Leading the Way in Diagnosis, Treatment of Patients with Disorders of Sex Development

Through a multidisciplinary approach to evaluation and patient care, along with national leadership in learning more about medical conditions of the reproductive system that have historically been difficult to diagnose and treat, the UCLA Urology-based Disorders of Sex Development (DSD) Clinic is meeting a critical need for patients who have in the past had few places to go for help.

DSD is an umbrella term for many types of developmental disorders of the reproductive system, usually involving malformation of the genitalia. It can include any discrepancy between chromosomes and genitals, such as individuals who have the XY sex chromosomes but are feminized, or XX chromosomes but are masculinized; anatomic abnormalities such as severe hypospadias or enlarged clitoris; as well as ambiguous genitalia. These conditions were once referred to by terms such as intersex or hermaphroditism, but as part of a 2006 consensus statement on the management of these disorders, leading experts in the field concluded that such labels were confusing and could be perceived as pejorative. Out of that consensus group came the term disorders of sex development, defined as "congenital conditions in which the development of chromosomal,
UCLA is the lead administrative site in the National Institutes of Health-funded DSD Translational Research Network, a multi-center effort to learn more about the genetic causes and psychological consequences of DSD through a patient registry. Dr. Eric Vilain (left), the clinic’s director, confers with nurse Oscar Rivera.

Management of patients with DSD has long been controversial within the urology field, according to Eric Vilain, MD, PhD, professor of human genetics, pediatrics and urology at the David Geffen School of Medicine at UCLA and director of the UCLA Disorders of Sex Development Clinic. “Among other issues, there have been questions about gender assignment and when and how to perform genital surgery,” Dr. Vilain says, “and there has been little data helping to guide clinicians in determining what is most appropriate from the patient’s perspective.”

Dr. Vilain played a key role in the 2006 consensus statement, including serving as chair of the work group on the nomenclature change. Out of the consensus statement came a number of influential recommendations – among them, the adoption of a multidisciplinary team approach to the care of DSD patients, with mental health counseling included as an integral part of the management plan.

“People with DSD tend to experience a great deal of anxiety and often suffer from low self-esteem, in addition to their medical concerns,” says Dr. Vilain. “Little is known about the diagnosis and treatment of these disorders. By taking this systematic approach with our team of experts, we are making considerable progress in improving the health and quality of life of these patients.”

In the wake of the recommendations, UCLA started a multidisciplinary DSD clinic headed by Dr. Vilain, a pediatric geneticist; and Dr. Bernard Churchill, the Judith and Robert Winston Chair in Pediatric Urology and founding director of the Clark Morrison Children’s Urological Center at UCLA, whose extensive experience gives the clinic a designation as a comprehensive center of excellence. The UCLA DSD Clinic is also led by a pediatric endocrinologist, Dr. Anna Pawlikowska Haddal; and a child psychiatrist, Dr. Vernon Rosario.

“All of our specialists are very experienced in these cases, and we work closely together to provide comprehensive evaluation and treatment – guided by the latest research and including a strong education component for families and healthcare providers,” says Dr. Vilain. “That type of approach to DSD is not found in many places.” Employing a state-of-the-art test called whole exome sequencing, the UCLA DSD Clinic is often able to pinpoint a genetic cause for patients who have spent years searching for an accurate diagnosis. UCLA is among the few centers in the world to provide such testing.

Under Dr. Vilain’s direction, UCLA is the lead administrative site in the National Institutes of Health-funded DSD Translational Research Network, a multi-center effort to learn more about the genetic causes and psychological consequences of DSD through a patient registry. The ultimate goal is to use the information to improve the care of DSD patients through standardized examination, diagnostic testing, and surgical approaches, as well as learning more about medical, cosmetic, and psychological outcomes of treatment.

For information on making a gift to UCLA Urology, please log on to http://giving.ucla.edu/urology or call (310) 794-2529.
Aristotle wasn’t referring specifically to biomedical research when he declared, “The whole is greater than the sum of its parts.” But more than two millennia later, the Greek philosopher and scientist’s statement about synergy provides a spot-on summary of UCLA Urology’s strength as an enterprise dedicated to discovery and cure.

Given our standing as one of the world’s leading urology departments within one of the world’s premier academic medical centers, it comes as no surprise that our faculty includes internationally renowned scientists across the research continuum. These include the basic scientists who conduct painstaking laboratory studies that help to advance our knowledge about the genetic and molecular processes involved in urologic diseases, clinical researchers who develop and test new therapies in clinical trials, as well as population scientists who bring discoveries to the communities in need.

But to Aristotle’s point, it’s only by working together – and with researchers in other departments within the David Geffen School of Medicine at UCLA and inside and outside UCLA – that these outstanding scientists bring promising discoveries from the laboratory bench to the patient’s bedside, and ultimately to the nation and world.

This is the process known as translational research, and it is the reason that having experts working together at every point on the research continuum is so critical. The most promising discovery in the laboratory brings no health benefit until it is seized upon to develop a new or improved diagnosis, treatment or prevention strategy. For that to happen requires close communication and collaboration among basic and clinical scientists – as well as those who straddle the two worlds – to determine the relevance of the lab work to patients’ lives. And increasingly, it’s not just the laboratory work that provides fuel for clinical studies, but also the reverse: Insights obtained from treating patients drive new experiments in the lab that help urologists make sense of what we are seeing.

Once, translational research meant converting basic findings into new and better therapies. But we now know that unless a new treatment becomes widely available in the community, we haven’t done our job. At UCLA Urology we are firmly committed to population science – partnering with the community to share knowledge and ensure that at UCLA and beyond, patients are offered care that is guided by the latest research findings and treatment strategies.

More than ever before, research is a team sport. To advance urological care at UCLA, in our surrounding community and around the world, we are working together as a department, a medical school, a campus and a community to translate research findings in ways that are improving lives.

Mark S. Litwin, MD, MPH
Professor and Chair, UCLA Urology
H. Alvin Meinhardt and his wife, Carrie, have been benefactors of UCLA Urology for two decades. The reason, Mr. Meinhardt, says, is simple: He considers the last 20 years to have been a gift to him that he never thought he would have the opportunity to enjoy.

In November 1994, Mr. Meinhardt, a Maryland business owner, began to experience severe back pain followed by a hacking cough. By February 1995, Mr. Meinhardt was diagnosed with kidney cancer. By that time he was urinating blood and could barely walk. He was told by his physician that his cancer was “too far gone” for surgery to help. “He figured I was going to die in 2-3 weeks,” Mr. Meinhardt recalls.

Fortunately, friends of the Meinhardts happened to see a TV news segment on an aggressive new immunotherapy regimen that the UCLA Kidney Cancer Program was offering in a clinical trial. Within 10 days, Mr. Meinhardt was on his way to UCLA for the treatment, performed by Dr. Arie Belldegrun, founder and surgical director of the UCLA Kidney Cancer Program. In addition to the complicated surgery, Mr. Meinhardt was treated with an experimental Interleukin-2 and adoptive cell therapy protocol designed to prime his immune system to recognize and attack the remaining cancer cells in his body.

Nearly 20 years later, the multiple tumors that had spread to Mr. Meinhardt’s abdomen, lymphatic system and lungs show up looking like tiny pencil points. “They haven’t bothered me since,” he says. To express their gratitude for the life-saving work of Dr. Belldegrun and his team, Mr. Meinhardt and his wife, Carrie, established the Henry Alvin and Carrie L. Meinhardt Chair for Kidney Cancer Research, currently held by Dr. Fairooz Kabbinavar. Mr. Meinhardt has continued to add to the endowment, nearly doubling it from its original $1 million amount. He continues to stay in touch with Dr. Belldegrun, sending him a plant each year to mark the anniversary of his clean bill of health.

Meeting the Needs of Underserved South Los Angeles Community

With the opening of the Martin Luther King, Jr. Outpatient Center in June, UCLA Urology has begun providing services to a South Los Angeles community that has had limited access to healthcare – particularly since the 2007 closure of Martin Luther King, Jr. Harbor Hospital.

Through a public/private partnership involving Los Angeles County, the University of California (UC), and Martin Luther King, Jr. Los Angeles Healthcare Corporation, the new Martin Luther King, Jr. Community Hospital is in the final stages of construction, with the reopening scheduled for mid-2015. As part of the partnership, UC will provide physician staffing and quality oversight.

The new hospital will serve as the hub for the county’s Campus Master Plan, which was developed with input from residents, civic leaders, business owners and healthcare advocates. The plan calls for a web of community wellness resources around the hospital – including the outpatient facility providing urology and other specialty services, a psychiatric urgent care center and an HIV clinic, along with connected community gardens, pedestrian walkways, and recreational facilities.

UCLA Urology is playing a key role in the overall effort. “Dr. Mark Litwin [UCLA Urology chair] became involved in this project early, committing resources and helping us recruit new medical talent to meet the needs of the community in the area of men’s health,” says Dr. Elaine Batchlor, CEO of Martin Luther King, Jr. Community Hospital. “This gave us a great opportunity to demonstrate how our new collaboration will positively impact the delivery of care in South Los Angeles.”

The newly opened Martin Luther King, Jr. Outpatient Center operates more than 70 primary care and specialty clinics in a state-of-the-art building. "This is a beautiful facility commensurate with the high-quality practitioners who are here to provide members of the community with the type of healthcare and patient experience they deserve," says Stanley Frencher Jr., MD, MPH, UCLA Urology assistant professor and chief of Martin Luther King, Jr. Outpatient Center’s urology division.

Dr. Frencher heads a team of urologists providing care at the facility, among them Allan Pantuck, MD, also a member of the UCLA Urology faculty; and Dana Scott, MD, a graduate of the UCLA Urology residency program. As UCLA Urology’s clinical involvement grows, it is developing patient education projects focused on men’s health and urologic care, as well as collaborating with the community on new research efforts.

“With the hospital and outpatient center, along with a truly integrated health campus, we are going to be uniquely positioned to provide services to a diverse community that has not had the care it has needed,” Dr. Frencher says. “This effort can serve as a model for addressing health disparities in underserved communities.”

“We couldn’t achieve our mission to provide compassionate, collaborative, quality care and improve the health of our community without partners like UCLA,” adds Dr. Batchlor. “Together, along with the County of Los Angeles, we have established a public-private partnership that brings innovative, high-quality, patient-centered care to this community.”
Minimally Invasive Partial Nephrectomy Offered at UCLA

For most patients with kidney cancer, UCLA Urology offers a treatment option that has traditionally not been widely available: partial nephrectomy – surgery that gets rid of the cancer while leaving the kidney function intact – performed as a minimally invasive, robotically assisted surgery. Although commonly performed at UCLA, the procedure remains mostly confined to major academic centers where urologists undergo additional specialty training.

Jim C. Hu, MD, MPH, professor of urology and Henry Singleton Chair in Robotic and Minimally Invasive Surgery at UCLA Urology, notes that recent studies have shown the benefits of sparing as much of the normal kidney tissue as possible. “For most patients with a renal mass, research indicates that removal of the entire kidney has been overused compared to just removing the cancerous portion,” says Dr. Hu. “Outside of the major referral centers, that was and still is the case.”

Beyond the fact that many urologic surgeons lack the training to perform the more difficult partial nephrectomy, a major factor contributing to the overly aggressive treatment in the past, Dr. Hu explains, was that many patients strongly prefer minimally invasive surgery to the more traditional open surgical approach – and with minimally invasive techniques, removing the entire kidney was much easier than taking out part of it. But that has changed in recent years with the advent of robotic surgery. “The robot is a game changer,” says Dr. Hu. “For urologists who have the specialized training, it is now much less risky to do a partial nephrectomy minimally invasively.”

With minimally invasive robotic-assisted partial nephrectomy, Dr. Hu notes, patients go home much earlier – often on the first day after the surgery, vs. day three, typically, for open partial nephrectomy. Complications and the need for blood transfusion are far less common. Patients are typically off of pain medications within several days, and able to return to normal daily activities much more quickly.

Dr. Hu is among the nation’s most experienced urologists in the procedure, having performed about 1,000 minimally invasive partial nephrectomies since 2008, shortly after he completed his UCLA Urology residency training. “This is a major benefit for patients,” he says. “For the vast majority of them, we are able to remove the cancer while leaving kidney function intact through a minimally invasive procedure that has become routine. Open partial nephrectomy continues to have a role for complex situations such as a solitary kidney or central, more involved cancers, and we are fortunate at UCLA to have world-class experts who have pioneered the open approach in these situations.”

Dr. Jim C. Hu, professor of urology and Henry Singleton Chair in Robotic and Minimally Invasive Surgery

ALUMNI PROFILE

Dr. Eric Rovner

Dr. Eric Rovner calls the year he spent as a UCLA Urology fellow under the guidance of Dr. Shlomo Raz “by far the best of my 27 years of education.”

After completing his residency at the University of Pennsylvania, Dr. Rovner was drawn to UCLA by the opportunity to train under Dr. Raz, whom he calls “the father of female pelvic medicine and reconstructive surgery in the United States.” Of his former mentor, who continues to be internationally renowned as director of UCLA Urology’s Division of Female Pelvic Medicine, Reconstructive Surgery and Urodynamics, Dr. Rovner says: “He has done seminal work in surgical reconstruction and in diagnosis and evaluation of the conditions in this field. Dr. Raz was a role model who encouraged me to go into academic medicine.”

Today, Dr. Rovner is himself a leader in the field as professor of urology and director of the Section of Voiding Dysfunction, Female Urology and Urodynamics at the Medical University of South Carolina in the beautiful and historic city of Charleston, as well as president of the Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction, the national organization of urologists who subspecialize in clinical care and research into conditions such as those seen by Dr. Rovner: voiding problems that include urinary incontinence, vaginal prolapse, urinary fistulae, and neurogenic bladder dysfunction.

An estimated 30-40 million people in the United States have urinary incontinence or another type of voiding dysfunction. The problem is most common among older individuals, so with the aging of the American population, urologists who specialize in treating these problems will be in even greater demand.

Practicing in an academic setting, Dr. Rovner sees some of the most complicated cases – including patients who have not benefited despite multiple surgeries or who have other complex medical conditions, as well as those with neurogenic voiding dysfunction, a nerve condition affecting the urinary tract. Patients are evaluated using urodynamics, a highly specialized diagnostic approach to examining lower urinary tract function.

“This is very challenging work – each case is unique, the surgery is intricate, and the technology advanced, all of which makes for a very intellectually stimulating work day,” Dr. Rovner says. “But beyond that, we see patients who have a substantial detriment in their quality of life. Many are shut-ins because they are embarrassed by the smell of the urine and their wet clothes. The ability to substantially improve their lives such that they can return to social settings is very gratifying.”
Urinary stones – hardened masses that form when certain chemicals in the urine stick together – can be the source of intense pain when they become lodged in the ureter, the tube that carries urine from the kidney to the bladder. If you have had stones, you are at risk of a recurrence. However, there are dietary strategies you can follow (sometimes in combination with medication) to reduce the likelihood that you will form stones in the future.

Nearly all prevention strategies include maintaining a healthy body weight and drinking lots of fluids. To keep their urine from becoming too concentrated, people who tend to form stones are generally advised to consume enough to produce at least two quarts of urine per day – typically about 6-8 glasses every 24 hours, mostly in the form of water. Other strategies may include reducing the amount of protein in the diet that comes from animal products such as meat, chicken, fish, and eggs. While people who form calcium stones were once told to avoid high-calcium foods such as dairy products, recent research indicates that very low calcium diets may actually promote stone formation. Thus, calcium stone-forming patients are asked to aim for about 1 gram of calcium per day in their diet.

The type of diet that’s best for preventing stone formation depends to some extent on the type of stones you form. The most common stones contain calcium and oxalate or uric acid. People who tend to form calcium stones are generally advised to reduce sodium in their diet to less than 2 grams a day. In addition to reducing sodium and animal protein, those who form oxalate stones may be advised to avoid certain high-oxalate foods, including nuts, beets, spinach, rhubarb, strawberries, chocolate, tea, and wheat bran. For individuals who have uric acid stones, limiting foods that contain high levels of purine – including many animal products – may be helpful, along with avoiding sugar-sweetened products and limiting alcohol, all of which may increase uric acid.

UCLA’s Stone Treatment Center, an integrated program between UCLA Urology and UCLA Nephrology, concentrates not only on the treatment of kidney stones, but also on prevention once the initial stone is removed. The center’s comprehensive approach includes dietary counseling to prevent a recurrence. All treatment and prevention recommendations are determined on an individual basis by the kidney stone management team.

For more information about the UCLA Stone Treatment Center or to make an appointment, call (310) 794-7700.
UCLA Urology is ranked No. 4 in the nation by U.S. News & World Report. The rankings are based on surveys that review patient-outcome data, reputation among physicians and other care-related factors. UCLA Health is ranked No. 5 in the country and No. 1 in both California and the Los Angeles metropolitan area, and is among 17 hospitals out of nearly 5,000 nationwide named to the survey's Honor Roll. The rankings can be viewed online at health.usnews.com/best-hospitals.

Jeremy Blumberg, MD, clinical assistant professor of urology, was appointed chief of the Division of Urology at Harbor-UCLA Medical Center, effective July 1.

Stanley Frencher Jr., MD, MPH, was appointed chief of urology at the Martin Luther King Jr. Outpatient Center. He was also appointed to the board for the Summer Enrichment Program in Health Management and Policy at the University of Michigan. Dr. Frencher was selected to attend the AAMC Minority Faculty Career Development Seminar in Vancouver. He was appointed as a board member for the Men's Cancer Network, which focuses on prostate cancer survivorship, and as a member of the Robert Wood Johnson Clinical Scholars Program cohort selection committee.

Joshua Gonzalez, MD, UCLA Urology fellow, received a research grant from the Sexual Medicine Society of North America for his study entitled, “A Randomized, Single Center, Single-Blind, Crossover Thermographic Study to Evaluate the Effect of 1000mcg of Optical Alprostadil Cream Compared to an Over-the-Counter Marketed Lubricant in the Absence of Sexual Stimulus in Healthy Women.”

Jim C. Hu, MD, MPH, professor of urology, won third place in the Western Section AUA 90th Annual Meeting Joseph F. McCarthy Physician Essay Contest for his entry entitled, “Comparative effectiveness of robotic-assisted versus open radical prostatectomy cancer control.”

Diana Kang, MD, UCLA Urology fellow, had her abstract, “Patient quality of life after the removal of vaginal mesh,” accepted for presentation at the annual meetings of the American Urological Association and Society of Urodynamics, Female Pelvic Medicine & Urogynecological Reconstruction (SUFU). Her essay, “Transurethral radiofrequency collagen denaturation for the treatment of female stress urinary incontinence: A systematic review,” was a runner-up for the 2014 SUFU clinical essay award.

Alan L. Kaplan, MD, UCLA Urology resident, won first prize in the American Urological Association Western Section History Essay contest. His historical biography, “Joseph J. Kaufman: Renaissance Man,” recounts the life and major contributions of the former UCLA Urology chief.

Leonard Marks, MD, professor of urology, had his publication, “Targeted biopsy in the detection of prostate cancer using an office based magnetic resonance ultrasound fusion device,” named one of the top five most cited articles in 2013 by the Journal of Urology.

David F. Penson, MD, MPH, former UCLA Urology resident, has been appointed to serve as chair of urologic surgery at Vanderbilt University, effective January 1, 2015.

Jeffrey Veale, MD, associate professor of urology and director of the UCLA Kidney Exchange Transplantation Program, was in the documentary film “The Chain,” which was accepted for presentation at the 142nd Annual Meeting of the American Public Health Association in New Orleans. The multi-award winning film chronicles a life-saving kidney transplant chain initiated by Karen Willis, who made the decision to donate after giving careful thought to the idea of helping a complete stranger. A kidney exchange is an innovative twist on efforts aimed at increasing the donor pool by giving people who are unable to receive a kidney from a loved one or friend the opportunity to do so through an exchange between incompatible donor-recipient pairs. The chains create potentially endless opportunities to match kidney disease patients with life-saving transplants. “The Chain” can be found at thechain.org.

IMPACT (Improving Access, Counseling and Treatment), a State of California-funded program administered by UCLA Urology in which a network of providers delivers free prostate cancer treatment to low-income, uninsured or underinsured men, has been renewed through 2016. Directed by UCLA Urology for more than a decade in partnership with community providers, local health departments and other community-based health organizations, IMPACT enrolled its 2,000th participant in July.
urologist. As a resident he began an association with Los Angeles Shriners Hospitals for Children, which provides pediatric specialty care based on medical need, regardless of ability to pay. For approximately 20 years, Dr. Lerman has spent two days a month at the philanthropic hospital, treating children with the congenital condition spina bifida. Because of Shriners’ international outreach, many of the patients he sees are children and their families from Spanish-speaking countries. Dr. Lerman learned the language as a child and spent a summer doing volunteer work in Costa Rica while in medical school.

“In so many parts of the world, children are not receiving the care they need – either because the system is set up so that if you’re poor you can’t afford it, or because physicians in the country lack the training,” Dr. Lerman says. “It always felt so unfair to me that so much of our life is determined by where we’re born and who we’re born to. This is my way of trying to help level the playing field for some of these children.”

If you are interested in supporting Dr. Lerman’s international efforts by contributing to the International Pediatric Urology Fund, contact Keri Eisenberg at (310) 794-2529 or keisenberg@support.ucla.edu.

Prostate Cancer Foundation Honors Three Young UCLA Investigators

Three of the 27 prestigious 2014 Prostate Cancer Foundation awards for young investigators went to researchers mentored by UCLA Urology faculty. Neema Jamshidi, MD, PhD (mentored by Dr. Robert Reiter); Rajan Kulkarni, MD, PhD (mentored by Dr. Matthew Rettig); and Tanya Stoyanova, PhD (mentored by Dr. Owen Witte) each received one of the prestigious Prostate Cancer Foundation awards, which offer career and project support for proven young investigators who have achieved junior faculty positions and are committing their lives to the field of prostate cancer.

From left to right: Drs. Rajan Kulkarni, Tanya Stoyanova, and Neema Jamshidi