



UC Irvine Health

Volume VII
Quarterly Report

Department of Urology

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Dr. Gamal Ghoniem Receives Lifetime Achievement Award

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Low Testosterone and Testosterone
Replacement Therapy

Patient Spotlight: Working Together to
Find the Right Answers and Treatment

Message from the Chair



Dear Friends and Colleagues,

Thank you for taking the time to read the latest issue of our Department of Urology Quarterly Report. In this issue, we share many exciting news about what our team is doing to improve the care we provide, advance the field of urology and educate the physicians of tomorrow.

Dr. Gamal Ghoniem was recently recognized by the Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction with their prestigious Lifetime Achievement Award. Dr. Ghoniem is a stellar faculty member who has made invaluable contributions to UC Irvine Health and to the future of medicine. We are very fortunate and proud to work with him. More on his latest achievement on page 6.

On page 4, we share the story of one of our patients, Tony Mastrangelo, who was diagnosed with a ureteropelvic junction (UPJ) obstruction and came to us for treatment. Working together as a team, we were able to not only take care of the UPJ obstruction, but used innovative technologies and procedures to find and treat possibly life-threatening prostate cancer.

Also, be sure to read the article on page 3, where Dr. Faysal Yafi discusses the benefits and misconceptions of low testosterone replacement therapy. Last but not least, we are thrilled to announce that *U.S. News & World Report* recently ranked CHOC Children's program in pediatric urology #18 among the country's top 50 programs. As you may know, our department's pediatric urology team provides clinical care for CHOC's patients. Congratulations to the outstanding team of physicians who provide care for the children of Orange County and beyond.

Enjoy the latest issue from the UC Irvine Health Department of Urology.

Sincerely,

A handwritten signature in black ink that reads "Jaime Landman". The signature is fluid and cursive.

Jaime Landman, MD
Chair and Professor, UC Irvine Health Department of Urology

At UC Irvine Health Center for Urologic Care, we offer expert, comprehensive care for:

Female Urology

Judy Choi, MD
Gamal Ghoniem, MD

General Urology Services

Michael K. Louie, MD
M. Leon Seard, II, MD
Mrinal Dhar, MD

Kidney Stones & Kidney Disease

Ralph Clayman, MD
Jaime Landman, MD
Ramy Yaacoub, MD

Men's Health

Faysal Yafi, MD

Pediatric Urology

Kai-Wen Chuang, MD
Irene McAleer, MD
Antoine Khoury, MD
Elias Wehbi, MD
Heidi Stephanie, MD

Reconstructive Urology

Judy Choi, MD
Joel Gelman, MD
Gamal Ghoniem, MD

Urologic Cancers

Thomas Ahlering, MD
Mark Jordan, MD
Edward Uchio, MD
Corey Hugen, MD

Is Testosterone Therapy Safe?



Low testosterone and testosterone replacement therapy (TRT) have gained fame in recent years. Many misconceptions surround TRT, but if low testosterone or hypogonadism is properly diagnosed and managed, treatment can improve men's overall health. TRT has been recently vilified after studies linked it to higher incidence of cardiovascular problems. Those studies, however, had significant flaws, and at least one of them has since been amended multiple times to actually now demonstrate survival benefit with TRT in hypogonadal men. Similarly, a recently published study suggested a harmful effect of TRT on coronary plaque formation. A closer look at this study suggests that this effect was not clinically significant.

Meanwhile, more recent robust studies have continued to demonstrate that TRT is not only beneficial to men with hypogonadism, but also safe and potentially cardioprotective in men at risk. Another classic concern with TRT is the potential risk for prostate cancer. While TRT does lead to small increases in serum PSA values, this has not consistently translated to an

increase in prostate cancer detection. The literature suggests that once testosterone levels reach a certain point, termed the saturation point, they no longer exert an effect on prostate cancer development beyond that point. Moreover, current evidence has shown that TRT may be safe in select patients with untreated and treated low-risk prostate cancer. This issue remains controversial, however, and TRT should only be initiated in patients after a prolonged duration of PSA stability and after discussion with the treating oncologist.

Testosterone replacement therapy

There is currently no FDA-approved pill for TRT, but there are several other options including topical applications, short- and long-term intramuscular injections, subcutaneous testosterone pellets, and intranasal applications, among others. Men receiving TRT should be checked on a regular basis with serum testosterone (and other hormones when indicated), PSA and CBC measurements, symptom assessment and physical examination.

Testosterone replacement therapy misconceptions

One of the most common questions men ask about TRT is whether they are too old to receive therapy. The answer is there is no cutoff age. Also, there is a misconception that TRT could cause an increased risk of heart problems. Most rumors about the dangers of TRT come from cases of abuse — men who were taking high doses of the hormone to artificially enhance their sports performance or build exaggerated muscles. It is also dangerous to receive TRT from doctors who are not specialized in men's health, give prescriptions without determining first that testosterone levels are low, or fail to follow up on how their patients are doing. For the men whose testosterone levels are abnormally low or borderline low with symptoms of hypogonadism, responsible TRT can provide significant health benefits.

Benefits of testosterone replacement therapy

Multiple studies have now demonstrated that TRT may help reverse most of the signs and symptoms of hypogonadism, notably sexual, psychological and quality of life-related. Due to the relationship between hypogonadism and elements of the metabolic system, TRT has been associated with improvements in diabetes, lipid, blood pressure and weight control in hypogonadal men. This certainly offers an additional tool to both internists and urologists when tackling these increasingly prevalent conditions.



Faysal Yafi, MD

Working Together to Find the Right Answers and Treatment



Tony Mastrangelo keeps himself fit and has enjoyed good health overall except for some asthmatic allergies. But when real trouble came, it came quickly.

He was in the shower when a blast of pain in his back hit so hard that it dropped him to his knees. A trip to the emergency room at UC Irvine Medical Center resulted in quick medications to relieve the pain and then a series of tests that revealed a urinary obstruction where the funnel-shaped renal pelvis drains into the ureter.

“That was the precipice that started this whole domino effect,” Mastrangelo recalls now, a year later. Within a few months, he would undergo two surgeries for two completely separate medical problems discovered by testing — the blockage and prostate cancer. And two weeks after each surgery, Mastrangelo said, he was back to work as head of the international department at American Business Bank.

Getting the correct diagnosis

The doctors started with the immediate

problem, the ureteropelvic junction obstruction. These days, UPJ obstruction is most often diagnosed in babies, largely because it can be seen clearly on ultrasounds routinely given to pregnant women. In Mastrangelo’s case, it isn’t known whether this was a condition he always had that remained symptom-free or whether it developed later in life. Either way, if untreated, UPJ obstruction can cause severe and permanent kidney damage.

That’s how he came to see Dr. Jaime Landman, chair of the Department of Urology at UC Irvine Health and a specialist in kidney disease. Landman employed a novel CT imaging technique to reach a diagnosis. “It gives precise, detailed anatomy with about 40 percent less radiation,” Landman said.

With the CT scans and a renal scan, Landman was able to determine that the problem was an artery adhering to and pressing against the area. It would have to be peeled away and the openings to both the ureter and renal pelvis widened.

Pioneering technology to treat patients

UC Irvine Health urologists pioneered the use of less-invasive laparoscopic surgery for these kinds of cases, Landman said. But such surgeries also require pumping gas into the abdominal area to create space for the surgeon to work, and that gas creates post-operative pain and discomfort. Landman has been at the forefront of solving that problem.

“We have technology to perform these procedures using half the normal gas pressure,” Landman said. “We were the first to document the extraordinary precision of this device which helps patients get out of the hospital a little bit faster and with less pain.”

In Mastrangelo’s case, that meant a very short hospital stay of a day and a half; the obstruction was completely resolved. But once he recovered fully, there was still the prostate cancer to deal with.

He had been told for years by his regular doctor that his intermittently rising PSA

levels, from a blood test that measures prostate-specific antigen, were nothing to worry about. As it turned out, after further testing by UC Irvine Health physicians, he had two malignant lesions in the prostate.

Prostate cancer is especially difficult to biopsy. Magnetic resonance imaging (MRI) can find the cancer, but needles for the biopsy can't be used in the machines. Ultrasound allows doctors to see where the needles are going in real time, but can't locate the lesions, so doctors insert the needles at short, regular intervals that can still miss the cancer.

UC Irvine Health has been a pioneer in the use of the Artemis device, which fuses MRI imaging onto the ultrasound, giving doctors an accurate, 3-D real-time guide for taking exactly the right tissue samples. The result is fewer needle jabs with far more accurate results.

Making decisions: Watchful waiting or immediate treatment?

The question for Mastrangelo, once the cancer was confirmed, was whether to proceed with surgery, radiation or "watchful waiting."

When genetic testing revealed a propensity for aggressive forms of cancer, his mind was made up.

"Relatives on my mom's side have died in their 60s of prostate cancer. So for me, it was time to think about trying to cure this."

He was referred to Dr. Thomas E. Ahlering, a UC Irvine Health specialist in urologic oncology and vice chair of the Department of Urology, who has built a reputation for fine-tuned prostate surgery that removes all cancerous cells while preserving urinary or sexual function. Damage to either or both is a well-known side effect of prostate surgery.

"Dr. Ahlering's results are the best in the world with regards to outcome for negative margin (meaning no cancer cells are left), incontinence and potency," Landman said.

Ahlering said that radiation and other nonsurgical therapies for prostate cancer

have their own onerous side effects, and do not cure the cancer, which will almost surely return. But complications from surgery have been so problematic that a federal task force said it wasn't clear which was worse, harm from cancer or harm from the surgery.

"A better answer," he said, "would be to make sure that the surgery works better."

Finding better answers

Ahlering found the way to make that happen with DaVinci® robotic surgery technology, again using a laparoscopic procedure. He became an early adopter of the robotic technique for prostate surgery some 15 years ago, and has taught it to others.

"I did the first robotic prostatectomy in Southern California and the first in Canada, Australia and Denmark," he said.

Most surgeons are aware of the need to retract tissue to keep the nerves that control urinary and sexual function away from the tissue being removed, Ahlering said. "But most of them think 'As long as I preserve the nerve visually, then that's the goal,'" he said. "The problem is that if they push on those nerves to retract them, the nerves are still being damaged."

The key, he said, is to dissect the prostate away from the nerve, not the other way around. Many doctors don't do that because visually, it's harder to accomplish.

Making a positive impact

Mastrangelo couldn't be happier with the results. He's even amazed by the inconspicuous appearance of the 11 small incision marks on his abdomen. "It's true, he'll just pull up his shirt to anyone to show them," his wife Georgiann Mastrangelo said, as the two of them burst into laughter.

"We live in a world of caution," Tony Mastrangelo said. "You have to know when to trust people." He found those people at UC Irvine Health, with Landman, Ahlering and, he said, all the staff.

"I guess that was the most important, the level of care and concern of pretty much

everyone we came in contact with," he said. "The nurses in the hospital were fantastic."

Georgiann Mastrangelo agreed. "They're so compassionate, so kind," she said of the UC Irvine Health staff. Still, she said, she won't feel more relaxed about her husband's health until future scans continue to show he's cancer-free.

"I was a mess," she said. "Tony is the love of my life. We've been married 46 years. I'm probably crazier about him than I was on the day when I walked down the aisle."

Tony Mastrangelo said he's more the analytical than worrying type; his natural inclination is to figure out the best steps to take next. And that, he said, is why he is telling others now about his experience.



"If somebody can benefit by this," he said, "if it makes a decision easier, makes someone less anxious, then that's a good reason to tell my story."

Dr. Ghoniem Receives Lifetime Achievement Award



The Society for Urodynamics and Female Pelvic Medicine & Urogenital Reconstruction (SUFU), the premier specialty society for female pelvic medicine and reconstructive surgery, bestowed Dr. Gamal Ghoniem, UC Irvine Health professor of urology, the 2017 SUFU Lifetime Achievement Award.

The SUFU Lifetime Achievement Award, established in 1986, is given to an individual who has made continuing and progressive contributions that have had a significant and lasting effect on the field.

Ghoniem is deserving of this honor as he has published more than 150 peer-reviewed papers, 34 chapters and 27 videos. He has trained 13 clinical fellows, 20 international fellows and is a fellowship director at the UC Irvine Health Department of Urology. In addition, he has developed and modified a number of surgical techniques. Ghoniem is also an inventor with a patented device to treat overactive bladder. He shares his skills

by teaching and performing reconstructive surgeries in different countries.

“Our department is proud to practice among one of the most transformational specialists in his field. Dr. Ghoniem has provided superb leadership and the highest levels of clinical expertise, and he has made incredible contributions to female pelvic medicine and reconstructive surgery. We couldn’t agree more with how deserving he is of this wonderful honor,” said Dr. Jaime Landman, chair of UC Irvine Health Department of Urology.

The award was presented to Ghoniem by Dr. Gary Lemack, SUFU president and chair of the award committee, on March 2 at the SUFU 2017 Winter Meeting in Scottsdale, Ariz.

As the award winner, Ghoniem delivered the Blaivas Lecture, titled *“This is my journey; what’s yours?”*

Ghoniem and his team also had a prominent presence at the SUFU this year by giving several breakout panel presentations, including:

- “Interstitial cystitis/bladder pain syndrome: Update in 2017.”
- “Monocyte chemotactic protein-1 (MCP-1) urinary level in patient with OAB before and after treatment.” By Bilal Farhan: Female Urology/ Incontinence Moderated Poster session.
- “Monocyte chemotactic protein-1 (MCP-1) urinary level in patient with OAB before and after treatment.” By Bilal Farhan: Fellows forum podium presentation.
- “Use of electronic questionnaires to provide patient-centric healthcare in overactive bladder.” By Cristina Palmer: LUTS/voiding dysfunction/neurogenic bladder, non-moderated poster session.
- “Use of electronic questionnaires to provide patient-centric healthcare in overactive bladder.” By Cristina Palmer: Fellows forum podium presentation.
- “Lessons learned to lower the infection rate following sacral neuromodulation surgery: A review in two academic institutions.” By Ahmed Ahmed: Male incontinence/urodynamics/ neuromodulation, non-moderated poster session.

Ghoniem joins a select group of international members recognized for their leadership and involvement in the organization.

Successful PCNL Hands-on Course Held in February

32 physicians from six countries and 17 states attended Practical PCNL: From Access to Exit — A Hands-on Course held on Feb. 25–26, 2017, at UC Irvine Medical Center. The course sponsored by the American Urological Association and co-directed by Dr. Ralph V. Clayman and Dr. Jaime Landman featured both didactic and hands-on sessions to help urologists and residents gain practical experience in performing percutaneous access and minimally invasive percutaneous nephrolithotomy (PCNL). Alongside the world-renowned UC Irvine Health faculty was an all-star teaching faculty group, including Dr. Duane Baldwin from Loma Linda University, Dr. Robert Sweet from the University of Washington, Dr. Matthew Dunn from University of Southern California and Dr. Thomas Chi from UC San Francisco.



2017 NSF Graduate Research Fellowship Program

Victor Pham, a graduate student in Professor Xiaolin Zi's lab, was selected for the prestigious NSF Graduate Fellowship, which will provide funding for up to three years of doctoral education. He worked on a project to investigate a role of small nucleolar RNAs as biomarkers for predicting the resistance to anti-androgen therapy or as a novel therapeutic approach for treatment of castration-resistant prostate cancer. In addition to his research, he is also establishing an outreach program to bring and mentor low-income students to the field of science through internship opportunities in Zi's lab. The NSF Graduate Research Fellowship Program recognizes and supports outstanding graduate students in NSF-supported science, technology, engineering, and mathematics disciplines who are pursuing research-based master's and doctoral degrees at accredited U.S. institutions. Congratulations Victor!

Congratulations to Our Pediatric Urology Team!

U.S. News & World Report recently ranked CHOC Children's program in pediatric urology #18 among the country's top 50 programs. As you may know, our department's pediatric urology team provides clinical care for CHOC's patients.

Congratulations are in order for Antoine E. Khoury, MD, the Walter R. Schmid Endowed Chair and chief, pediatric urology and his entire team:

Elias Wehbi, MD

Kai-Wen Chuang, MD

Irene McAleer, MD, MBA, JD

Christina Chalmers, CPNP



While this recognition goes to CHOC, it's a reminder that our team of compassionate experts is unsurpassed in providing our region's children with the very best in urologic care.



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