanced Imaging Research Center, the Clinical Research Office, the Live Cell Imaging Resource, Bioinformatics Resources, and many faculty research laboratories.

UT Southwestern’s South Campus houses Cancer Center facilities such as Medicinal Chemistry and Mass Spectrometry, Proteomics Core, a Cell and Nanoparticle GMP facility, and High Throughput Screening, Tissue Management, and Small Animal Imaging Shared Resources, as well as the Health Promotion Intervention Shared Resource and other Population Science and Cancer Control research space.

Zale Lipshy University Hospital, a 152-bed facility, is known as a premier referral center for neurological care, including the treatment of brain and spinal malignancies. The hospital houses the Annette Simmons Stereotactic Treatment Center.

BioCenter at Southwestern Medical District, a 15.5-acre biotech park, was established by UT Southwestern to develop university technologies and to attract biotech companies to North Texas.

The Radiation Oncology Center, a 63,000-square-foot facility now under construction, will consolidate current programs and house the latest generation of cancer-fighting technology. The integrated complex will bring together many different modalities for the benefit of cancer patients and to further research. With seven treatment rooms, the center will be the largest radiation facility in North Texas.

UT Southwestern Moncrief Cancer Institute, a 60,000-square-foot facility located in the Fort Worth Medical District, provides early cancer detection and survivorship services in Tarrant and surrounding rural counties. Moncrief also houses the brand-new, 20,000-plus-square-foot UT Southwestern Simmons Cancer Center – Fort Worth, which provides services including chemotherapy, cancer imaging, and access to clinical trials.

UTSW North Campus

Moncrief Cancer Institute

Parkland Memorial Hospital

Children’s Medical Center

2005–2015: GROWTH BY THE NUMBERS

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Cancer Center chemists discover and develop a new approach that holds promise in treating kidney tumors.

Under normal conditions, hypoxia-inducible factors, or HIFs, allow the body’s cells to thrive in low-oxygen environments, such as high altitudes. By responding to changes in oxygen levels, HIFs serve as master regulators, determining whether multiple genes that help healthy cells survive and reproduce are activated downstream. But this mechanism also promotes growth and survival of cancer cells.

HIFs accumulate and drive these other genes when the von Hippel-Lindau (VHL) gene—normally a tumor suppressor that breaks HIFs down—is inactivated. This loss of VHL leads to the most common type of kidney cancer, renal clear cell carcinoma.

At UT Southwestern, fundamental studies into one type of HIF, called HIF-2, have blossomed into a promising potential treatment.
Human cells respond to low oxygen levels (hypoxia) using the hypoxia-inducible factor (HIF), which controls the expression of genes involved in angiogenesis, metabolism, and cell survival. In response to hypoxia, HIF binds to hypoxia response elements (HREs) in the promoters of target genes, leading to the synthesis of proteins that promote survival and proliferation. HIF is inhibited by the prolyl hydroxylases (PHDs) under normoxic conditions, but under hypoxic conditions, PHD inhibition allows HIF to accumulate and activate downstream targets.

The HIF-2α subunit is a key component of the HIF complex, which plays a role in the regulation of genes involved in angiogenesis, cellular metabolism, and cancer development. Disruption of HIF-2α function can be achieved through the use of small molecule inhibitors. The first HIF-2α inhibitor in clinical development is PT2385, which targets the HIF-2α subunit. This inhibitor has shown promise in treating patients with advanced renal cell carcinomas and glioblastomas, and it is being evaluated in clinical trials for the treatment of other cancer types.
Four-dimensional radiation treatment planning, using a CT scanner that simulates tumor dimensions, location, and movement for each patient, ensuring extreme accuracy.

• Vision RT video monitoring to help protect the heart during whole-breast radiation to the left breast; and

• Pediatric care, including an anesthesiologist to help treat very young patients.

EXCEPTIONAL FACILITIES

Clements University Hospital. In their own individual rooms, patients at Clements University Hospital can:

• Control the lights, temperature, and window shades, and even order a snack, from their bed;

• Access Wi-Fi;

• Review with their cancer-care providers personal test results and scans on a large-screen TV monitor or watch an educational video with loved ones; and

• Rest and recover quietly, away from the clamor of high-traffic locations in the hospital.

Family members can:

• Stay overnight in custom sleeper sofas;

• Discuss patient care in private conference rooms; and

• Learn more about medical conditions and clinical trials on a staffed, interactive Patient and Family Resource Center.

Moncrief Cancer Institute. At UT Southwestern’s Moncrief Cancer Institute, patients in or near Fort Worth benefit from:

• Expert physicians and other providers who treat each patient’s disease and coordinate other aspects of care;

• Clinical trials providing access to the latest therapies—and new possibilities for patients who have exhausted standard treatment options;

• Advanced genetics screening and counseling based on personal and family history of cancer;

• Support from psychologists, chaplains, social workers, dietitians, and others;

• An electronic medical record that encompasses all care patients have received at UT Southwestern, giving physicians instant access to patient information and test results across hospitals, clinics, and disciplines—and allowing patients to view test results and communicate with care providers through the university’s MyChart portal; and

• Excellence in research, prevention, and patient care that is the hallmark of a National Cancer Institute-designated Comprehensive Cancer Center.

Children’s Health. Children and teens with cancer are treated by UT Southwestern physicians at the Gill Center for Cancer and Blood Disorders at Children’s Medical Center, which:

• Treats the full range of pediatric cancers, including leukemia and lymphoma, brain and other nervous system tumors, Wilms tumor, musculoskeletal tumors, and sarcoma;

• Provides long-term monitoring for children, adolescents, and young adult survivors of childhood cancer through its ACE (After the Cancer Experience) program;

• Offers early-phase clinical trials, bringing promising new treatment options to fight some of the most challenging childhood cancers; and

• Treats one in five children in Texas diagnosed with cancer.

Parkland Health & Hospital System. Cancer patients at Parkland Health & Hospital System, Dallas County’s safety net system for patients who cannot easily access health care, likewise receive care from Simmons Cancer Center experts and other UT Southwestern physicians.

• Blood and Marrow Transplantation (BMT). Patients undergoing blood or marrow transplantation are cared for in Clements University Hospital’s state-of-the-art, 32-bed BMT unit. The nationally accredited program is recognized as a Center of Excellence by major insurance carriers, and it:

• Offers the latest therapies, some of which are not available in every hospital’s program;

• Leads in North Texas for one-year survival rates in transplants involving donor cells; and

• Provides blood or marrow transplants for children at a 12-bed pediatric unit at Children’s Medical Center.

Radiation Therapy. Patients undergoing radiation therapy at the Cancer Center have access to specialists providing therapies not widely offered elsewhere. Care includes:

• Stereotactic ablative radiotherapy, in which tumors are bombarded by radiation from multiple directions—concentrating the radiation on the tumor, minimizing dose to surrounding tissue, and adjusting for motion such as breathing in the body (see page 20);

• Stereotactic radiosurgery/stereotactic radiosurgery for brain tumors, which similarly applies high doses of radiation to the cancer while minimizing dose to adjacent tissue;

• Brachytherapy, or placement of a radiation source in direct contact with a tumor or treatment area;

• Intensity-modulated radiation therapy, which “sculpt[s]” the radiation field so it conforms to a tumor’s shape;

• Intensity-modulated radiation therapy, which “sculpts” the radiation field so it conforms to a tumor’s shape.

Inpatient rooms at Clements University Hospital, large-screen TV monitors allow videoconferencing with loved ones or with health care providers.

Cutting-Edge

Richard, diagnosed with kidney cancer at age 40 in 2008, was running out of treatment options. After enrolling in a clinical trial at Simmons Comprehensive Cancer Center, he was the first patient in Texas to receive a new, promising medication that he credits with saving his life. “I truly believe that if I had not come to UT Southwestern, I would not be here.”
Compassionate

Eight-year-old Shadiamond told her mother she was having “painful, painful headaches” that led to the discovery of her brain cancer in 2014. After treatment, she’s looking forward to growing up and becoming a lawyer. One aspect of her medical care that she found very important was “just to know you always have somebody near you.”

CLINICAL TRIALS

With partner health systems in Dallas and Fort Worth, Simmons Comprehensive Cancer Center is able to offer North Texas cancer patients access to many of the latest therapies available in clinical trials. Simmons Cancer Center has a thriving and nationally recognized clinical trials program with achievements including:

- The launch of a new Phase I Clinical Trials Unit, which helps speed the translation of scientific discoveries made at UT Southwestern for potential patient benefit;
- Recognition as a Lead Academic Participating Site for the National Cancer Institute’s National Clinical Trials Network, which means Cancer Center patients have access to the most cutting-edge drugs that are undergoing testing;
- More than twice the number of patients than a decade ago enrolling in trials to test new cancer therapies, with participants including a substantial representation of racial and ethnic minorities; and
- More than 200 patients a year participating in national cooperative group trials.

CLINICAL RESEARCH OFFICE

Simmons Cancer Center’s Clinical Research Office provides research infrastructure for cancer-related clinical trials at UT Southwestern. Besides managing numerous details related to each trial and its patients, the office coordinates with partner facilities including Parkland, other participating institutions, and cooperative groups.

The office’s research nurses, coordinators, and other staff collaborate with the Cancer Center’s disease-oriented teams to provide specialized care and expertise based on the site or sites of cancers that are targeted in each study. The office has a staff of more than 80, nearly 30 percent of whom speak another language in addition to English—including Spanish, Mandarin, Vietnamese, French, Italian, Arabic, Urdu, Romanian, Russian, Ukrainian, Yoruba, Punjabi, Tamil, Malayalam, Hindi, Japanese, and Korean.

Clinical research coordinator Jenny Chang and Kidney Cancer Program leader Dr. James Brugarolas work with patient Diane Greckel in a clinical trial of an experimental therapy for renal cell carcinoma. The phase I trial, led at UT Southwestern by genitourinary cancer specialist Dr. Kevin Courtney, tests a drug called PT2385, which was developed after groundbreaking research by Simmons Cancer Center biochemists (see page 12).
UT Southwestern is helping redefine lung cancer care through innovations in stereotactic body radiation therapy.

BACKGROUND

Stereotactic radiotherapy, originally piloted for treating tumors situated in important functional parts of the brain, operates on a converging-beam principle in which dozens of highly focused yet relatively weak radiation beams from different directions travel through normal tissues on their way to a tumor target deep within the body. The intentionally weak beams cause little entry damage, but at the point of convergence, they add up to deliver a very potent tumor treatment.

For decades, its use was confined to the cranium. Precise but also extremely powerful, stereotactic radiotherapy was not possible elsewhere in the body, where breathing and other functions could cause the target to move, potentially resulting in disastrous side effects.

However, recognition that new image-guidance technology could address that challenge has fueled development of stereotactic body radiation therapy (SBRT), also known as stereotactic ablative radiotherapy (SABR). For the past decade, UT Southwestern has been on the leading edge of SABR innovations.
2003
Dr. Hak Choy is named Chairman of Radiation Oncology at UT Southwestern, with the goal of developing a department that deploys the most promising technologies against cancer.

2004
At a national meeting of radiation oncologists, Dr. Robert Timmerman, then a faculty member at Indiana University and a renowned expert in stereotactic radiosurgery, is met with skepticism when he presents early results of a clinical trial indicating that SABR appears effective in patients with early-stage, non-small cell lung cancer (NSCLC).

2011
UT Southwestern becomes the first North American institution to recite Vero SBRT, an advanced system for imaging tumors and delivering treatment. Vero joins Simmons Cancer Center’s formidable arsenal of stereotactic radiotherapy technology, including cutting-edge Gamma Knife, CyberKnife, Agility, and TomoBeam technology.

2012
Cancer Center scientists receive a $4.1 million multi-investigator research award from CPRIT to explore in lung cancer how best to exploit the radiobiological effects of SABR, whose cancer-killing properties at the cellular level appear different than standard radiation. Dr. Timmerman heads the project, which also involves Cancer Center members Drs. Ralph Mason, Rolf Brekken, Chul Ahn, Debisa Soha, and others, along with the work of Dr. Phil Thorpe.

2014
Cancer Center researchers led by Drs. Timmerman and Choy potentially extend the use of SABR to patients with stage 4 limited metastatic NSCLC. In a phase II, multi-institution trial combining lowered doses of SABR with the drug erlotinib, the treatment is well-tolerated and patients marked by surpass the time periods they otherwise would be expected to survive without disease progression. Tissue analyses suggest the SABR is primarily responsible for the benefit.

2011
A $3.5 million grant from the Cancer Prevention and Research Institute of Texas (CPRIT) funds a five-year multi-institution effort to develop advanced radiotherapy technology for lung cancer with the aim of also reducing toxicity. The program is led by Dr. Choy and includes Cancer Center members Drs. Timmerman, Dr. Chul Ahn, and Dr. Purvathi Iyerigar.

2015
Institution of SABR continues at UT Southwestern for cancers in sites including the prostate, breast, and larynx, and a range of clinical trials of the therapy is open at Simmons Cancer Center.

THE FUTURE

Dr. Timmerman, Choy, and Ahn are leading an ambitious phase III study that encompasses more than two-dozen sites, directly comparing the benefits of surgery versus SABR in lung cancer patients healthy enough to choose surgery. The trial aims to collect evidence from 258 patients with high-risk stage I NSCLC.

Dr. Phil Thorpe.

THE IMPACT

2008–2015
As stereotactic radiotherapy research flourishes, new studies indicate its effectiveness in various cancers that have spread to a limited number of sites within organs such as the liver and lungs. SABR also appears promising in classically “radio-resistant” tumors such as renal cancer and melanoma.

2009
UT Southwestern’s Department of Radiation Oncology begins hosting quarterly, hands-on courses to train peers interested in implementing SABR in their clinical practice. To date, more than 100 practitioners from all over the world have been trained through the initiative.

2014
A team led by Dr. Timmerman reports on five-year follow-up results among the patients, too frail for surgery, who received SABR for early-stage lung cancer. The rate of recurrence at primary tumor sites is low, and the powerful therapy is not associated with any surge of late ill effects—demonstrating SABR’s long-term efficacy and safety in early lung cancer.

SIGNIFICANT PUBLICATIONS


The Foundations

Dr. Robert Timmerman

The Impact

The Future

Significant Publications

Current Department of Radiation Oncology facilities include the 50,000-square-foot H. A. Manney & Tex Memorial Radiation Oncology Building, the Amanette Simmons Stereotactic Treatment Center, which houses the Gamma Knife (1) and CyberKnife (2) for cranial and extracranial stereotactic radiosurgery; and the newly added 16,000-square-foot Radiation Oncology Building housing technologies such as the Vero SBRT (3).
Simmons Comprehensive Cancer Center serves urban, suburban, and rural populations throughout the 12 counties that make up the nearly 7 million-resident Dallas/Fort Worth metropolitan area. As partner sites, the Dallas County and Tarrant County public hospital systems, Parkland and JPS Health Network, are invaluable proxy grounds for new, more impactful ways of delivering cancer services, especially to people who lack financial resources for care.

In a region in which nearly one in five people are uninsured and where urban centers quickly transition to rural communities, the Cancer Center’s outreach programs target populations that have greater financial, geographical, or other challenges in accessing care. These programs focus on prevention, screening and early detection (along with health care navigation), genetics, patient and family education, and cancer survivorship.

CANCER PREVENTION

Breast Cancer. Simmons Cancer Center’s Breast Screening and Patient Navigation (BSPAN) program, based at Moncrief, strengthens community care resources and connects low-income and uninsured women in rural and underserved counties to local health care providers for screening, diagnostic, and follow-up services. The program, now in 17 counties, will expand to 21, reaching more than 180,000 women who are eligible for screening and connecting about 14,000 with services.

Colorectal Cancer. Simmons Cancer Center investigators have been building a coordinate, evidence-based strategy to increase colon cancer screening rates in the Parkland and JPS Health systems (see page 40). The center’s research on multiple aspects of colorectal screening resulted in establishment of the Parkland-UT Southwestern Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) Center, to expand the research and help export lessons learned in order to benefit patients across the U.S., especially those who are medically underserved. (The center’s mission has since been expanded to include cervical cancer.)

Like the BSPAN breast cancer program, the Cancer Center’s Colorectal Screening and Patient Navigation (CSPAN) initiative, also based at Moncrief, develops and fosters local partnerships across North Texas to improve screening rates among uninsured, underserved people and to help guide them to needed care. Building on previous Cancer Center research, CSPAN targets 20 local counties and 165,000 individuals due for screening, using test kits mailed to patients.

CANCER EARLY DETECTION

Liver Cancer. Cancer Center scientists, focusing their efforts at Parkland, are testing ways to overcome systemic obstacles that prevent patients at highest risk of hepatocellular carcinoma, the most common type of liver cancer, from receiving ongoing monitoring to catch the disease early.

GENETICS/PATIENT & FAMILY EDUCATION

Hereditary Cancer Risk. Working at UT Southwestern, Moncrief, and 15 sites throughout the Dallas/Fort Worth area, nine certified genetic counselors advise individuals about their personal risk of breast, colon, and other cancers, discuss the role of lifestyle and other risk factors in the disease, and guide patients through any recommended testing for genes that could increase their cancer vulnerability. Patients who test positive for a genetic predisposition to cancer work with their genetic counselor and physicians to obtain follow-up care, and counselors empower the patients to reach out to their family members who might likewise be at risk.

The Cancer Center’s genetics team serves patients in rural areas by providing counseling at satellite sites and through telemedicine.

OUTREACH

CANCER PREVENTION

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CANCER EARLY DETECTION

Liver Cancer. Cancer Center scientists, focusing their efforts at Parkland, are testing ways to overcome systemic obstacles that prevent patients at highest risk of hepatocellular carcinoma, the most common type of liver cancer, from receiving ongoing monitoring to catch the disease early.

GENETICS/PATIENT & FAMILY EDUCATION

Hereditary Cancer Risk. Working at UT Southwestern, Moncrief, and 15 sites throughout the Dallas/Fort Worth area, nine certified genetic counselors advise individuals about their personal risk of breast, colon, and other cancers, discuss the role of lifestyle and other risk factors in the disease, and guide patients through any recommended testing for genes that could increase their cancer vulnerability. Patients who test positive for a genetic predisposition to cancer work with their genetic counselor and physicians to obtain follow-up care, and counselors empower the patients to reach out to their family members who might likewise be at risk.

The Cancer Center’s genetics team serves patients in rural areas by providing counseling at satellite sites and through telemedicine.

CANCER PREVENTION

Breast Cancer. Simmons Cancer Center’s Breast Screening and Patient Navigation (BSPAN) program, based at Moncrief, strengthens community care resources and connects low-income and uninsured women in rural and underserved counties to local health care providers for screening, diagnostic, and follow-up services. The program, now in 17 counties, will expand to 21, reaching more than 180,000 women who are eligible for screening and connecting about 14,000 with services.

Colorectal Cancer. Simmons Cancer Center investigators have been building a coordinate, evidence-based strategy to increase colon cancer screening rates in the Parkland and JPS Health systems (see page 40). The center’s research on multiple aspects of colorectal screening resulted in establishment of the Parkland-UT Southwestern Population-based Research Optimizing Screening through Personalized Regimens (PROSPR) Center, to expand the research and help export lessons learned in order to benefit patients across the U.S., especially those who are medically underserved. (The center’s mission has since been expanded to include cervical cancer.)

Like the BSPAN breast cancer program, the Cancer Center’s Colorectal Screening and Patient Navigation (CSPAN) initiative, also based at Moncrief, develops and fosters local partnerships across North Texas to improve screening rates among uninsured, underserved people and to help guide them to needed care. Building on previous Cancer Center research, CSPAN targets 20 local counties and 165,000 individuals due for screening, using test kits mailed to patients.

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The Cancer Center’s genetics team serves patients in rural areas by providing counseling at satellite sites and through telemedicine.
Nearly one-third of brain tumors are gliomas. These tumors can lie dormant for months or years, then suddenly start growing rapidly in a deadly form called glioblastoma.

Gliomas traditionally have been diagnosed via surgical biopsy, an invasive procedure that is especially risky when tumors are near sensitive sites in the brain. Detecting precisely when gliomas become glioblastomas is a challenge, and the transformation requires aggressive treatment. Doctors would also like more information about how tumors respond to treatment and which treatments best target traits specific to individual tumors.

Building on fundamental imaging and metabolism research at UT Southwestern, Cancer Center scientists and physicians have developed innovative approaches to address these challenges.

Imaging innovations developed by UT Southwestern scientists are being deployed to improve brain cancer care.
THE FOUNDATIONS

1980s
Ongoing work at UT Southwestern, spearheaded by Drs. Dean Sherry and Craig Malloy, focused on development of tracer molecules that can be used with magnetic resonance (MR) technology to measure changes in metabolism that occur with disease.

2007
The two researchers honed the use of carbon-13 (13C), a stable natural isotope, in a hyperpolarized state—activating its nuclei so they create a signal powerful enough to track in the body. Enriching substrates such as glucose with 13C allows the researchers to better detect details of the substances’ metabolism than does current technology.

THE TRANSLATION

2009
Research elsewhere links cancer-associated mutations in the gene IDH1 to high levels of a metabolite called 2-hydroxyglutarate (2HG) and finds elevated 2HG in surgical samples of malignant gliomas. UT Southwestern physicists Dr. Changho Choi and neuro-oncologist Dr. Elizabeth Maher, already working on MR spectroscopy of glioblastoma to find tumor biomarkers, focus their work on developing an approach to noninvasively detect 2HG.

2010–2012
UT Southwestern researchers, including Dr. Ralph DeBerardinis, Dr. Maher, Dr. Malloy, Dr. Robert Bachoo, and neurosurgeon Dr. Bruce Mickey, pioneer the presurgery infusion of 13C-labeled glucose to directly study metabolic flux in patients with brain tumors. Once the tumors are removed, researchers use MR spectroscopy to provide a “snapshot” of the tumor cells’ metabolic processing of the glucose. The team finds that glioma cells—and metastatic lung and breast cancer cells in the brain—metabolize glucose much more rapidly than does the rest of the brain, using the energy to survive and to help perpetuate growth of new tumor cells.

2012
A team led by Drs. Choi and Maher finds 2HG is detectable with MR technology using a technique called point-resolved spectroscopy, or PRESS. Accumulation of 2HG is associated with mutations in IDH1 and 2, a hallmark of about 70 percent of gliomas. Thus, 2HG can be used as a biomarker to identify gliomas without need for surgical biopsy; the biomarker also can provide information on patient prognosis and has the potential to help track tumor progression and drug response.

2014
Infusing mouse models of human gliomas with 13C-labeled glucose and 13C-labeled acetate, a team led by Dr. Bachoo demonstrates that cancer cells can use acetate to fuel growth. The study, along with research led by Cancer Center biochemist, pinpoints ACC2, an enzyme that metabolizes acetate, as a potential treatment target.

THE IMPACT

2014–2015
Researchers launch a prospective phase I/II clinical trial, led by Dr. Maher and conducted at Clements University Hospital, testing the IDH2 inhibitor AG-221 (Agios Pharmaceuticals), the first drug of its type, in patients with tumors including gliomas. Researchers deploy their approach to noninvasively measure levels of 2HG (the metabolite associated with the IDH1/2 mutation) in gliomas, providing a way to monitor drug penetration into the tumor and ability to inhibit the target.

THE FUTURE

Building on the finding that acetate can fuel cancer growth, Cancer Center scientists are revealing more about the role of ACC2, which is expressed in a variety of human tumors, as a potential vulnerability that may be exploited therapeutically.

Based on the insights made in studying tumor metabolism in brain cancer patients at the time of surgery, several other areas of focus have emerged. Dr. DeBerardinis and colleagues are pursuing similar studies in lung cancer, and Drs. Maher and Bachoo are studying early-stage breast cancer in collaboration with Dr. Redus Ria. They are also working with pediatric neurosurgery and neuro-oncology teams to address many of the same metabolic questions in childhood brain cancers.

SIGNIFICANT PUBLICATIONS


A new hyperpolarizing technology called PRESS—funded through an award from the National Institutes of Health, along with support from UT Southwestern—will enable metabolic analyses at the cellular level in patients. By improving sensitivity of nuclear MR by a factor of 10,000 or more, hyperpolarization could help physicians determine cancer severity, identify recurrence or metastasis, gauge the impact of treatment, and better predict disease outcomes. The technique might also help guide novel therapy choices for patients, based on their tumors’ individual metabolism.

Proton magnetic resonance spectroscopy provides noninvasive evaluation of 2-hydroxyglutarate in IDH1-mutated gliomas.
R-34a blocks

• Stem cell biology
• Epigenetics and cell fate
• Cancer cell programming

To conduct studies at the intersection of developmental biology and cancer biology in both laboratory researchers and physician-scientists. Program members investigate the ancestral themes that are fundamental to cell biology. Program members include scientists from the departments, including scientists from the fields of cancer, stem cell, and developmental biology. Program members investigate the developmentally and evolutionarily conserved ancestral themes that are fundamental to cell and organism growth, development, and physiology, and how these factors influence cancer biology.

OF NOTE

A $6.9 million grant from the Cancer Prevention and Research Institute of Texas (CPRIT) is fueling a multi-investigator, multi-institution research project to conduct molecular genetics and functional genomics studies in soft-tissue and Ewing sarcoma. The project aims to uncover unknown drivers of soft-tissue sarcoma, with the goal of developing molecularly targeted therapies. The effort includes a biosciences banking initiative encompassing patients at cancer centers across Texas, and builds upon UT Southwestern research developing unique, non-mammalian models of human cancer, including a Drosophila (fruit fly) model of rhabdomyosarcoma, and zebrafish models of malignant germ cell tumor and Ewing sarcoma.

SIGNIFICANT PUBLICATIONS

CANCER CELL NETWORKS

MISSION

To promote research that will contribute to an understanding of the mechanisms by which aberrant cell regulatory networks support cancer initiation and growth.

OVERVIEW

The Cancer Cell Networks Program facilitates investigations that shed light on the mechanisms by which aberrant cell regulatory networks support cancer initiation and growth. The program’s approaches range from structural biology to animal models.

Peer-reviewed Funding

2015 total = $37.2 million

LEADERSHIP

Melanie Cobb, Ph.D.
Professor, Pharmacology

Paie Paola Sagnoni, M.D.
Associate Professor, Internal Medicine

OF NOTE

Supported by new CPRIT funding of more than $889,000, Dr. Zhijian “James” Chen and colleagues are shedding light on innate immune responses to DNA and RNA. The researchers previously discovered a new enzyme, cyclic GMP-AMP synthase (cGAS), that acts as a sensor of innate immunity. The work also has described a novel cell signaling pathway: When cGAS detects foreign DNA or even host DNA that is in the cell’s cytoplasm, the enzyme binds to the DNA, catalyzing formation of a chemical called cyclic GMP-AMP, or cGAMP. Then cGAMP binds to the protein STING, activating a signaling cascade that produces interferons and pro-inflammatory cytokines. The work also has revealed a potential new avenue for enhancing anti-tumor immunity and developing cancer vaccines.

SIGNIFICANT PUBLICATIONS


**CHEMISTRY & CANCER**

**MISSION**

To discover drug-like chemicals that impede (or enhance) biological processes related to the development (or inhibition) of cancer.

**OVERVIEW**

The Chemistry and Cancer Program combines the expertise of synthetic and medicinal chemists, molecular biologists, biochemists, structural biologists, and clinical scientists to discover, design, and optimize drug-like small molecules that regulate biological pathways deregulated in cancer. The program engages 19 members drawn from six departments on campus.

The program’s discovery process takes one of two approaches. For a chemistry-to-biology approach, discovery starts by identifying natural or unnatural small molecules that are selectively lethal to human cancer cell lines, then determining exactly how the small molecules have their effect. In a biology-to-chemistry approach, hypotheses regarding the “biogability” and cancer relevance of specific biological pathways investigated by Cancer Center scientists can be tested with drug-like chemicals.

**THEMES**

- Molecular targets of cancer cell-specific small-molecule toxins
- Novel, cancer cell-specific pathways
- Proof-of-concept preclinical development of cancer cell-specific small-molecule toxins
- The hypoxia response pathway

**OF NOTE**

Supported by nearly $1.5 million from the National Institutes of Health, Simmons Cancer Center investigators (with collaborators at Simon Fraser University) are developing an innovative research paradigm to characterize mechanisms of action of natural products and botanicals more quickly and precisely. The approach of the new Center for High-Throughput Functional Annotation of Natural Products (HiFAN) incorporates natural products chemistry, biological screening, data analytics, and bioinformatics, combining two high-throughput platforms (cytological profiling and a technique called FUSION, developed at UT Southwestern) to discern in greater detail the impact on cells of both complex chemical mixtures and pure natural compounds.

**SIGNIFICANT PUBLICATIONS**

PEER-REVIEWED FUNDING

2015 total – $27 million

LEADERSHIP

John Minna, M.D.
Professor, Internal Medicine and Pharmacology

David Boothman, Ph.D.
Professor, Simmons Cancer Center

David Gerber, M.D.
Associate Professor, Internal Medicine

OF NOTE

Research by the lab of Dr. David A. Boothman on the anti-cancer effects of the natural substance beta-lapachone has led to two multidisciplinary projects—funded through PanCAN and totaling $1.3 million—testing the substance against pancreatic ductal adenocarcinoma (PDA) and non-small cell lung cancer (NSCLC). The first project is pursuing lab studies and a phase IB clinical trial involving chemotherapy plus a formulation of beta-lapachone called ARQ761 (from the biotechnology firms NQ Oncology and ArQule). The other project is exploring the efficacy of combining ARQ761 with PARP inhibitors to treat PDA, NSCLC, and other NQO1 over-expressed malignancies. The combination has proved effective against pancreatic, breast, and non-small cell lung cancer cells in vitro, and NSCLC in mouse xenografts.
**OVERVIEW**

Drawing from the large and diverse population that Simmons Cancer Center serves, the Population Science and Cancer Control Program has a special focus on uninsured residents served by local public health systems. Studies are centered on cancer disparities among subpopulations of individuals who traditionally are medically underserved.

Research focuses on processes of care with the goal of translating findings into improved cancer care in local health systems. The 25 members of the Population Science and Cancer Control Program have the goal of translating findings into improved cancer care in local health systems. The 25 members of the Population Science Program are key investigators for the multi-institution Texas HCC Consortium, a $9.7 million initiative funded by the Cancer Prevention and Research Institute of Texas. Consortium projects include characterizing factors that predict liver cancer in a diverse group of patients with cirrhosis, evaluating novel biomarkers to increase sensitivity for early tumor detection, and a trial comparing interventions to boost screening rates in at-risk patients.

**THEMES**

- Cancer prevention (including the study of biomarkers for colon and liver cancers and risk prevention behaviors)
- Screening for early detection of colon, liver, and esophageal cancers
- Cancer survivorship

**OF NOTE**

A thriving research effort is evaluating strategies to improve screening effectiveness and ensure that more people at high risk for hepatocellular carcinoma (HCC), the most common form of liver cancer, receive appropriate testing so tumors can be detected earlier and treated more effectively. Population Science program members are key investigators for the multi-institution Texas HCC Consortium, a $9.7 million initiative funded by the Cancer Prevention and Research Institute of Texas. Consortium projects include characterizing factors that predict liver cancer in a diverse group of patients with cirrhosis, evaluating novel biomarkers to increase sensitivity for early tumor detection, and a trial comparing interventions to boost screening rates in at-risk patients.

**SIGNIFICANT PUBLICATIONS**

The Cancer Center tackles the complex challenge of boosting colon cancer screening among minorities and underserved populations.

BACKGROUND

Colorectal cancer screening—generally advised for people age 50 and older—saves lives. Yet only about 15 percent of those who lack insurance receive screening, research has indicated, compared with 50 percent of insured people. And rates for African-Americans and Hispanics lag substantially behind those for whites. Thus a key challenge in reducing colon cancer deaths is delivery of early detection and follow-up services to people who are inadequately insured and to minorities. Partnering with the community and local health systems, Simmons Cancer Center researchers are addressing that challenge and are setting an agenda nationally for colorectal cancer detection in the neediest of populations.
THE FOUNDATIONS

2009
Parkland Health & Hospital System, Dallas County’s sole “safety net” health care provider for more than 1 million underserved or uninsured people, adopts an electronic medical record, integrating data from its hospital, clinics, and health centers. The massive data pool provides a unique opportunity to investigate how to improve health care delivery in a highly diverse, low-income population.

2009
Cancer Center members Dr. Chul Ahn, Dr. Keith Argenbright, and Dr. Celette Sugg Skinner study colon cancer screening among more than 20,000 patients ages 50–75 in Tarrant County’s medical safety net. The findings indicate a need to simplify access to screening, laying the groundwork for a project testing different methods to encourage more people to get screened.

THE TRANSLATION

2009-2013
Cancer Center members lead a project involving about 5,900 people in Tarrant County that compares three means of engaging primary-care patients in screening: usual care, a direct invitation to receive a free colonoscopy, or a free fecal immunochemical test kit mailed directly to them. Participation rates rise to about 41 percent for people sent a test kit and 25 percent among those invited for colonoscopy, compared with just 12 percent for those receiving usual care. The findings have implications for public health policy-making.

2014
Led by Dr. Sandi Pratt, a statistical analysis of patients in the Tarrant County study who received usual care indicates that factors related not just to patients but to their physicians, neighborhoods, and clinics are relevant in screening decisions. The work highlights potentially important avenues to boost screening rates, such as reminders built into clinic systems or neighborhood campaigns.

THE IMPACT

2013
The PROSPR Center implements a program, embedded in Parkland’s electronic medical record, that matches colonoscopy findings with follow-up care guidelines for surveillance and resection. The program ensures that subsequent care is provided based on the individually determined risk of colon cancer in each patient.

2014
The PROSPR Center’s mission expands to include cervical cancer screening, an effort led by Dr. Jasmin Tiro and Dr. Skinner. Additional funding supports initiatives such as a project to follow some 178,000 screening-eligible women in the Parkland system (24 percent of them African-American, and 61 percent Hispanic). Rates of cervical cancer in Hispanic women are about 60 percent higher than in non-Hispanic Caucasian women.

THE FUTURE

Investigators are studying whether higher colorectal cancer screening participation rates found among patients mailed test kits will carry over into repeat screening and follow-up when needed. Also, a large CPRIT-funded initiative called CRAN (colorectal cancer screening and patient navigation) is partnering with agencies and institutions in 20 local counties to expand the test kit mailing program to 165,000 underserved suburban and rural residents and to ensure access to needed follow-up care.

Meanwhile, new insights into the genetics of colon cancers may someday better guide screening and follow-up care among African-Americans, who face higher risk of the disease and are more likely to die from it. Work by a team of investigators including Simmons Cancer Center Director Dr. James Willson has identified a set of previously unrecognized mutations in colorectal cancers among African-Americans, shedding light on biological differences in the disease that may help explain that group’s elevated risk.

SIGNIFICANT PUBLICATIONS


Colorectal cancer screening process at PROSPR Center.
SENIOR LEADERSHIP

SIMMONS CANCER CENTER LEADERS, 2015

James R. V. Willison, M.D. — Director; Associate Dean for Oncology Programs; Professor of Internal Medicine; The Lisa K. Simmons Distinguished Chair in Comprehensive Oncology

David Boothman, Ph.D. — Associate Director for Translational Research; Professor of Simmons Cancer Center; Robert R. and Virginia Payne Professorship in Oncology

Joan Schiller, M.D. — Deputy Director; Chief of Hematology/Oncology; Professor of Internal Medicine; Andrea L. Simmons Distinguished Chair in Cancer Research

Chul Ahn, Ph.D. — Associate Director for Biostatistics and Bioinformatics; Professor of Clinical Sciences

David Gerber, M.D. — Associate Director for Clinical Research; Associate Professor of Internal Medicine

Jerry Shay, Ph.D. — Associate Director for Training and Education; Professor of Cell Biology; Southland Financial Corporation Distinguished Chair in Genetics

Michael White, Ph.D. — Associate Director for Basic Science; Professor of Cell Biology; Sherry Wispay Cline Cancer Research Endowed Chair, in Honor of Robert Lewis Kelby, M.D.; Grant A. Dove Chair for Research in Oncology

Hak Choy, M.D. — Associate Director for Radiation Oncology; Professor and Chair of Radiation Oncology; Nancy B. and Jake L. Hamon Distinguished Chair in Therapeutic Oncology Research

David Boothman, Ph.D. — Associate Director for Translational Research; Professor of Simmons Cancer Center; Robert R. and Virginia Payne Professorship in Oncology

Stephanie Clayton Hobbs, M.H.S.M. — Associate Vice President for Cancer Programs

Tim Strawderman, Ph.D. — Associate Director for Research Administration

Jerry Shay, Ph.D. — Associate Director for Training and Education; Professor of Cell Biology; Southland Financial Corporation Distinguished Chair in Genetics

Stephen X. Skapek, M.D. — Director of Pediatric Hematology/Oncology; Professor of Pediatrics; Children’s Cancer Fund Distinguished Professorship in Pediatric Oncology Research

Celette Sugg Skinner, Ph.D. — Associate Director for Cancer Control and Population Science; Professor of Clinical Sciences; Chief of the Division of Behavioral and Communication Sciences; Parkland Community Medicine Professorship

Tim Strawderman, Ph.D. — Associate Director for Research Administration

Chul Ahn, Ph.D. — Associate Director for Biostatistics and Bioinformatics; Professor of Clinical Sciences

David Gerber, M.D. — Associate Director for Clinical Research; Associate Professor of Internal Medicine

Colette Sugg Skinner, Ph.D. — Associate Director for Cancer Control and Population Science; Professor of Clinical Sciences; Chief of the Division of Behavioral and Communication Sciences; Parkland Community Medicine Professorship

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Chul Ahn, Ph.D. — Associate Director for Biostatistics and Bioinformatics; Professor of Clinical Sciences

David Gerber, M.D. — Associate Director for Clinical Research; Associate Professor of Internal Medicine
EXPERIMENTAL THERAPEUTICS OF CANCER PROGRAM

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Sandeep Burma, Ph.D.  
Associate Professor, Radiology

Benjamin Chen, Ph.D.  
Associate Professor, Radiology

Changho Choi, Ph.D.  
Professor, Advanced Imaging Research Center

Rajiv Chopra, Ph.D.  
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Art Frankel, M.D.  
Professor and Chairman, Radiation Oncology

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Robert Lenkinski, Ph.D.  
Professor, Surgery
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Larry Anderson, M.D., Ph.D. (Heme)
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W. Phil Evans, M.D. (Breast)
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Professor, Internal Medicine

James Huth, M.D. (Melanoma)
Professor, Surgery

Puneeth Iyengar, M.D., Ph.D. (Lung)
Associate Professor, Pathology

Dawn Klemow-Reed, M.D. (Breast)
Assistant Professor, Radiation Oncology

Saad Khan, M.D. (Head & Neck)
Assistant Professor, Radiation Oncology

Barbara Haley, M.D. (Breast)
Professor, Internal Medicine – Gastroenterology

Raghu Hannon, M.D., Ph.D. (GU)
Assistant Professor, Radiation Oncology

Randall Hughes, M.D. (Head & Neck)
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James J. Lowe, M.D. (Melanoma)
Professor, Surgery

Sirisha Karri, M.D. (GI)
Assistant Professor, Internal Medicine

William Kemp Clark Chair of Neurological Surgery

Prasad Koduru, Ph.D. (Heme)
Associate Professor, Pathology

Theodore Laetsch, M.D. (Pediatrics)
Assistant Professor, Pediatrics

Patrick Leavey, M.D. (Pediatrics)
Professor, Pediatrics

A. Marilyn Leitch, M.D. (Breast)
Professor, Surgery

Hsiao-Ching (Jenny) Li, M.D. (Breast)
Associate Professor, Internal Medicine

Yair Letan, M.D. (GU)
Professor, Urology

Ann Spangler, M.D. (Breast)
Assistant Professor, Radiation Oncology

Amitay Takahashi, Ph.D. (Lung)
Assistant Professor, Advanced Imaging Research Center

Vitaly Margulis, M.D. (GU)
Associate Professor, Pathology

Jeffrey Mayer, M.D. (GI)
Associate Professor, Radiation Oncology

Bruce Mickey, M.D. (NeuroOnc)
Professor, Neurological Surgery

S.T. Harris Family Chair in Medical Science, in Honor of John D. McConnell, M.D.; E.E. Fogelson and Greer Garson Houghton Distinguished Chair in Gastrointestinal Oncology

Edward Pan, M.D. (NeuroOnc)
Assistant Professor, Neurology & Neurotherapeutics

David Pistenmaa, M.D., Ph.D. (GI)
Professor, Radiation Oncology

Cynthia Rutherford, M.D. (Heme)
Professor, Internal Medicine

Arthur Sagalowsky, M.D. (GI)
Professor, Oncology

Vitaly Margulis, M.D. (GU)
Associate Professor, Pathology

Ann Spangler, M.D. (Breast)
Assistant Professor, Radiation Oncology

Amitay Takahashi, Ph.D. (Lung)
Assistant Professor, Advanced Imaging Research Center

Hamid Vossoughi, M.D. (Heme)
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Naomi Winick, M.D. (Pediatrics)
Professor, Pediatrics

Laura T. Wilson Chair in Pediatric Neuro-Oncology