Stone Center Tackles Painful Problem with Latest Treatments, Prevention Strategies

Nellie Lopez had known about the stone residing in her right kidney for 40 years. The 70-year-old Los Angeles resident had first been told about it when she was hospitalized in her native Peru for a stone in her left kidney. The first stone was resolved, and Ms. Lopez was advised not to worry about the second stone, which was small and high in her right kidney.

But almost 10 years ago, she felt some pain, as well as pressure on her right side. Ms. Lopez, by now living in Los Angeles, was told by a surgeon that the stone was now particularly large, and removal would likely require loss of the kidney. Frightened by that prospect, she decided to put up with the discomfort, and soon it subsided – until two years ago, when it returned, this time with bleeding. After a trip to the emergency department, Ms. Lopez began revisiting the idea of surgery. But she continued to wait, and over the next 18 months two more physicians told her she needed invasive surgery and would be at risk of losing her kidney.

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After enduring more pain and bleeding, Ms. Lopez visited the UCLA Stone Center, whose surgical director, Gregory S. Jack, MD, specializes in minimally invasive approaches to stone removal. Two outpatient laser surgeries later, the large kidney stone that had dogged Ms. Lopez for so many years was completely gone and her kidney was spared, without a single cut or incision in the process. “Sometimes I want to cry, I am so grateful,” she says.

The UCLA Stone Center, a combined effort of UCLA Urology and UCLA Nephrology, takes a comprehensive approach to patients such as Ms. Lopez, combining compassionate care and the latest surgical and non-surgical treatments, along with a strong emphasis on strategies to prevent future recurrences.

The center has played a pioneering role in the field for nearly 30 years. In 1985, UCLA was the first institution on the West Coast to remove kidney stones non-surgically with a lithotripter, a device that employs high-energy shockwaves to break up the stone. “Treatment of stones is an area in which UCLA has been a leader for a long time, and we continue to have a very high-volume practice and a reputation for being able to take on the most difficult cases,” says Dr. Jack, who recently was recruited back to the faculty of UCLA Urology – where he had trained as a resident – after establishing himself as an international expert in endo-urology and minimally invasive surgery at the University of Melbourne, Australia. “Most recently James [Wilson, MD, nephrologist and medical director of the Stone Center] and I have teamed up and brought our resources together so that we can provide comprehensive medical and surgical care, individualized to each patient.”

Urinary stone disease (commonly called kidney stones, but the stones can also form elsewhere in the urinary tract) is one of the most common urological conditions – and among the most painful. In the United States, approximately one in 10 men and one in 14 women will have one in their lifetime, and roughly half of those who develop a stone will experience a recurrence within five years. As the nation struggles with high rates of obesity, diabetes and metabolic syndrome – a combination of obesity, diabetes, high blood pressure, and elevated uric acid – the incidence is on the rise: According to a UCLA Urology study led by UCLA Urologist Christopher Saigal, MD, MPH, the number of Americans suffering from kidney stones between 2007 and 2010 nearly doubled from 1994.

In addition to obesity and metabolic syndrome, genetic factors can increase susceptibility, and people who don’t drink enough fluids may also be at higher risk. Kidney stones may sit dormant in the kidneys barely noticed, if at all. But when the stones pass they become lodged in the ureter – the narrow tube that carries urine from the kidney to the bladder – and can cause severe pain in the back, lower abdomen or groin, as well as blood in the urine and discomfort while urinating. Unlike Ms. Lopez, most people get no advance notice.

The UCLA Stone Center’s facilities offer all of the latest approaches to treatment, including:

- pharmacologic therapy, which uses various medicines to dissolve stones or dilate the ureter, avoiding surgery altogether.
- extracorporeal shock wave lithotripsy (ESWL), which uses non-invasive sound waves to crush the kidney stone into tiny fragments that can easily pass through the urinary tract.
- flexible ureteroscopy, a simple outpatient procedure that passes an ultra-thin fiber optic camera up through the urinary tract, allowing specialists to break up and completely extract the stone.
We've all heard it said. Perhaps we've even used the expression ourselves a few times, as we sought or counseled collaboration on a challenging problem: Two heads are better than one.

At UCLA Urology, we tackle the most challenging problems in modern medicine – common and rare urological conditions that profoundly affect the quality of life, and in some cases the very survival, of our patients as well as millions more across the country and around the world. Whether we are searching for clues into the causes of these conditions or finding new and better ways to treat those affected, rising to these challenges calls for not just one head, or even two. It requires a diverse, multidisciplinary group of scientists and clinicians bringing their unique talents to bear so that, in another time-honored observation first made by Aristotle, the whole is greater than the sum of its parts.

In his 2004 book *The Wisdom of Crowds*, James Surowiecki argued that the collective decisions made and actions taken by a group are typically better than what any one of its members could have conceived. Surowiecki focused on fields such as economics and psychology, but examples of the wisdom of crowds abound throughout our society. It's the basis for everything from jury trials to popular websites that aggregate information and opinions, from Wikipedia to Yelp.

Our UCLA Urology faculty includes some of the most outstanding doctors and scientists in the world, but they don't work in isolation. As we seek to maximize our impact in research, clinical care, education and community engagement, we rely on the collective wisdom of this diverse group of individuals. We promote an environment that fosters and encourages their collaboration. For it is the collective wisdom of these talented faculty members, each bringing a different perspective and area of expertise to the difficult problems we face – that enables UCLA Urology to challenge conventional thinking and find new ways to push the boundaries of scientific and clinical knowledge, producing the breakthroughs that will make all of our lives better and heal humankind, one patient at a time.

– Mark S. Litwin, MD, MPH
Professor and Chair
UCLA Urology

Letter from the Chair

• percutaneous nephrolithotomy, or PCNL, which removes extremely large stones, typically several inches long, through a one-fourth inch hole in the back.
• laparoscopic and robotic surgery, which are advanced options for extreme stones, horseshoe kidneys, ureteropelvic obstructions, and ureteral strictures – problems that traditionally require major surgery through a large flank incision.
• metabolic evaluation to identify risk factors from stone formation.
• dietary and nutritional.

In the 1980s and ’90s, virtually all kidney stones were treated only with ESWL, and that is still the case in some centers, Dr. Jack notes. ESWL has success rates between 50 and 85 percent, depending on the stone size and location. “We still utilize ESWL when we think it will be effective,” Dr. Jack says, but the UCLA Stone Center increasingly uses endoscopic approaches, which, by manually removing all of the stone fragments, result in a nearly 100-percent stone-free rate and can typically be performed in a one-hour, same-day surgery. “By offering all of the modalities, we can tailor our treatment to all spectrum of stones in order to get the highest stone-free rate,” Dr. Jack explains.

But removal of the stone is only the beginning. The next step involves testing to determine what caused the stone in an effort to devise a strategy to prevent future stones from developing. “About 50 percent of these patients will have a recurrence within five years, but studies have shown that with proper diet and lifestyle modifications, we can cut that recurrence rate in half,” Dr. Jack says.

The prevention side is led by Dr. Wilson, who works closely with Dr. Jack as the center’s medical director. Patients receive metabolic analysis of their blood and urine, dietary counseling, and medications when indicated. Based on the testing, they may be advised to modify certain foods they eat and limit their salt intake. Nearly all prevention strategies include maintaining a healthy body weight and drinking lots of fluids. “It’s amazing how many patients out there get really bad advice about kidney stones.” Dr. Jack notes. “Our job is to dispel the myths.”

“This center is unlike most other places in that we have coordination among the specialists and the development of a comprehensive plan specific to the patient,” says Dr. Wilson. “Our goal is to put ourselves out of business by preventing these stones in the future.”

No one would be happier to prevent a recurrence than Ms. Lopez. “Something happened after the surgery,” she says. “I feel young and healthy. I have so much more energy. I can’t say enough good things about what they have done for me.”
Dr. Jiaoti Huang: Pathologist a Linchpin for UCLA Urology Cancer Programs

One of the most important members of the UCLA Urology faculty is not a urologist. But as the rare pathologist who focuses entirely on urologic malignancies, Jiaoti Huang, MD, PhD, is a linchpin of UCLA Urology cancer programs, whether he’s ensuring that patients receive the proper diagnosis; consulting with the department’s urologists on the best course of treatment; or participating in some of UCLA Urology’s most closely watched research initiatives and serving as a vital link between laboratory scientists and clinicians.

“Since coming to UCLA, Dr. Huang has been a cornerstone of our Prostate Cancer Program,” says Robert E. Reiter, MD, director of the program, which received the National Cancer Institute designation as a Specialized Program of Research Excellence (SPORE) in 2002 – one of only 11 in the country. “Not only is he a great clinician who has helped us to develop better imaging tools and better assessment of our clinical outcomes, but together with Dr. Jonathan Said, he has facilitated all of the translational research in our SPORE and prostate research programs. He is a close friend and colleague whom I and others can collaborate with and depend on.”

When a patient is suspected of having any urologic cancer, a biopsy is conducted and the tissue sample is analyzed by Dr. Huang’s group. Once patients have been diagnosed and surgery is performed to remove their tumor, Dr. Huang’s task is to determine how aggressive the cancer is and to what extent, if any, it has spread. “This diagnosis is important for a couple of reasons,” he explains. “It addresses whether the patient needs additional treatment, such as radiation or chemotherapy; and it has prognostic significance.”

In addition to his clinical and research roles, Dr. Huang is active in teaching – both preparing future pathologists and educating urology residents so that they will have a better grasp of the pathology of urologic diseases, as well as a more complete understanding of the reports that come from Dr. Huang and his colleagues. And it’s not just the trainees who seek his guidance: Dr. Huang gives presentations to UCLA urologists, some of whom also sit in when he is teaching residents and fellows.

“We work as a team,” Dr. Huang explains. “There is a level of back-and-forth communication between the urologists and me that doesn’t exist in many places. Whenever they need consultation about a patient they call me, and if I have a concern about a case I call them. This leads to the highest quality of service for the patient.”

Dr. Huang’s value isn’t lost on his urology colleagues. “He represents the best of academic pathology, combining the skills of a cutting-edge and innovative researcher and an outstanding clinical pathologist,” says Arie Belldegrun, MD, the Roy and Carol Doumani Chair in Urologic Oncology and director of the UCLA Institute of Urologic Oncology. “Under the multidisciplinary umbrella of the Institute of Urologic Oncology, Dr. Huang excels as an educator and research collaborator to a host of clinical and translational research projects, in addition to his very popular lecture series on clinical pathology and case reviews.”

The close ties between Dr. Huang and the UCLA Urologists benefit both sides. “When pathologists aren’t working so closely with the clinicians, they are less likely to fully understand the issues involved in patient management,” Dr. Huang explains.

This collaborative effort is particularly beneficial for prostate cancer patients. “In the past, the vast majority of patients with localized prostate cancer were treated right away with surgery,” Dr. Huang says. “But many of these patients have very small, indolent tumors that are never going to kill them, and they don’t need the treatment and all of its potential side effects. Before, we couldn’t predict which patients didn’t need treatment until after the fact, but pathology has advanced to the point that we have a much better idea of how individual tumors are going to behave. This allows us to closely watch certain patients rather than immediately treating them.”

UCLA Urology is at the forefront of this movement through its Active Surveillance for Prostate Cancer program, which takes men whose prostate cancer is deemed to be a low risk and defers surgery or radiation therapy – ideally for the duration of their lives – while monitoring them through regular exams and annual biopsies to ensure that their pathology doesn’t change. Hundreds of patients are currently in the program, with Dr. Huang playing a key role.

“Dr. Huang has added a valuable new dimension to our work,” says Leonard Marks, MD, professor of urology and the program’s director. “He is brilliant; he is always available; and he is the most selfless co-worker I’ve ever had.” Dr. Marks also credits Dr. Huang with playing an integral part in a related initiative that is having a dramatic impact on prostate cancer diagnosis and treatment – using new approaches to produce more accurate biopsies for prostate cancer patients who have elevated PSA levels but multiple negative biopsies.

Dr. Huang has also worked closely with Dr. Reiter and UCLA radiologists to improve the radiological diagnosis of prostate cancer. “This has traditionally been a difficult area,” says Dr. Huang, “but by combining our expertise we are making great progress. This is the kind of team effort that makes UCLA different.”

In addition to his collaborations with urologists and other clinical researchers, Dr. Huang runs his own lab, focusing on prostate cancer. There, his interests include investigating tissues taken from prostate cancer patients to learn more about the molecular changes that lead to the development of prostate tumors. Dr. Huang is also studying the role of certain cells in contributing to the eventual progression of advanced prostate cancer after it has been successfully treated with hormonal therapy. His group is actively pursuing potential biological markers in negative biopsy tissue and in prostate tumors themselves that would help to better diagnose and treat prostate cancer.

“My work involves a very challenging area of pathology that has an impact on many men around the world,” Dr. Huang says. “To be able to collaborate with outstanding colleagues in urology to improve the lives of patients is very gratifying.”
Joseph I. Schultz, MD

It's been more than 50 years since Joseph I. Schultz, MD, walked into the UCLA Urology administrative office without an appointment, hoping to see Dr. Willard E. Goodwin in an effort to convince the department's founding chair to select him for one of the coveted slots as a UCLA Urology resident.

Dr. Schultz had graduated from UCLA as a pre-med student in 1952 before going to medical school at the University of Buffalo State of New York, then returning to Los Angeles in 1957 to begin an internship at Harbor General Hospital. When he told some of his former UCLA pre-med classmates that he hoped to become a UCLA Urology resident, they warned him that he would likely have to wait 2-3 years...and even then, he would be lucky to be accepted. "It was an elite program, then and now," Dr. Schultz recalls.

He'll never forget the conversation he had with Dr. Goodwin's assistant. After Dr. Schultz admitted to her that he didn't have an appointment, she told him Dr. Goodwin would be leaving for a business meeting in 15 minutes and wouldn't be back for awhile...but that she would take the blame and tell him she'd forgotten to write Dr. Schultz's appointment in the calendar. Dr. Schultz got his meeting, and by the time he left he had a promise from the UCLA Urology chair that if he progressed well in his internship, he could train as a UCLA Urology resident.

Under the tutelage of Dr. Goodwin, who had earned a reputation as one of the nation's leading urologists, Dr. Schultz learned how to perform radical surgery for cancer patients, which at the time was practiced very little outside the university setting. He assisted Dr. Goodwin on some of the first kidney transplants on the West Coast. And with the skills he learned as a UCLA Urology resident — along with the prestige of having trained at UCLA and continuing to serve as an attending urologist at Harbor-UCLA Medical Center — Dr. Schultz established a highly successful urology practice in Torrance, CA, under the name South Bay Urology Medical Group.

"I loved everything involved in the practice of medicine, from both an administrative and a personal point of view," says Dr. Schultz, who retired in 2002. "I got to establish great relationships with patients and contribute to the community. Having trained at UCLA and being on the attending faculty made all of that possible."

Anna and David Grotenhuis have chosen to support educational scholarships for the department — support they view as an investment in the community's future.

Mr. Grotenhuis was referred to UCLA Urology's Dr. Shlomo Raz in 2007 after a urologist near the couple's Santa Barbara home indicated that there was nothing more to be done for his bladder condition. Aware of Dr. Raz's international reputation, the couple made an appointment for a consultation. During that first meeting, they presented a comprehensive list of questions to Dr. Raz, who patiently answered each one. Struck by his knowledge and compassionate manner, they knew they were in capable hands.

In 2008, Mr. Grotenhuis underwent a highly complex bladder augmentation surgery that involved months of recovery. The Grotenhuijse's appreciation for the expertise of Dr. Raz and his staff soared during the post-operative care and recovery. In particular, they were impressed by the high quality of the UCLA postdoctoral fellows trained by Dr. Raz.

Grateful for the experience, the Grotenhuis wanted to give back to Dr. Raz, his colleagues, and to UCLA Urology. Their passion for education led them to direct their support to the education and training of the next generation of urological surgeons.

The Pelvic Medicine and Reconstructive Surgery Division of UCLA Urology annually selects four candidates who have completed an accredited urology residency to participate in a two-year clinical fellowship program. Wholly dependent on charitable donations, the fellowship focuses on clinical and operative experience in pelvic floor dysfunction, incontinence, voiding dysfunction, urodynamics and reconstructive surgery.

Shortly after Mr. Grotenhuis' recovery, he and his wife made their first gift to the Female Urology, Reconstructive Surgery and Urodynamics Fellowship Program at UCLA. They got to know the first postdoctoral fellow to benefit from their gift, and to this day they receive Christmas cards from her.

In 2012, Mrs. Grotenhuis, too, became a patient of Dr. Raz. "I think almost everyone will need a urologist at some time in their life, and there is no physician in the world more equipped to handle the tough cases in urology than Dr. Raz," she says. "We were extremely impressed not only by Dr. Raz's tireless dedication to his work, but also by his availability to his patients. This personal attention to patients is special in medicine today."
Jonathan Bergman, MD, is focused on improving quality, value, and patient-centeredness at the end of life. As a member of the UCLA Urology faculty he will be involved in medical student and resident education, clinical urology at Olive View-UCLA Medical Center and the West Los Angeles VA Medical Center, and quality improvement projects at UCLA and its affiliated institutions.

Jeremy Blumberg, MD, will focus clinically on meeting the urologic needs of patients at Harbor-UCLA Medical Center, where he will also serve as the surgical director of kidney transplantation. His research interests lie in studying the clinical behavior of prostate cancer in solid-organ transplant patients, and the potential use of PDE5 inhibitors for the prevention of fibrosis in renal allografts.

Also joining UCLA Urology as fellows are Drs. Christopher Filson, Hung-Jui (Ray) Tan, Eric Treat, Judy Choi, Diana Kang, Tamara Hartshorn, Erin Mellano and Leah Nakamura; as a second-year resident, Dr. Joseph Shirk; and as interns, Drs. Stephanie Chue, Tonye Jones, Andrew Lenis and Matthew Pollard.
Arie Belldegrun, MD, professor and director of the Institute of Urologic Oncology, presented on a phase III clinical trial evaluating cG250 treatment for kidney cancer at the American Society of Clinical Oncology annual meeting.

Jeremy Blumberg, MD, UCLA Urology fellow, was the lead author on an article by the entire UCLA kidney transplant team for the journal *Kidney International*, highlighting the program’s combination of kidney paired donation with positive cross-match transplantation in order to successfully sensitize transplant patients with significant levels of donor-specific antibodies. His essay, “Last Thanksgiving,” appears in the Spring 2013 issue of *The Beat*, the David Geffen School of Medicine’s literary magazine.

J. Bryant Byrd, MD, UCLA Urology resident, was awarded the 2013 Laurence R. Meyerson and Deborah L. Faiman Travel Award to present a moderated poster session at the 2013 American Urological Association annual meeting, “Low Fat Fish Oil Diet Decreases Pro-inflammatory Eicosanoids and Prostate Cancer Cell Cycle Progression Score in Men Undergoing Radical Prostatectomy.”

Karim Chamie, MD, MSHS, assistant professor, was selected to present his study, “Quality of Care in Patients with Bladder Cancer,” at the 2013 American Urological Association Research Forum, “Showcasing Early Career Investigators.” He received a $25,000 grant from H.H. Lee for “The Utility of a Novel Hydrogel Polymer in the Diagnosis and Treatment of Urothelial Carcinoma.”

Arnold Chin, MD, PhD, assistant professor, is the co-recipient with Andrew Goldstein, PhD, UCLA Urology researcher, of a $50,000 Concern Foundation grant to foster their collaboration in developing a prostate cancer model to study innate immunity and inflammation in prostate cancer development and progression.

Stephanie Chu, MD, UCLA Urology intern, had her photograph, “The Dandelion,” published in the Spring 2013 issue of *The Beat*, the David Geffen School of Medicine’s literary magazine.

H. Albin Gritsch, MD, surgical director of the Kidney Transplantation Program, was invited to give a State-of-the-Art Lecture on “Indications for Renal Auto-Transplantation” at the American Urological Association annual meeting. He is also now an associate editor for the journal *Clinical Transplantation*.

Alan L. Kaplan, MD, UCLA Urology resident, received funding from the H.H. Lee Surgical Research Scholars Program for his study, “Identifying Quality Barriers and Facilitators in Bladder Cancer: Bridging the Quality Chasm in Bladder Cancer Through Implementation Science.” He was awarded a postdoctoral fellowship by the Center for Cancer Prevention and Control Research in the UCLA School of Public Health and UCLA’s Jonsson Comprehensive Cancer Center. His essay, “A Day in the Life of the Guy in Bed,” appears in the Spring 2013 issue of *The Beat*, the David Geffen School of Medicine’s literary magazine.

Ja-Hong Kim, MD, assistant professor, was selected as the first inductee into the California Urological Association Young Leadership Circle.

Mya Levy, MD, UCLA Urology resident, received a $1,500 travel grant from the American Urological Association to attend its annual meeting.

Mark S. Litwin, MD, MPH, professor and chair of UCLA Urology, ranks in the highest percentile of Top Doctors in the nation, according to the annual *U.S. News & World Report* listing. Top Doctors is a resource for patients in which physicians from around the country identify the best experts in their fields for providing excellent care and superior outcomes.

Allan Pantuck, MD, associate professor, received funding from Memorial Sloan-Kettering Cancer Center for his study “Genomic Characterization of Metastatic Chromophobe Renal Cell Carcinoma.”

Shlomo Raz, MD, professor and director of the Division of Pelvic Medicine and Reconstructive Surgery, spoke at the All Indian College of Obstetrics and Gynecology meeting in Mumbai, India, and was the main guest of the Thai Urological Society meeting in Khao Yai, Thailand.

Robert Reiter, MD, MBA, professor and director of the UCLA Urology Prostate Cancer Program, received funding for two new studies: “Multifunctional ImmunoPET Tracers for Pancreatic and Prostate Cancer” and a collaboration with Agensys-UCLA to evaluate the efficacy and effect of AGS-PSCA on tumor growth and progression in a genetically engineered mouse model of prostate cancer that expresses human PSCA.

Larissa Rodriguez, MD, co-director of the Division of Pelvic Medicine and Reconstructive Surgery, was the American Urological Association lecturer at the European Association of Urology annual meeting, speaking on the topic, “Lower Urinary Tract Management: How to Balance Benefits with Side Effects.” Among her other recent presentations was the American Urological Association Annual Meeting State-of-the-Art in Urology Lecture, “Cell Based Therapy: Are We Making Progress?”

Christopher Saigal, MD, MPH, vice chair of UCLA Urology, was invited to speak on “Patient Engagement in Healthcare Decision-Making” at The Engelberg Center for Health Care Reform at Brookings and the Dartmouth Institute for Health Policy and Clinical Practice at the Fourth National Accountable Care Organization (ACO) Summit.

Jeremy Shelton, MD, UCLA Urology fellow, received seed-grant funding from the Veterans Affairs Health Services Research & Development.

Geoff Sonn, MD, UCLA Urology fellow, was part of a research group whose paper, published in the journal *European Urology*, shows that targeted biopsies employing magnetic resonance/ultrasound fusion improve the detection of prostate cancer in men with prior negative biopsies and rising PSA levels. The study showed that targeted biopsies identify more clinically significant cancers and fewer insignificant cancers than conventional systematic biopsies.
Electronic Health Record Brings Benefits to Patients

From easier scheduling and simplified billing to the ability to receive results and communicate with doctors via email, the experience of being a UCLA Urology patient is improving dramatically with the implementation of CareConnect, UCLA’s new electronic health record program. The equivalent of a computerized chart, CareConnect is fully operational for patients admitted to the hospital, and most patient-related activities occur within this single system. By November, UCLA Urology will have fully adopted the program.

“All of our patients’ health records will be available in a single computerized system and paper charting will be a thing of the past,” explains Jennifer Singer, MD, assistant professor of urology and CareConnect clinician informaticist and clinical content coordinator. “This means all of our patients’ relevant information, including how to contact their primary care and referring physicians, their past medical history and a list of their medications, will be accessible at the click of a button, while they are sitting with the urologist in the clinic.” Dr. Singer notes that a soon-to-be-introduced function called MyUCLAHealth will enable UCLA Urology patients to receive results and correspond, via secure email, directly with their urologist merely by signing up for participation. Patients will also be able to schedule their own appointments.

Dr. Singer cautions that implementing this type of system takes time. “We ask for patience and participation as we launch our electronic health record,” she says. “We are excited for this to improve our patients’ experiences, and confident that institution of CareConnect will improve the delivery of health care and patient satisfaction.”

UCLA Urologist Jennifer Singer, MD