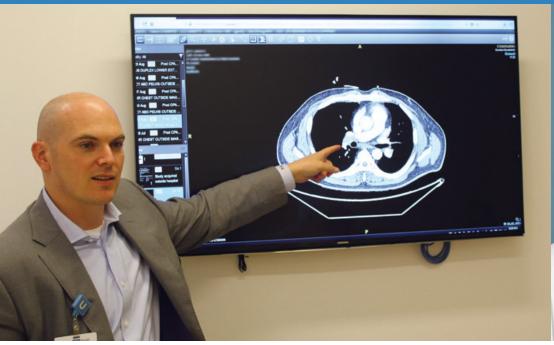




UCLA UROLOGY

UPDATE





The renowned UCLA Kidney Cancer Program is led by Dr. Brian Shuch, UCLA Urology associate professor and Henry Alvin and Carrie L. Meinhardt Chair for Kidney Cancer Research.

A Leading Kidney Cancer Program Steps Up Fight Against the Disease

t a time of dramatic advances in the diagnosis and treatment of patients with kidney cancer, the UCLA Kidney Cancer Program — which has a storied history of innovation and leadership in fighting the disease — has redoubled its research and clinical efforts under new leadership.

The program has launched a multidisciplinary clinic within the UCLA Institute of Urologic Oncology, offering the full gamut of state-of-the-art and innovative treatment options in a setting where urologists, medical oncologists, pathologists, radiation oncologists, and radiologists work side-by-side with patients to determine the best treatment options.

The program's clinical trials team has expanded, offering a variety of promising treatments for early and advanced kidney cancer. Under the leadership of Dr. Brian Shuch, UCLA Urology associate professor and the Henry Alvin and Carrie L. Meinhardt Chair for Kidney Cancer Research, the program has

Fall 2019

Alumni Profile	p4
Donor Spotlight	p4
Letter from the Chair	p 5
Kudos	p6
Healthy at Every Age	p7
New Face	p7

The Men's Clinic at UCLA

VOL. 30 | NO. 4

p8

Kidney Cancer Program

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Members of the UCLA Kidney Cancer Program team include (I. to r.) Wayne Brisbane, MD, a urologic oncology fellow; Lars Henningsohn, MD, PhD, a visiting scholar from Karolinska Institutet; and Nazy Zomorodian, MSN, NP, a board-certified urology nurse practitioner and clinical research coordinator.

continued from cover

also established new research and clinical programs designed to accelerate the already rapid pace of progress in treating kidney cancer, one of the 10 most common cancers in both men and women — and a cancer that is being diagnosed more frequently than ever before.

Each year in the U.S., approximately 70,000 new kidney cancer diagnoses are made and 14,000 people die from the disease. The

incidence of new kidney cancer diagnoses has been increasing over the last 25 years for reasons that are not exactly clear. While this may be partly explained by improved detection through imaging methods,

Dr. Shuch notes that higher rates of obesity are likely a strong contributing factor. Other important risk factors include hypertension, family history, and African-American ethnicity.

In its early stages, kidney cancer generally produces no signs or symptoms and is most often detected incidentally, during an imaging test ordered for other purposes. By the time symptoms develop — including an abdominal mass, pain, and blood in the urine — the disease is usually in an advanced stage.

When the cancer is confined to the kidney, the standard treatment option is to remove it through surgery. While this once involved removal of the entire organ (radical nephrectomy), today in most cases a partial nephrectomy is performed, sparing the healthy portion of the kidney in order to maximize kidney function. In patients for whom surgery is considered to be too high of a risk, the tumor can be destroyed through heating or freezing — an approach known as tumor ablation.

Similar to prostate cancer, not every cancer diagnosis involves an aggressive malignancy. It has become increasingly clear that the majority of small tumors in the kidney are either benign or of limited aggressiveness (see "Healthy at Every Age" on page 7). "Nationally, there has been a great deal of unnecessary treatment of stage 1 kidney cancer," Dr. Shuch states. "The standard

approach has been 'see a mass, excise a mass,' with only 7% of patients getting biopsies."

At UCLA, if a small mass in the kidney is not believed to pose an immediate threat, the team will always discuss obtaining additional information

from novel diagnostic tests. This includes molecular imaging studies to identify benign tumors prior to embarking on a treatment path, characterizing tumors by means of multi-phasic conventional MRI and CT scans, or genetically characterizing them after a standard biopsy process. For most patients, this information can be a valuable method of making treatment decisions. For the majority of patients not needing immediate treatment,

very rapidly."

"We are pushing

the field forward

active surveillance is always discussed as a possible and highly effective treatment modality. This includes monitoring the tumor and intervening only if it becomes necessary due to growth. "It's been established that it is safe to monitor and we are actively involved in research to define which tumors are going to ultimately need treatment," Dr. Shuch explains.

The prognosis for metastatic kidney cancer patients has vastly improved with the approval of more than a dozen



Sandy Liu, MD, is the program's lead medical oncologist.

new drugs in the last 15 years. With the use of immunotherapy in combination with targeted therapy drugs, up to 10% of patients experience a complete disappearance of their active disease, and the average length of survival is 2-3 times longer for these patients than it was two decades ago. "We are now attacking the cancer by two different mechanisms, using immunotherapy as the backbone, along with targeted therapy," says Sandy Liu, MD, lead medical oncologist for the UCLA Kidney Cancer Program. "The field

is headed in a very exciting direction, with significant survival benefits for the majority of patients."

The UCLA Kidney Cancer Program was established in 1989 as one of the first comprehensive kidney cancer programs in the United States. Under the leadership of Arie Belldegrun, MD, UCLA Urology professor and currently director of the Institute of Urologic Oncology, the program ushered in some of the most important advances in the field, including establishing the role of partial nephrectomy, using immunotherapy (IL-2) for patients with metastatic disease, developing biomarkers for prognosis, and characterizing the molecular aspects of kidney tumors to determine which patients are most likely to experience cancer recurrence following surgery.

Now, under the leadership of Dr. Shuch, a renowned kidney cancer surgeon and clinical/translational researcher who trained at UCLA Urology and the National Cancer Institute, and previously held a leadership position at Yale University, the program has expanded its clinical and investigative activities. The multidisciplinary kidney cancer clinic allows patients to see all relevant experts on the same visit and leads to a better-informed treatment plan. "When you have medical and urologic oncologists working closely together, it ensures that all of the risks and benefits of the various treatment options — including surgery, systemic therapy and clinical trials - are considered," Dr. Liu explains.

The program's research effort has also become more robust since Dr. Shuch

arrived. The initiative to genetically characterize patients' kidney cancers in order to better define therapeutic targets and help determine the level of risk for an individual tumor involves an active collaboration with radiation oncologists, who can perform stereotactic radiation to lower the disease burden for certain patients. Research is underway to establish biomarkers to determine which patients are most likely to see improvements from immunotherapy. A collaboration has been forged with nuclear medicine specialists to better characterize tumor behavior and evaluate disease sites that are not visible with traditional imaging methods. A program has been established to evaluate hereditary risk factors that might have contributed to patients' kidney cancer, offering both genetic testing and genetic counseling. Meanwhile, an active kidney cancer laboratory promotes a "bedside-to-bench-to-bedside" approach, in which samples from the clinic are used to learn more about the biology of the disease, as a way of better informing future treatment.

"We are pushing the field forward very rapidly," Dr. Shuch says. "In the next 5-10 years, through these and other initiatives, we expect the approach to kidney cancer care to be completely different, with a host of new ways to assess the tumors, provide individualized treatment, and most importantly improve patient treatment."

DONOR SPOTLIGHT

Stephen Riggs, MD



s a clinician, researcher and educator at one of the nation's largest independent academic medical centers, Dr. Stephen Riggs is grateful to be able to make an impact in multiple settings — and for the role his UCLA Urology training played in putting him in the position to do so.

Dr. Riggs is a urologic oncologist at the Levine Cancer Institute in Charlotte, North Carolina, which is part of Atrium Health and affiliated with the University of North Carolina-Chapel Hill, where he is an associate professor. He has been part of the Atrium system since 2012, after spending four years at Eastern Virginia Medical School following completion of his fellowship in urologic oncology at UCLA in 2008.

Some of the most rewarding moments come when Dr. Riggs is able to see his patients in the recovery phase. "A cancer diagnosis can be overwhelming, so we're seeing patients during a time of great anxiety," Dr. Riggs says. "To be able to treat them successfully and see them on the other side of that journey is special."

Dr. Riggs has an active program of research aiming to enhance the recovery of bladder cancer patients after surgery. Removal of the bladder (cystectomy) is associated with a high hospital readmission rate from complications. By ensuring that every urologic oncologist in his department follows the same protocols for the complex procedure, Dr. Riggs is able to continuously track and analyze the outcomes, provide feedback, and implement changes designed to improve patients' recovery. This has led to reductions in length of hospital stay and complications after surgery, along with reduced pain and use of narcotics.

The focus dovetails with Dr. Riggs' role as director of Atrium's urologic surgery residency training program. "My research is about questioning everything we do, rather than just continuing to do it the way we were taught," he says. "I love the inquisitive nature of that work, and melding it with the next generation of urologists and their inquisitive minds."

When it came time for his own fellowship training, UCLA was at the top of Dr. Riggs' list. "Many of the giants in urologic oncology were at UCLA," he says, noting that he continues to draw on the lessons he learned from his fellowship mentors, Drs. Jean deKernion and Arie Belldegrun, and to benefit from the friendships he forged with his peers. "My best friends in the field are people I met at UCLA," Dr. Riggs says. "Beyond the personal relationships, we have collaborated academically, grown together, and supported each other's careers."

Carrie Meinhardt



wenty-five years ago, the UCLA Kidney Cancer Program gave Carrie Meinhardt the ultimate gift — an experimental therapy that brought her husband, Henry A. Meinhardt, Jr., more than two decades of health after other doctors had told Mr. Meinhardt, diagnosed with kidney cancer, that he had little time left.

v the time Mr. Meinhardt,

of Upper Marlboro, Maryland, was diagnosed in 1993, he was urinating blood and could barely walk. The cancer had metastasized to his lungs. "He was passed over by two leading hospitals, told to go home and get the end of his life in order," Mrs. Meinhardt recalls.

Then came a stroke of serendipity. Friends in Tampa, Florida were watching the evening news and saw a segment on an aggressive new immunotherapy protocol being offered by the UCLA Kidney Cancer Program through a clinical trial. They called Mr. Meinhardt, who got the TV station to send a recording of the segment by overnight mail. Thinking this might be for them, the Meinhardts contacted Dr. Arie Belldegun, the UCLA Kidney Cancer Program's founding director, who had pioneered the treatment along with Dr. Robert Figlin, a medical oncologist.

"Dr. Belldegrun said that if Henry could travel, he should come on out," Mrs. Meinhardt remembers. "He barely could, but we made it there."

After Dr. Belldegrun performed the complicated surgery to remove Mr. Meinhardt's right kidney and the cancer that had spread to other organs, Dr. Figlin treated him with a drug protocol designed to prime Mr. Meinhardt's immune system to recognize and attack the remaining cancer cells in his body. The Meinhardts spent nearly a year living across the street from the UCLA hospital in Westwood, attending regular appointments. Ultimately, Mr. Meinhardt's health was restored and he was able to return to an active life right up until 2015, the year he passed away.

"From being told his life was at an end, he was given another amazing 22 years, thanks to UCLA," Carrie Meinhardt says.

Following Mr. Meinhardt's recovery, the couple became ardent supporters of UCLA Urology and the Kidney Cancer Program, establishing the Henry Alvin and Carrie L. Meinhardt Chair for Kidney Cancer Research, currently held by Dr. Brian Shuch. "My husband wanted to give back to UCLA and share his life-saving experience with others," Mrs. Meinhardt says. "And I am continuing to carry on his legacy."

Letter from the Chair



Our reconstituted
Kidney Cancer
Program is an
example of what
makes UCLA Urology
so special in all areas
of urologic care.

ince its founding 30 years ago, the UCLA Kidney Cancer Program has been one of UCLA Urology's crown jewels. For kidney cancer patients in Southern California, across the nation and even internationally, this program has been a destination for treatment because of its leadership in redefining the state of the art through research in the laboratory and in the clinic — the so-called bench-to-bedside continuum that allows basic-science discoveries to be translated into improved patient care.

As this issue of our newsletter highlights, we have recently redoubled our investment in this renowned program with the recruitment of Dr. Brian Shuch, one of the nation's top kidney cancer investigators and clinicians, and the establishment of both a multidisciplinary kidney cancer clinic and a more robust clinical and basic research program. This bolstered commitment comes at an exciting time for the kidney cancer field, as we begin to move toward a precision-medicine approach to patient care — the ability to deliver individualized treatments or, in some cases, no treatment at all when, for example, a patient's cancer is deemed to be slow-moving, and can instead be monitored through active surveillance. We now know that kidney cancer is not just one disease but a host of different diseases, and through assessing both the patient's overall genetics and the specific genetic alterations within the patient's tumor cells, we can develop and implement treatments that more precisely address the cancer at its source.

This focus of our reconstituted UCLA Kidney Cancer Program is an example of what makes UCLA Urology so special in all areas of urologic care. As part of a world-renowned academic medical center, we are not just at the cutting edge of clinical care; we are the ones doing the cutting. Leveraging the strength within our department and across the entire scientific enterprise in the UCLA Health system and across the UCLA campus, there is constant engagement among our scientists and our multidisciplinary clinicians. The result: new innovations that advance the field and improve our ability to fulfill one of our core missions — providing compassionate care that optimizes our patients' health.

* Mark S. Litwin, MD, MPH

Professor and Chair, UCLA Urology

Kudos

Arash Amighi, fourth-year UCLA medical student, had two manuscripts accepted: "A modified technique for intralesional injection of collagenase Clostridium histolyticum for Peyronie's disease results in reduced procedural morbidity using a standardized hematoma classification rubric," in World Journal of Urology; and "Discontinuation from collagenase Clostridium histolyticum therapy for Peyronie's disease: Review and singlecenter cohort analysis," in Sexual Medicine Reviews. Co-authors include UCLA Urology residents Steven Mills, MD, and Neil Mendhiratta, MD; UCLA Urology physician assistant Keith Regets, PA-C; former UCLA Urology fellow Justin Nork, DO; and UCLA Urology faculty Sriram Eleswarapu, MD, PhD, and Jesse Mills, MD.

Richard M. Ehrlich, MD, UCLA Urology professor emeritus, is the photographer of Face The Music, a photography exhibit at the GRAMMY museum in Los Angeles from September 12, 2019, to January 6, 2020. The exhibit showcases 41 legendary musicians — showing, through portraiture, how these artists feel emotionally while listening to the music of their choice.

Andrew Goldstein, PhD, UCLA Urology assistant professor, received his first National Institutes of Health R01 grant, "The Origins of Metabolic Reprogramming in Prostate Cancer." The research seeks to define metabolic profiles of the cells-of-origin for prostate cancer and determine how epithelial metabolism is reprogrammed in response to disease-initiating oncogenes — addressing a fundamental understanding of prostate tumorigenesis and potentially yielding new insights into metabolic vulnerabilities that can be targeted for therapy.

UCLA Urology resident Raj Jayadevan, MD, is a recipient of the Society for Male Reproduction & Urology Traveling Scholar Award for his abstract, "Decisional conflict and knowledge among patients with varicocele seeking treatment for infertility," which will be highlighted as a podium presentation at the American Society for Reproductive Medicine 2019 Annual Congress. Co-authors include Arash Amighi, Dr. Ali Almuzeni, Dr. Steven Mills, Dr. Justin Nork, Dr. Matthew Pollard, Lorna Kwan, Sylvia Lambrechts, Dr. Sriram Eleswarapu,

and **Dr. Jesse Mills** from UCLA Urology. Dr. Jayadevan also authored an Open Access article published in the September 11 issue of the *Journal of the American Medical Association*, "MRI-guided confirmatory biopsy as a start point for active surveillance of prostate cancer." Co-authors are **Drs. Ely Felker** and **Anthony Sisk**, along with statistician **Lorna Kwan**, database manager **Danielle Barsa**, and senior author **Dr. Leonard Marks**.

Adam Kinnaird, MD, PhD, UCLA Urology fellow, and Alan Priester, PhD, UCLA Urology project scientist, have received a \$250,000 grant from Toronto's Exact Imaging, Inc., along with principal investigator Leonard Marks, MD, UCLA Urology professor, to evaluate a new high-resolution ultrasound system in prostate cancer. Collaborating with them will be UCLA radiologist Dr. Ely Felker and UCLA pathologist Dr. Anthony Sisk.

Fourth-year UCLA medical student Vadim Osadchiy will present his abstract entitled "Content analysis of an online male infertility community on the social media website Reddit" at the American Society for Reproductive Medicine 2019 Annual Congress. His mentors are Drs. Sriram Eleswarapu and Jesse Mills.

Kymora Scotland, MD, PhD, a new UCLA Urology faculty member, was awarded the Best Essay Award (Basic Science) from the Endourologic Society, which will be presented during the 2019 World Congress of Endourology in Abu Dhabi.

Jeremy Shelton, MD, UCLA Urology assistant clinical professor, received a prestigious three-year Young Investigator Award in the amount of \$225,000 from the Prostate Cancer Foundation for his grant, "Developing a Prostate Cancer Data Repository to Support Implementation of Precision Oncology Care and Research in VA." Dr. Shelton has also been appointed director of surgical informatics, which plays a central role in the Veterans Administration's National Surgery Office.

Brian Shuch, MD, UCLA Urology's Henry Alvin and Carrie L. Meinhardt Chair for Kidney Cancer Research and director of the Kidney Cancer Program, received the 2019 Kure It award in the amount of \$275,000 to evaluate the concept of an enhanced genomic biopsy. Dr. Shuch also received an award from UCLA Health for the Med-Tech Challenge and the Greatest Idea Award to promote a novel copy number assay in tumor specimens and to pursue the concept of telegenetic counseling in urologic cancer. He served as co-chair of the annual Kidney Cancer Association meeting in Miami, co-chair of the first-ever consensus meeting on Hereditary Kidney Cancer Risk assessment in Philadelphia, and session chair for the National Cancer Institute's Clinical Trial Planning Committee focused on localized kidney cancer.

Dyvon Walker, a research-year medical student, is the recipient of the Hiatus in Active Learning Scholarship from the David Geffen School of Medicine at UCLA. The award provides support for his research project, which is focused on developing 3D imaging technologies for enhanced diagnosis of Peyronie's disease. His mentors for this project are UCLA Urology's Drs. Sriram Eleswarapu and Jesse Mills.

UCLA Urology's Division of Andrology has 10 abstracts accepted for presentation at the 20th Annual Fall Scientific Meeting of the Sexual Medicine Society of North America in Nashville. Presentations will be given by UCLA medical students Arash Amighi, Vadim Osadchiy, Robert Shahinyan, and Dyvon Walker; visiting medical student Bobby Vanmali (Georgetown University School of Medicine); and UCLA urology fellows Justin Houman, MD, and Andrew Sun, MD. Co-authors include UCLA Urology residents Steven Mills, MD, and Neil Mendhiratta, MD. UCLA Urology faculty Drs. Jesse Mills and Sriram Eleswarapu served as mentors.

The UCLA Specialized Program of Research Excellence (SPORE) in Prostate Cancer has been renewed through 2024 by the National Cancer Institute. Principal investigators of the prestigious program are Robert E. Reiter, MD, MBA, UCLA Urology professor and director of the UCLA Prostate Cancer Program; and Owen Witte, MD, director of the UCLA Broad Stem Cell Research Center, with collaborations at City of Hope and Cedars-Sinai Medical Center.

Active Surveillance for Small Renal Tumors

he increased use of imaging studies in health care settings has led to a substantial rise in the discovery of renal (related to the kidney or surrounding regions) tumors. As a result, up to 70% of new kidney cancer diagnoses are stage 1 (early disease), a far higher proportion than in years past, with the most common method of diagnosis being incidental, or accidental, through an imaging test ordered for another purpose.

Although renal tumors are now found 3-4 times more often than previously, this does not mean that there is a new epidemic of kidney cancer — only that many of these tumors are now being detected that would otherwise not have been discovered in one's lifetime. This has led to a tripling of kidney cancer surgeries nationally, but the number of people dying of kidney cancer hasn't changed, suggesting that early-stage renal tumors are often being treated unnecessarily.

Historically, urologists have often surgically removed these early-stage tumors without first ordering biopsies, due to concerns that the biopsies were not 100% reliable. But following this approach, up to 25% of small renal tumors are ultimately found to be benign once they are removed, meaning that these patients are unnecessarily subjected to risk that include worsened kidney function, discomfort, and recovery time inherent to surgery. Even among tumors that are discovered to be cancerous at surgery, over 90% are considered indolent ("wimpy") or slow moving, and might never pose a problem.

These developments raise the question of whether "active surveillance," as opposed to active treatment, could be an option for small renal tumors, as it is for prostate cancers not deemed to be a threat. Large recent studies with patients who have chosen this approach have shown, in fact, that most small renal tumors grow very slowly, that the risk of metastasis outside of the kidney for such tumors is extremely low, and that select patients can be watched for years without the need for treatment. While some of these tumors grow to the point where the patient needs surgery, most patients who have delayed treatment are still able to be cured, indicating that it is safe to wait. Another option for these small renal tumors is to use less-invasive treatment modalities such as freezing or heating the tumor. Stereotactic radiation is also an emerging, non-invasive treatment modality.

At the UCLA Kidney Cancer Program, all patients have the option of seeking additional testing, including state-of-the-art imaging approaches such as sestamibi imaging to help identify benign tumors or triphasic imaging to help detect a type of kidney cancer. All patients have the option of seeking a biopsy, which is reviewed by expert genitourinary pathologists. Finally, UCLA is conducting the first-ever "enhanced genomic biopsy" trial, which will enable a precision-medicine approach to management.

For more information, visit www.uclaurology.com. To make an appointment, call (310) 794-7700.



Sriram V. Eleswarapu, MD, PhD



r. Eleswarapu, a physicianscientist with a special interest in urological quality of life in men, joins the UCLA Urology faculty as a health sciences clinical assistant professor, seeing patients in UCLA Urology's north campus locations in Burbank and Santa Clarita. His clinical work includes all aspects of andrology and men's health, including erectile dysfunction, infertility and Peyronie's disease, as well as general urology. Dr. Eleswarapu's main academic focus at UCLA Urology is to establish a basic and translational science research program in tissue engineering and regenerative medicine. He earned his undergraduate degree and doctorate in bioengineering from Rice University and his MD from Baylor College of Medicine, then completed his urology residency training at Henry Ford Hospital in Detroit and his fellowship in andrology at UCLA.



UCLA Health

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U.S.News & World Report's UCLA Health hospitals in Westwood and Santa Monica placed

No. 1 in Los Angeles, No. 1 in California and

No. 6 in the nation in the 2019-20

U.S. News and World Report rankings.



UCLA Urology: #10 in the Nation Highest Ranked in Los Angeles



The Men's Clinic at UCLA

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The Men's Clinic at UCLA is a comprehensive, multidisciplinary health and wellness center located in Santa Monica. For more information or to make an appointment, call (310) 794-7700.



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