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HAVE YOU READ?

PRACTICE TIPS & TRICKS

JOHN K. LATTIMER

Lecture

The Urinary Microbiome Impacts Urological Disease

J. Curtis Nickel, MD, FRSC
Kingston, Ontario, Canada

“We are our microbiome!”

It is hard to believe that the human form and function are, in reality, an evolutionary effort to provide a safe environment for the bacteria, fungi and viruses that make up our existence. It is hard to believe that our microbial population (with estimates of as many as 10 times more microbial cells than human cells in each individual) is nourished by our complex system of human organs, supported by our sophisticated muscle-skeletal scaffold and protected by our thin envelope of skin.

Our microbiome modulates our digestion, respiration, urinary system, energy and moods through complicated neuroendocrine mechanisms. When the symbiotic relationship between the human and microbial universes is disrupted and/or the microbial population is traumatized with the subsequent development of dysbiosis, we become ill, and experience bothersome symptoms and even the development of malignancies.

Our microbial population is our friend, but instead of supporting it, we continue to harm it with terrible dietary habits, environmental pollution and injudicious dumping of antibiotics into our bodies. With a better understanding of the close interrelationship we have with our microbiome we can change those relationship dynamics.

But what does that have to do with our role as urologists? The evaluation of the urinary tract was excluded from the well publicized Human Microbiome Project because of a perception that the healthy urinary tract harbored a nonexistent or sparse and unimportant population of microorganisms.

We now know that not only is the urinary tract not sterile, it is colonized by a diverse population of microorganisms that impact not only urological health but also the general health of their host organism, the human. While the study of the urinary microbiome is in its infancy, new state-of-the-art technologies cumulating in next generation whole genomic sequencing have led to a new understanding of the urinary microbiome and its impact on health.

The fundamental question we started with was whether we could find the putative bug causing some of our enigmatic urological conditions. That effort ended in failure (in most cases) and it is unlikely that there is a single “smoking gun” organism to explain the majority of urological diseases. Instead it has become more complicated.

Six important questions need to be answered in relation to our understanding of the urinary microbiome.

1) What is the normal microbiome in healthy males and females?
2) Is microbial diversity always a good thing?
3) What is the relationship between the urinary tract and the bowel microbiome?
4) How do microorganisms communicate and interact with each other and their human host?
5) What is the relationship among bacteria, fungi, viruses and bacteriophages in

Do Electronic Health Records Make Care Better?

Peter Basch, MD, MACP
Washington, D.C.

Electronic health records (EHRs) at their best enable infrastructure, making information visible that might not have otherwise been readily available or top of mind. So no, EHRs alone do not and cannot improve care. However, depending on a number of other factors the enhanced presentation of information coupled with context sensitive decision support can lead to better decisions about testing and treatment which, in turn, lead to better care. In such circumstances not only can EHRs support better care, they could make the experience of care (for patient and clinician) better and make possible the care models and outcomes that were considered all but impossible when using paper medical records.

While an EHR by itself cannot improve care, it can lead to worse care, typically from the distraction of irrelevant checkboxes and/or a flood of useless information that “buries
the urinary tract? 6) How does the microbiome impact (affect etiology and/or progression) inflammation, pain, lower urinary tract symptoms (eg overactive bladder, urge incontinence), urolithiasis and malignancy (prostate and bladder)?

These questions are all being addressed in exciting research efforts that will change the way we think about urological health and disease (see figure). With a better understanding of the crucial role of our urinary microbiome, we can determine how to strengthen our microbial allies and manipulate our microbial foes in an effort to improve urological health and treat urological disease.

This process will include simple steps such as dietary changes, use of supplements (inhibitors and prebiotics) and targeted antimicrobial therapy, as well as more complicated strategies such as microbiome replacement therapies, use of genetically altered bacteria, targeted bacteriophage warfare and immunological strategies (eg vaccines).

The study of our urinary microbiome and how we can potentially manipulate it to our advantage has become very exciting and will soon be a new reality for prime-time urology.

The complete lecture on this topic will be presented at this year’s AUA meeting in Washington, D.C. on Saturday, May 16. ◆

Using the EHR to Solve a Practice Problem

Most practices devote too much time and effort every day to administrative tasks such as prior authorization, referral management, medication renewals etc. Many of these largely nonclinical burdens can be substantially reduced with EHR integrated software. These efficiency gains can be used to see more patients, see the same number of patients at a more comfortable pace, operate the practice more efficiently or enable clinicians to go home earlier to spend more time with family and friends.

A Welcome Regulatory Reform

Poor EHR usability makes all tasks take longer and requires more effort. The conclusion of the first AMA-CPC-EHRA EHR Usability Summit was that the existing evaluation and management documentation guidelines were the single biggest cause of poor usability, and without regulatory reform from CMS (Centers for Medicare and Medicaid Services) the impact of usability improvements from EHR vendors would be severely limited.

The good news is that CMS has delivered, and in CY21 (at

dressed in exciting research efforts and treat urological disease. effort to improve urological health manipulate our microbial foes in an ing of the crucial role of our urinary (see fi gure). With a better understand- about urological health and disease (prostate and bladder)?

Electronic Health Records and Patient Care

Electronic Health Records and Patient Care

Using an EHR Where it Might Make a Difference

A scalpel in the hands of a good surgeon has potential value in an operating or procedure room and almost certainly no potential value in a psychiatrist’s office. As the greatest potential value-add of an EHR to the patient’s care is based on the EHR’s ability to find and present information in a useful manner, it stands to reason that the EHR is most likely to have a positive impact within specialties and settings of care where robust information presentation might have a high impact. This is borne out by surveys in which clinicians in cogniti-veal what it means, but how to concur-

Training

The best EHRs are highly complex and may contain helpful tools that many clinicians never use or even know about. Without good training, clinicians and staff risk remaining forever dysfunctional users.2 Furthermore, training should include how to effectively use an EHR in the presence of a patient.

In medical school when clinicians are taught physical examination they are taught not just what to do and what it means, but also how to concur-

Having an EHR that Supports Your Best Practice Workflows

Where clinicians and staff have spent time to review and edit content to best fit their clinical fields, the EHR can help to make good care more effi- cient as well as improve the odds that key checklist items are not forgotten.3 Conversely, using an out of the box EHR without such fine-tuning is the equivalent of trying to run a marathon in shoes that do not fit. Every patient encounter will be inefficient, not to mention painful.

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Electronic Health Records and Patient Care

Continued from page 2

least for outpatient visits) E&M Documentation Guidelines will no longer define visit codes by the length and formatting of physician notes. Decisions on what to document and in what format are returned to the clinician.

It is too early to assess the impact of these regulatory reforms, but if clinicians and EHR vendors step up to the opportunity, EHR usability should improve, documentation time may be reduced and the time wasted on reading prior notes to better inform current care should be markedly reduced.4

The Role of the Business Case

In the early days of EHR adoption (before the regulatory influence of meaningful use) payment was almost entirely based on the volume of care delivered. Procedural care was most favorably compensated, visit based nonprocedural care was compensated reasonably well, and nonvisit based care and services that were linked to robust health information management and quality outcomes were not compensated at all. The more optimally EHR technology was used, the worse the business case for the technology purchaser.

For example, where an EHR might suggest and enable equivalent or even better care through the addition of remote monitoring and nonvisit based care, this new care model is not possible at scale without paying for care differently.5 Conversely, where such care is paid for (as a service, via risk adjusted capitation etc) it would not be possible to efficiently deliver at scale without the use of an EHR and other robust health information technology.

The complete lecture on this topic will be presented at this year’s AUA meeting in Washington, D.C. on Saturday, May 16.

Probiotics and Microbiota in Urology—Beginning of the End or End of the Beginning?

Jeremy P. Burton, BSc, MSc, PhD, dBA
London, Ontario, Canada

Probiotic approaches for urological therapeutic benefit have historically focused on uncomplicated urinary tract infections (UTIs). While there are some studies with results comparable to those of antibiotics, recent guidelines by the AUA/CUA (Canadian Urological Association)/SUFU (Society of Urodynamics, Female Pelvic Medicine & Urogenital Reconstruction) panel relating to recurrent UTI in women were “unable to recommend the use of lactobacillus as a prophylactic agent for recurrent UTI given the current lack of data indicating benefit in comparison to other available agents.”1

The World Health Organization has determined that probiotics must be evaluated on a strain by strain basis and ideally be of comparable dose, delivery and format. There is a clear need for more work with probiotics to reduce UTI recurrence.

As there are some 180 species of Lactobacillus, each with indeterminant numbers of strains, we must be careful not to broadly dismiss their future therapeutic potential, especially given their importance in the urogenital and intestinal tracts. Additionally, we should be promoting them for their proven ability in preventing antibiotic associated diarrhea and Clostridium difficile infections.

Probiotics are usually administered orally or vaginally, which limits accessibility to the urinary system in high doses. Instead, they must be translocated to the site or work by other mechanisms. The question is whether we have delivered these bacteria to the site in adequate numbers to be useful in the urinary system.

Natural colonization pathways via ascension are ideal and may become self-sustaining. However, they may not be efficient for all, especially men. Some of our recent work has shown that certain urogenital lactobacilli can mitigate the purinergic induction of urothelial cell lines by deleterious Escherichia coli, likely important for conditions such as overactive bladder.2 Therefore, direct instillation of the bacteria into the bladder may be necessary to achieve optimal responses.

Some Lactobacillus strains and avirulent E. coli have been experimentally instilled into the bladder but only Mycobacterium bovis bacillus Calmette-Guérin has been instilled on a routine basis for bladder cancer. In the future other bacterial types may enhance these effects. Unfortunately, the more complicated methods of administration will slow the evaluation of new bladder probiotic strains for reasons of practicality, safety and regulatory considerations.

The bacteria persisting at a site in adequate numbers we must acknowledge in the context of acute infection and disease, but some physicians may not necessarily appreciate the potential longer term role that the microbiota is likely to have on health.

Since Alan Wolfe and colleagues demonstrated the presence of a bladder microbiota in healthy women, the urological world has awoken to the paradigm shift relating to nonsterility. With the emergence of the described microbiota from the urethra to the kidney, semen and prostate, as well as the importance of the intestinal microbiota for kidney stones, and drug metabolism and activation, we now must consider the potential to improve health outcomes by modulating microbial responses in urology.

Urologists are acquainted with broad antibiotic extermination, but should we be looking at other microbial modulating therapeutic options? Alternative approaches may become more appealing as the antimicrobial resistance burden increases, progress is lacking for new pharmaceutical treatments and there remains a preference for prevention. However, in reality there are few precision tools available to modulate the microbiota either as probiotic strains or enhancers of the indigenous microbiota.

Nevertheless, treatments may be possible as coincidental reports of fecal microbiota transplants (FMTs) being applied for recurrent C. difficile and irritable bowel syndrome have had the unexpected effect of decreasing the frequency of recurrent UTIs.3 Presumably the infectious reservoir in the gut was eliminated by the FMT. In other metabolic syndrome cohorts receiving FMTs it has been observed that oxalate degrading bacteria of importance to kidney stones return after transplantation.

The facial expressions of my clinical colleagues indicate that FMTs are unlikely to be rapidly taken up or tested as treatments as there are many more years of studies to conduct. However, given these early successes we will ultimately look to more refined versions of this treatment with selected bacterial strains isolated from the microbial milieu for use in their pure strain forms. In effect these will likely be totally new species never seen in human use and we are starting to encounter them in other parts of medicine.

For example, Akkermansia muciniphila is a gut microbe that beneficially modulates host metabolism, increases in abundance with metformin use and has been tested as a probiotic.4 Metformin has been repurposed for prostate cancer treatment and our work shows that this bacterium is boosted by abiraterone acetate and may be important in treatment outcomes, while other groups are using it as a probiotic.

Lastly, of note, we have recently seen a vaginal microbiota transplantation study reported for the treatment of bacterial vaginosis.5 Therefore, we could speculate that a bladder urine transplant for UTI, bladder pain or urgency conditions may soon be tested. However, the need for such transplanted material and the potential accompanying infection risk may not be warranted given that certain species of lactobacilli are known to...
Science is rapidly moving toward the exemplar that microbes are important in the cause, prevention, treatment and determination of health and disease. Emerging evidence suggests this is also the case for many aspects of urology. The current thinking on probiotics and their delivery is out of step with what is required to move the field forward beyond the alternative medicine basket. We need greater investment in this area for new microbial therapeutics and probiotic types to meet the needs of urological applications.

The complete lecture on this topic will be presented at this year’s AUA meeting in Washington, D.C. on Sunday, May 17. ◆


Abnormalities of the semen represent a clinical gray area for many practitioners. In particular, transient changes that are reported by the patient (often alarmingly) include semen color, smell, taste, ejaculatory pain or hematospermia, but often lack clearly established evidence-based guidance to the clinician managing various changes in semen characteristics.

**Anatomy and Pathophysiology**

Although many genitourinary structures contribute to semen characteristics, including the posterior urethra, testicles, epididymides and vasa, those most commonly involved are the seminal vesicles and prostate.

As is commonly known, the prostate contributes an acidic fluid to the ejaculate while the seminal vesicles produce basic fluid that includes fructose and other substances. Therefore, any changes that disrupt the production or delivery of these substances or cause infection can lead to odorous, discolored or painful ejaculate.

Common etiologies for these changes are iatrogenic (eg prostate biopsy), viral or bacterial infections (sexually transmitted, prostatitis, urinary tract), development of prostatic or seminal vesicular calculi, hyper/dysplasia, polyps, cysts (congenital or acquired), seminal vesicles left in situ after prostatectomy, or vascular malformations/angiogenesis, among others.

**Clinical Impact**

The clinical impact of ejaculatory fluid changes remains understudied. Hematospermia, blood clots, seminal vesicle stones, residual seminal vesicles after prostatectomy and possibly prostatic stones are commonly associated with painful ejaculation. Obstruction may also predispose patients to further stone formation and infections.

Chronic, recurrent infections may also have notable impacts on overall health, particularly if they lead to recurrent urinary tract infections, pyelonephritis or bacteremia. From an infertility standpoint the majority of prostate/seminal vesicle infections likely have minimal impact on fertility, with the exception of those resulting from etiologies that may lead to ejaculatory duct obstruction.

In contrast, inadequately or delayed treatment of sexually transmitted infections such as gonorrhea, chlamydia or HIV may have impacts on future fertility, and may require specialized testing and treatment. Interestingly, more recent research identifying olfactory receptors on sperm responsible for chemotaxis may indicate that changes in semen characteristics have a more notable impact on fertilization potential than previously recognized.1

**Clinical Evaluation and Testing**

As with most conditions, appropriate clinical evaluation begins with a focused history. Pertinent factors include any preceding trauma (eg prostate biopsy), symptoms of a urinary tract infection or prostatitis, recent sexually transmitted infection exposures, the presence/timing of pain, duration of symptoms and prior similar symptoms.

Once the history has been obtained, further testing will vary depending on the specific abnormalities of the semen and patient characteristics. Men with discolored (not bloody), odorous or painful ejaculates should undergo laboratory analysis including urinalysis and possibly sexually transmitted infection testing (as appropriate).

The role for expressed prostatic secretion is debatable and may be based on the presence of other chronic prostatitis-like symptoms. In men seeking infertility evaluation semen analysis is also appropriate (if not previously performed), and this may lead to additional testing based on characteristics such as the presence of sperm, volumes less than 1.0 ml or acidic pH.

For those with hematospermia, in the absence of an inciting cause (eg prostate biopsy) all patients should undergo urinalysis (with or without expressed prostatic secretions as previously noted), while those older than 40 are also appropriate for prostate cancer screening (including prostate specific antigen).

If the hematospermia resolves with no additional recurrences, further testing is not required. However, recurrent or persistent symptoms should be considered for transrectal ultrasound and/or prostate magnetic resonance imaging (particularly if the ultrasound is negative or indeterminate), as recommended by radiology guidelines.2 The objective of these imaging modalities is to confirm the presence of blood products in the seminal vesicle, evaluate for possible stones, strictures, cysts or other sources of obstruction, and rule out the presence of malignancy (although very rare).

Men who exhibit postejaculatory urethral tip bleeding (not true hematospermia), urethral blood clots or other signs of urethral stricture may also benefit from cystoscopy to rule out posterior urethral vascular malformations/hemangiomas.3

**Management**

In the absence of a clearly identifiable inciting cause (eg prostate biopsy, prostatectomy without seminal vesiculectomy) several publications suggest benefits of empirical antibiotic therapy. Although robust efficacy data are lacking, in 1 study men with confirmed bacterial prostatitis, ejaculatory pain and hematospermia reported 86% improvement/resolution when combining 750 mg ciprofloxacin daily and 500 mg azithromycin 3 times weekly for 4 weeks.4

Men with confirmed bacterial cultures may also have their antibiotic regimen tailored to susceptibilities and prostate penetrating antibiotics use (ie fluoroquinolones, macrolides, trimethoprim-sulfamethoxazole, tetracyclines). Those who are treated empirically without positive cultures may be considered for a shorter course of antibiotics, although the optimal regimen has not been described to date.

Endoscopic management of hematospermia and seminal vesicle stones with vesiculoloscopy (with or without laser lithotripsy) has been described but has not reached mainstream status.1 Additionally, given the specialized instruments and skill set, this should likely be referred to specialized centers when indicated. Similarly, laparoscopic (with or
without robotic assistance) management of residual seminal vesicles or seminal vesicle stones and transurethral resection of ejaculatory ducts/prostatic cysts may be performed in select situations and are likely best managed by subspecialty practices.

Summary

Although rarely dangerous or clinically significant, unprovoked changes in semen characteristics including odiferous, discolored, bloody or painful ejaculate commonly indicate underlying pathology. As such, patients presenting with these symptoms should undergo limited baseline testing including urinalysis, sexually transmitted infection assessments (based on history), and prostate specific antigen and rectal examination (for those over the age of 40). Empirical or therapeutic courses of antibiotics are also appropriate in most cases.

More advanced testing, including transrectal ultrasonography and prostate/semenal vesicle magnetic resonance imaging, is reserved for refractory or persistent cases or those with atypical symptoms. Further management with more invasive treatments is selected based on symptom severity and duration, secondary effects (ie infertility), anticipated side effects of therapy and physician training/experience and in most cases is best referred to subspecialty practices when possible.

The complete lecture on this topic will be presented at this year’s AUA meeting in Washington, D.C. on Sunday, May 17.


Laser Evolution in Urology—Are We Ready for the Future?

Peter Kronenberg, MD
Lisbon, Portugal

The top Ho:YAG (Holmium:yttrium-aluminum-garnet) lasers today allow urologists to choose from a wide range of lithotripter settings including low to high pulse energies (0.2 to 6.0 J) and low to high pulse frequencies (up to 100 Hz), as well as the ability to choose short, medium or long pulse durations (150 to 1,300 ps).

Additionally, special features such as Moses™ technology by Lumenis, stabilization mode by Olympus® or virtual basket technology by Quanta System reduce retropropulsion, making our lives easier and enhancing surgical performance.

This continuous Ho:YAG laser evolution, with the ability to fragment or dust any type of urinary stone and the capacity to cut, coagulate, ablate, enucleate and vaporize tissues, makes the Ho:YAG laser the safest, most versatile and most successful type of laser currently used in urology. However, there has been increasing interest in a new laser technology for lithotripsy called thulium fiber laser (TFL), with claims of being several

TEST-SIZE® ORCHIDOMETER
FOR QUICK AND EASY MEASUREMENT OF TESTES

For years, the medical profession has understood the correlation between testes size and function. In pediatric and adolescent endocrinology, determining testicular growth is critical for assessing disturbances of puberty, abnormal testicular development and the therapeutic effect of hormones vis-a-vis sperm production. In adults, testicular size is one of the important criteria in the accurate evaluation of male reproductive function.

Based on the Prader model, the orchidometer allows the physician to make rapid evaluations using the comparative palpation method. It offers many advantages over calipers, which can be difficult to use, even with proper positioning of the testes.

How to use the orchidometer:

Patients should be examined in a supine position to ensure an accurate measurement. The testis is then compared to its under the scrotal skin. The testis is then compared to its

Benefits of the orchidometer:

- Facilitates an accurate diagnosis
- Easy, safe to use
- Eliminates calipers
- Minimizes patient embarrassment and discomfort
- On-the-spot evaluations
- Used in extensive clinical trials

Moreover, calipers are ineffective as a diagnostic tool in many cases of undescended testes. The Test-Size® Orchidometer affords more patient comfort and is easier to use...without compromising accuracy.

Available in two set sizes: RA125
- Contains of 12 models, 1 to 25ml
RA125PLUS
- Contains of 14 models, 1 to 30ml

ASSI® is the exclusive North American distributor of the Test-Size® orchidometer.
New Thulium Fiber Laser

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times more efficient than the current gold standard.

While the Ho:YAG laser uses a flash lamp and a several millimeter thick laser crystal rod containing holmium ions (the gain medium) to generate the Ho:YAG laser radiation, the TFL uses electronically modulated laser diodes and a laser fiber (containing thulium ions) to generate the TFL radiation. The TFL is called a fiber laser as the laser originates inside a fiber.

To get a better perspective on this topic, my colleague Prof. Olivier Traxer and I performed a prospectively registered systematic review (PROSPERO registration number CRD42019128695) analyzing the existing data on this new technology. The results of our review surpassed our expectations.

TFL technology offers the most comprehensive and flexible range of laser parameters among laser lithotripters with pulse frequencies greater than 2,000 Hz, very low to very high pulse energies (0.005 to 6.0 J) and short to long pulse durations (200 to 12,000 µs) (see table). TFL stone ablation efficiency is up to 4 times that of the Ho:YAG laser for similar laser parameters with associated implications for speed and operating time.

Figure. Existing TFL lithotripter machines.

Regarding the new laser lithotripsy philosophy, namely the ability to dust urinary stones, the TFL outperforms the Ho:YAG laser, producing not only a larger dust quantity but also a better dust quality with much finer particles (less than 0.1 mm).

With the TFL the retropulsion is also significantly reduced and sometimes even absent. Since the TFL radiation originates within a very thin fiber core (10 to 20 µm diameter) TFL technology will be able to use smaller laser fibers (as small as 50 µm cores) with resulting advantages in irrigation, scope deflection and retropulsion reduction, and (in)direct effects on accessibility, visibility, efficiency and surgical time. It also presents future instrument miniaturization possibilities.

Another advantage of the TFL is the lower amount of laser fiber degradation, which has significantly less fiber tip burnback and allows smaller (200 µm) small core fibers to be safely used under extreme bending diameters (such as 9 mm) and with 50 W high power settings. Similar to the Ho:YAG laser, the TFL can also be used at least as efficiently for other soft tissue applications such as prostate enucleation (ThuFLEP).

Attempts have already been made to determine the optimal settings for lithotripsy using the TFL. However, since we now have unprecedented high frequencies and significantly lower pulse energies at our disposal with the future possibility to deliver them through thinner laser fibers, the ideal TFL lithotripsy settings are far from established and must be determined in future clinical experience based studies.

However, there are more advantages than surgical performance alone. Current TFL machines such as the Urolase SP+ from IPC Medical Corporation or the SOLITVE™ Laser System from Olympus are 7 times smaller and 8 times lighter than current top-of-the-line Ho:YAG laser systems (see figure). These systems are so small that they can easily fit inside an endoscopy tower with the other surgical equipment, devices and video monitor, thereby saving precious operating room space.

These systems also consume almost 10 times less energy than a high-end Ho:YAG laser system (800 to 1,000 W instead of 10,000 W). Besides being more environmentally friendly, the TFL works with any standard power outlet as opposed to other Ho:YAG systems that need a dedicated power supply and may require an overhaul of the electrical installation of the operating room or limit its use to certain modified operating rooms.

To better illustrate this advantage the electricity consumed by a simple household hair dryer would be enough to power at least 2 TFL lithotripter machines at the same time. Unlike Ho:YAG systems that require high voltage power supplies for the flash lamps, multipart optical alignment systems, and complex and noisy water cooling systems with multiple moving parts, the TFL has a simplified construction with no complex optical alignment systems and no moving parts, and with a simple and silent air fan cooling system.

Thus, the wear and tear of these machines will be low and the maintenance costs should be minimal compared to Ho:YAG lasers. In addition, despite the Ho:YAG’s excellent safety profile, the TFL’s is even better in many aspects, ie for patients, instruments and surgeons.

It is true that the Ho:YAG laser has stood the test of time and it rightfully deserves its place as the current gold standard for endoscopic laser lithotripsy. However, the advantages of the TFL over the Ho:YAG laser are simply too extensive to be ignored.

The TFL appears to be a real alternative to the Ho:YAG laser with the potential to overthrow its decade-long standard for endoscopic laser lithotripsy.

Table. Technology and machine related specifications

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<thead>
<tr>
<th>High Power Ho:YAG</th>
<th>TFL</th>
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<tr>
<td><strong>Technology specifications</strong></td>
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<tr>
<td>Laser radiation generation:</td>
<td>Laser diodes (electronically controlled)</td>
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<td>Energy (light) source</td>
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<td>Gain medium</td>
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<td>Optical penetration depth in water (mm)</td>
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<td>Pulse profile</td>
<td>Irregular energy pulses, with several spikes</td>
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<td>Laser fiber features:</td>
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<tr>
<td>Laser coupling into pt laser fiber</td>
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<td>Pt laser fiber core diameter (µm)</td>
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<td>System of calibrated focusing lenses</td>
<td>Machine specifications</td>
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<td><strong>Laser parameters:</strong></td>
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<td>Pulse frequency (Hz)</td>
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<tr>
<td>Water cooling</td>
<td>Air cooling</td>
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Congratulations to our 2020 Award Winners

John D. Denstedt, MD, FRSCC, FACS, FCAHS
Editor, AUA News
London, Ontario, Canada

Each year at the AUA annual meeting in May we have the honor and privilege to recognize and celebrate physician researchers and educators for their contributions to the field of medicine, the specialty of urology and the AUA. This year in Washington, DC we will recognize the following distinguished individuals for their achievements.

Ramon Guiteras Award—Dr. William J. Catalona: The Ramon Guiteras Award is presented annually to an individual for outstanding contributions to the art and science of urology. Dr. Catalona will receive this award for outstanding leadership in demonstrating the value of prostate specific antigen testing and surgical treatment of prostate cancer.

Hugh Hampton Young Award—Dr. Stephen Y. Nakada: The Hugh Hampton Young Award is presented annually to an individual for their outstanding contributions to the study of genitourinary tract disease. Dr. Nakada will receive this award for enduring leadership and pioneering studies of urolithiasis, minimally invasive surgery and renal preservation.

Gold Cystoscope Award—Dr. Thomas Chi: The Gold Cystoscope Award is presented annually to a urologist distinguished by outstanding contributions to the profession within 10 years of completing residency training. Dr. Chi will receive this award for outstanding research of the cause of urolithiasis and innovations in surgical techniques for kidney stone removal.

Lifetime Achievement Award—Dr. William F. Gee: The Lifetime Achievement Award is presented annually to an individual for outstanding contributions to advance the mission and goals of the AUA. Dr. Gee will receive this award for a lifetime of service advancing the goals and mission of the AUA.

Victor A. Politano Award—Dr. Gopal H. Badlani: The Victor A. Politano Award is presented annually to an individual for outstanding research and work in the field of incontinence and for enhancing the treatment of incontinent patients, thereby helping to improve their quality of life. Dr. Badlani will receive this award for exemplary clinical, and translational and basic science research on the treatment of stress urinary incontinence.

William P. Didusch Art and History Award—Dr. Michael E. Moran: The William P. Didusch Art and History Award promotes and recognizes contributions to urological art, including but not limited to illustrations, sculpture, still photography, motion pictures and television productions. Dr. Moran will receive this award for extensive written contributions on urological history and dedicated service as AUA museum curator.

Gold-Headed Cane Award—Dr. Daniel J. Culkin: The Gold-Headed Cane Award is presented to a senior urologist distinguished by outstanding contributions to the profession and to the AUA. Inspiration for the AUA Gold-Headed Cane dates back to a highly respected tradition that began in the 17th century when the cane was first carried by Dr. Radcliffe from 1689 to 1714 during his many consultations in London, England. He was known by royalty for his medical skills and was considered an outstanding practitioner. Dr. Culkin was the first to pass the cane along to a successor who he considered to be the greatest English physician of his time. AUA continues this tradition by presenting this award to Dr. Culkin for tireless advocacy encouraging outreach to underserved rural populations and patients with spinal cord injuries.

Distinguished Contribution Awards: The Distinguished Contribution Awards are presented annually to individuals who have made outstanding contributions to the science and practice of urology, including but not limited to contributions made in a subspecialty area, or for military career service or humanitarian efforts. Recipients of this award are:

- Dr. Timothy D. Averch for contributions to AUA initiatives including quality improvement, simulation, e-learning and health policy
- Dr. Lawrence S. Ross for contributions to the field of reproductive medicine and for many years of dedicated service to the AUA
- Dr. Christian Winters for outstanding leadership and contributions to the field of incontinence and voiding dysfunction
- Dr. Jeffrey H. Kavoussi for contributions to AUA initiatives including quality improvement, simulation, e-learning and health policy

Distinguished Service Awards: The Distinguished Service Awards are presented annually to individuals for outstanding service in advancing the goals of the AUA. Recipients of this award are:

- Dr. Dean G. Assimos for voluminous, substantive contributions to the educational resources of the AUA
- Dr. Manoj Monga for innovative and impactful service as AUA Secretary to the benefit of urologists and patients worldwide
- Dr. Aaron Spitz for more than 12 years of outstanding service to the American Medical Association and organized medicine on behalf of urology

Presidential Citations: Presidential Citations are presented to individuals chosen by the AUA President deemed to have significantly promoted the cause of urology. Citation recipients are:

- Dr. Jaime A. Cajigas for excellence in advancing AUA education, membership and collaborations with Sociedad Colombiana de Urología
- Dr. Brendan M. Fox for leadership and outstanding contributions in advancing the AUA’s strategic goals
- Dr. Stanley J. Kandzari for an outstanding career devoted to the education of urology residents
- Dr. Carl A. Olsson for outstanding contributions as the inaugural editor of Urology Practice
- Dr. Gail S. Prins for leadership, determination and success in advancing urological research and advocacy
- Mr. Kevin A. Wohlfert for more than 30 years of distinguished executive leadership and outstanding contributions in advancing AUA’s mission

Secretory Commendation for Global Leadership: Each year the AUA Secretary honors individuals deemed to have significantly promoted the cause of urology through international relations and collaboration with the AUA to improve urological education. I am honored to present this award to the following individuals:

- Dr. Mohamed Abdel Latif Elsaa for advancing collaborations between the Egyptian Urological Association and the AUA
- Dr. Yinghao Sun for advancing collaborations between the Chinese Urological Association and the AUA
- Dr. Sebastião José Westphal for advancing collaborations between the Sociedade Brasileira de Urologia and the AUA

Congratulations to all!

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New Thulium Fiber Laser

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hegemony and become a true game changer in laser lithotripsy.

Looking back at the remarkable parameter possibilities of the TFL, one wonders if we aren't closer to Prof. Joel Teichman's dream of "having a laser with the longest pulse duration setting possible, with the lowest stone-ablating pulse energy and with the highest possible frequency, like a gazillion."1

So we should ask ourselves, are we ready for the future? Because the future is already here.

The complete lecture on this topic will be presented at this year's AUA meeting in Washington, D.C. on Saturday, May 16.
The SAU (Society of Academic Urologists) mission is to uphold and evangelize the ideology of academic urology: fostering values leading to best patient care. Our organization is comprised of all the academic teaching programs across the United States that are responsible for educating trainees as well as practicing urologists with the most up-to-date information and surgical techniques. Of equal importance, our constituents are the engine of advancing knowledge in our field.

The SAU coordinates the common mission of our members through unparalleled forums where academicians assess the current climate, define prevailing challenges and share experiences. Discussions provide pathways for data driven solutions and common problems are dealt with through the adoption of consensus based policies. The winter meeting focuses on issues directly related to resident and fellow education where-as our conference at the AUA annual meeting addresses global problems facing faculty and chairs.

For this year’s program at the AUA annual meeting in Washington, D.C. on Thursday, May 14 (8:00 a.m.-5:00 p.m., Walter E. Washington Convention Center) co-chairs Drs. Simone Thavaseelan and Mark Litwin have designed an important program that addresses the unique pressures of academic practice. The program includes important updates from partner organizations including the American Board of Urology, American Urological Association, Residency Review Committee, Society of Women in Urology, Association of American Medical Colleges and R. Frank Jones Society.

Topics of global interest will include a discussion on compensation systems and an interesting presentation on the potential for converting training programs from traditional time based to competency based systems.

In addition, there will be a session dedicated to individual professional development, along with sessions on the use of social media, the value of advanced degrees such as a MBA or MHA and applying for a chair position. Also, in promoting and recognizing research endeavors related to academic pursuits, the results of last year’s SAU grant winners will be presented.

With societal changes we need to stay ahead of the curve on social issues involving inclusion and equity. A session will address methods to increase interest of underrepresented minorities in urology, equity in compensation and leadership opportunities for women as well as challenges for LGBT colleagues.

Our winter gathering featured workshops addressing several global issues, including methods to increase medical student interest in urology, encourage practice in rural America, develop universal resident assessment tools and create tools to obtain objective information on resident candidates. Workshop leaders have collated the data and opinions expressed at these forums and recommendations will be presented to our membership for final discussion.

At the end of this session a vote will be taken to determine if proposals should be incorporated into our academic practices. Moreover, topics for the 2021 winter meeting workshops will be solicited from the general membership. Opportunities to serve on committees and workshops will be made available.

With the corporatization of university medicine the SAU’s role in expounding the ideals of urorogical academicians is more important than ever. Academic institutions are the stewards of education that forge the metal of our practitioners and the generators of research that defines best practice.

The SAU will continue to minister the ideas that promote collaborative best practices as well as provide members with administrative tools to facilitate negotiation of the complexities of an academic practice.

The leadership of the SAU hopes you will join us at the meeting and help in paving the future path of academic urological practice.
and Ronald Lewis, both former SMSNA Presidents. Dr. Mark Hirsch will present on “Advances in Disease Modification for ED,” followed by the Ronald W. Lewis Lifetime Achievement Award ceremony.

Dr. Run Wang, SMSNA immediate former president, will moderate the next session while Dr. Harris Nagler presents an AUA update on the Urology Care Foundation. The last session of the morning, moderated by Drs. Lawrence Jenkins and Hossein Sadeghi-Nejad, will be on social media in sexual medicine, with Dr. Stacy Loeb presenting “How to Use Social Media in Sexual Medicine.”

The first session of the afternoon, moderated by Drs. Gregory Broderick and Fernando Facio, will address male sexual dysfunction. Dr. Landon Trost will address sexual complaints in young men and how to differentiate psychological causes from the rest. Dr. Andrew McCullough will present “Congenital ED: The Young Man Who Has Never Functioned Well.” Dr. Jay Lee will follow with “ED Considerations in the Gay Population.” Dr. Daniela Wittmann will address “ED in Patients with Mental Health Disorders.” Finally, Dr. Run Wang will give an update on sexual function preservation strategies for benign prostatic hyperplasia.

The basic science segment will be moderated by Drs. Carol Podlasek and Johanna Hannan, and will include Dr. Ranjith Ramasamy’s talk on electromagnetic vs electrohydraulic modality for low intensity shock wave treatment. Dr. Tobias Köhler will present a review of the current knowledge and clinical applications of selective androgen receptor modulators. The final talk will be on the effect of exercise and diet on erectile function, presented by Dr. Omer Raheem.

The sexual dysfunctions after treatment of prostate cancer session, moderated by Drs. Jonathan Clavell and John P. Mulhall, will feature talks on “Libido and Orgasmic Issues after Prostate Cancer Treatment” by Dr. Laurence Levine and “Penile Changes after Prostate Cancer Treatment” by Dr. Serge Carrier.

These lectures will be followed by a session on ejaculatory and pelvic dysfunction moderated by Drs. Jason Kovic, Adrian Momesso and Alan Shindel. Dr. Wayne Hellstrom will present on “Diagnosing and Treating Postorgasmic Illness Syndrome.” Dr. Daniel Williams, IV will speak on management of chronic scrotal pain and Dr. Mulhall will address the complaint of sexual headache. Dr. Irwin Goldstein, former SMSNA President, will close this session with “Diagnosing and Treating Male Neurogenic Sexual Dysfunction: From Genital Numbness to Muted Pleasure/Orgasm.”

Finally, the day will be highlighted by the final session on surgical therapies. This second surgical session will be moderated by Drs. Amy Guise and LeRoy Jones and will feature presentations by Dr. Gerard Henry on “Infection Prevention Strategies in Prosthetic Urology: Where Are We Now, and What’s Coming?” as well as Dr. Mohit Khera on “When an Inflatable Device is NOT the Right Choice for the Patient.” Dr. Mang Chen on “Erectile Restoration in a Neophallus, Advantages/Disadvantages of Available Devices” and Dr. John Mulcahy, former SMSNA President and a legend in the field, on “Things I Wish I Had Known Earlier: Lessons Learned over the Last 40 Years in Prosthetics.”

The SMSNA provides a forum for the free exchange and discussion of new ideas, thoughts and concepts, and strives to promote the highest standards of practice, research, education and ethics in the study of all aspects of human sexual function and dysfunction.

Please join us for this exciting scientific program.
AUA Guidelines Update

The AUA has continually recognized the significance of clinical practice guidelines as essential tools to aid physicians in the betterment of medical practice and quality of patient care. AUA guidelines are consistently ranked as the leading member benefit in repeated member surveys, and provide the basis for a variety of AUA programs at the Annual Meeting and throughout the year at various educational venues. Through their ability to concisely summarize the best practices in evidence-based medicine, guidelines play a crucial role in the AUA’s mission to promote the highest standards of urological care.

It is through the strong support and continued investment from AUA leadership that the program has expanded to further cover topic areas important to AUA membership for which guidance was previously unavailable. In 2019 the AUA released 3 new guidelines on early stage testicular cancer, incontinence after prostate treatment and recurrent uncomplicated urinary tract infections in women.

The guidelines program will continue development on a number of additional topics for 2020 with guidelines on advanced prostate cancer (an expansion of the current castration resistant prostate cancer guideline), premature ejaculation and microhormetria anticipated for release ahead of Annual Meeting 2020.

Furthermore, guidelines on localized and locally advanced prostate cancer and early detection of prostate cancer will begin development in 2020. These expanded topics along with the 2020 advanced prostate cancer guideline will allow for complete coverage of the spectrum of prostate cancer management from early detection through treatment of metastatic castration resistant disease.

These topics also highlight the guideline program’s increased emphasis on creating diverse panels to review topics from a multidisciplinary perspective as management of many diseases moves in a more collaborative direction. As the AUA focuses on topics that often impact nonurologists, increased importance has been placed on identifying experts from outside specialties to serve on panels and review guidelines to ensure representation from the physicians treating these increasingly complicated conditions.

As such, the AUA guideline program maintains strong relationships with several other specialty societies, not only enhancing the quality of the guideline itself but also providing physicians with a single source of rigorously reviewed guidance and ensuring concordance across specialties in disease management.

As we assess new topics for potential guideline development, AUA members are encouraged to nominate topics for consideration by visiting https://www.auanet.org/guidelines/topic-submission.

Members are also reminded that all full text guidelines may be freely accessed on the AUA website at https://www.auanet.org/guidelines. All guidelines are also available in a summarized format through the AUA Guidelines smartphone application. This user-friendly format is available for download in the Apple and Android app stores.

As use of AUA guidelines grows the AUA will continue to review its guideline program to ensure compliance with the most current accepted standards in guideline development to guarantee production of the quality documents that AUA members have come to expect and trust.

Guidelines Based Review of Female Pelvic Medicine and Reconstructive Surgery

Kathleen Kobashi, MD, FACS, FPMRS
President, SUFU
Seattle, Washington

The 2020 SUFU (Society of Urodynamics, Female Pelvic Medicine and Urogenital Reconstruction) meeting at the American Urological Association meeting will take place at the beautiful Renaissance Hotel in Washington, D.C. on Friday, May 15 (12:30-4:30 p.m.).

Although this annual meeting has continued to evolve and the attendance has grown every year, our primary goal to provide practical and applicable information for the practicing urologist remains constant. SUFU also aspires to provide an environment that focuses on collegial and collaborative sharing of information among colleagues, trainees and allied health professional associates from around the globe. We strive to serve our members and the urological community as a resource for innovation, valuable information and camaraderie.

To that end, this year’s SUFU at the AUA program is based on the theme of AUA guidelines pertinent to female pelvic medicine and reconstructive surgery (FPMRS). Indeed, many of the current guidelines were authored jointly between the AUA and SUFU, and it has been our privilege to partner with the AUA on these important projects and to serve as a resource to the AUA for matters that pertain to FPMRS.

Given the importance of the guideline, program chairs Drs. Jaspreet Sandhu, Blayne Welk and Eric Rovner have cleverly woven them into a series of clinical themes. This should not only prove interesting, but will provide a practical application of the guidelines that endeavors to stimulate the audience to consider the guidelines in the context of their real-world practices.

Additionally, given the emphasis that the American Board of Urology and the AUA Office of Education place on guidelines and the core curriculum, this program should serve as an excellent overview for trainees and future examiners.

The program will include discussions around the AUASUFU overactive bladder guidelines recently updated by Lightner et al.1 Two pertinent debates are scheduled, one regarding beta-3 agonists vs antimuscarinic medications and the other covering the optimal third line therapy.

These debates will be followed by a discussion around the female stress incontinence guidelines with debates considering recurrent stress urinary incontinence and mesh in the contemporary era.2 A review of the urodynamics guidelines by Dr. Alan Wein will ensue with a robust case based discussion on which patients would benefit from undergoing the study.3

The newest guidelines (released in 2019) are the postprostatectomy incontinence (PPI) guidelines4 and the recurrent urinary tract infection (UTI) guidelines, chaired by Dr. Jennifer Anger.5 Dr. Kurt McCammon will moderate the PPI guidelines session that will include an overview and 2 debates, one regarding the treatment of PPI following radiation therapy and the other on urinary diversion for refractory PPI.

The final session will review the UTI guidelines and will include an interesting panel on conservative therapy, and the consideration of antibiotics and how best to incorporate them into this challenging clinical situation.

I would like to thank Drs. Sandhu, Welk and Rovner for constructing such an excellent program. Suffice it to say that this year’s program is packed full of exciting and thought provoking sessions as well as a meaningful review of foundational material. We hope this meeting will provide a springboard from which to launch interesting discussions. On behalf of SUFU, we look forward to seeing you in Washington, D.C.

The 69th annual meeting of the SPU (Societies for Pediatric Urology) will be held in conjunction with the AUA Annual Meeting in Washington, D.C. (May 15–17, Marriott Marquis). We are looking forward to an exciting educational program.

With Associate Program Chair Dr. Emilie Johnson (Lurie Children’s Hospital of Chicago) we have worked tirelessly with SPU leadership and the AUA to produce an outstanding program, including podium presentations, posters, lectures, engaging panel discussions and debates, the distinguished Meredith Campbell and Duckett Lectures, as well as the AUA Plenary Session and the pediatric programming at the Convention Center as part of the AUA meeting on Sunday.

The SPU program on Friday, May 15 (7:30 a.m.-6:00 p.m., Marriott Marquis) will include the Clinical and Basic Science Prize abstracts, sessions on tests and disorders of sex development, hypospadias, health services and population research, and congenitalism. A highlight of Friday’s program is the SPU Lecture, which will be presented by Dr. Antoine E. Khoury from the University of California, Irvine. Dr. Khoury will focus on “Modern Management of VUR – The Importance of Risk Stratification.”

The SPU (Society for Fetal Urology) has partnered with the SPU for the scientific sessions to be presented late Friday afternoon. A panel on “What is the Best Postnatal Surgical Intervention for Posterior Urethral Valves” will feature a discussion on valve ablation by Dr. John Ellison and vesicostomy by Dr. Robert DeFoor.

Next, Dr. Linda Baker from Dallas Children’s Hospital will speak about “The Modern Management of Prune Belly Syndrome.” In addition, the SPU will feature another panel discussion moderated by Dr. Anthony Herndon on “The Management of the Ectopic Upper Pole Obstructed Duplicated Ureter,” with Drs. Daryl McLeod, Paul Noah, Jason Van Batavia, Rosalia Misseri and Vijay Verma under the chairmanship of Dr. John Ellison.

On Saturday, May 16 (7:30 a.m.-6:20 p.m., Marriott Marquis) the program will include abstract sessions on tumors, trauma and transplantation, neurogenic bladder, the lower urinary tract, urinary tract infection/vesicoureteral reflux, bladder extrophy, endourology, minimally invasive surgery and stone disease.

In addition, Dr. Gregory E. Taitan will give an update on “The Design and Methodology of a Multicenter Randomized Controlled Trial on Kidney Stones.”

Dr. Anthony A. Caldamone will moderate a debate on controversies involving indications for ureteropelvic junction obstruction and whether to use pyeloplasty as a study outcome, with Dr. Armando A. Lorenzo in favor and Dr. Caleb P. Nelson opposing.

One of the highlights of the meeting is the Meredith Campbell Lecture, for which Dr. Ritchey has invited our esteemed colleague Dr. David A. Bloom from the University of Michigan Medical School. Dr. Bloom will address the history (origin) of our specialty and this promises to be an outstanding talk.

Dr. Patricio C. Gargollo and Molly Fuchs will moderate a panel on bladder exstrophy, which will be a reality check for our field. Panelists from 4 major exstrophy centers will share their views on the “Realistic Goal for Bladder Exstrophy Patients.” This panel will feature Peter Cuckow from Great Ormond Street Hospital in London, Dr. Paul A. Merguerian from Seattle Children’s, Dr. Heather N. Di Carlo from Johns Hopkins and Dr. Douglas A. Canning from Children’s Hospital of Philadelphia.

Dr. Jonathan Ross will moderate another panel discussion on “Testis/Paratestis Tumor Board” as the final session of the day. The panel will include Dr. Jonathan Routh discussing the “Role of Retroperitoneal Lymph Node Dissection (RPLND) in Paratestis Rhabdomyosarcoma,” Dr. Candace Granberg focusing on the “Role of RPLND in Adolescent Testicular Germ Cell Tumor” and Dr. Amanda Saltzman presenting the “Role of Testis Sparing Surgery.”

On Sunday, May 17 (7:00 a.m.-5:30 p.m., Walter E. Washington Convention Center) the SPU will combine with the AUA programming with the morning Plenary Session remaining the highlight of the day. In addition to the highlights of the SPU meeting presented by Dr. Emilie Johnson and an update on The Journal of Urology® best articles of the year by Dr. Julian Wan, the morning will feature critical discussions on issues facing academic and community urologists, such as when to intervene for neonatal testicular torsion and the status of robotic surgery.

This year’s John Duckett Memorial Lecture will be on long-term outcomes of children who survived malignancies in childhood, presented by Dr. Daniel M. Green, from St. Jude Children’s Research Hospital. Other Sunday afternoon sessions of interest to general and pediatric urologists include abstract sessions on hypospadias, penile surgery (circumcision) and upper urinary tract anomalies.

Based on this strong educational program, the Societies for Pediatric Urology 69th Annual Meeting promises to be a great conference. We hope to see all of you in Washington, D.C. this spring.
SBUR Meeting at AUA2020

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Hopkins Greenberg Bladder Cancer Institute).

Extracellular vesicles as modulators of renal disease will be covered by Dr. Peter Quesenberry (Warren Alpert Medical School of Brown University). The morning session will conclude with a sharing of views and perspectives on the future directions in using these molecular tools in managing urological cancers, with Drs. Christina Jamieson (UC San Diego) and Colin Dinney (MD Anderson Cancer Center) as moderators.

Defining the cellular subtypes driving cancer development and progression is vital for developing molecular based tests that provide accurate diagnoses. Therefore, the afternoon SBUR session focuses on the cellular subtypes producing molecules that could be used for the development of effective genomic technologies.

The prevalence of stem cell characteristics suggests that cancer could originate from stem-like cells, and the first group of presentations will analyze similarities and differences in stem/progenitor cells derived from prostate (Dr. Wen-Yang Hu, University of Illinois at Chicago), mesenchyme (Dr. Nathaniel Brennen, Johns Hopkins School of Medicine) and bladder cancer (Dr. David Degauff, Penn State Cancer Institute).

Cancers composed of neuroendocrine-like cells present different treatment challenges, and the molecular characteristics of neuroendocrine-like bladder and prostate cancers will be presented by Drs. Omar Mian (Cleveland Clinic) and Jung Wook Park (Duke Cancer Institute), respectively.

Finally, the microenvironment is a rich source of molecules that could be used for developing molecular tools for diagnosis and treatment. Drs. Keith Syson Chan (Cedars-Sinai Cancer Institute) and Aaron LeBeau (University of Minnesota) will present their work on the collagen and stromal microenvironment, respectively.

The session will conclude with a discussion led by Dr. Hung-Ming Lam (University of Washington) on whether cancer cells exhibit common and/or cancer type-specific signatures and how these signatures could be used to inform precision therapy.

We invite you to this informative meeting and look forward to seeing you in Washington, D.C. ◆

Society of Urologic Oncology Meetings

Michael S. Cookson, MD, MMHC
Oklahoma City, Oklahoma

The SUO (Society of Urologic Oncology) recently held its 20th annual winter meeting, hosting more than 800 physicians and researchers. The meeting included dynamic sessions featuring almost 100 presenters and 241 abstracts.

This year’s Huggins Medal was awarded to Dr. Laurence Klotz from the Sunnybrook Health Sciences Centre in Toronto, Canada. His presentation entitled, “My Active Surveillance Trajectory: A Literary Bibliography” provided a fascinating look at important advancements in this area.

We were excited to welcome our EAU (European Association of Urology) Lecturer, Dr. Arnulf Stenzl from Eberhard-Karls-University Tuebingen, Tuebingen, Germany, who presented “How to Improve Uro-Oncological Surgery with Intraoperative Real-Time Multisensory Technology.” The program also featured a session by the SUO nominated winner of the Richard D. Williams, MD Prostate Cancer Research Excellence Award, Dr. William Catalona of the Northwestern University Feinberg School of Medicine.

A new addition at this year’s meeting was a half day session on clinical research and clinical trials targeted at fellows and young urologists, providing the tools and knowledge required to quickly engage in clinical trials upon graduation. Consistent with the SUO’s objective to stimulate research in urologic oncology, the session focused on clinical trials including best practices for facilitating trials, a discussion on funding and grants, and a look into the work of the SUO-Clinical Trials Consortium. The symposium was very successful, hosting 178 attendees this first year with requests to repeat the program at next year’s winter meeting and future collaborations already being discussed.

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AUA/SUO Spring Meeting

This year’s AUA/SUO spring meeting will be held in Washington, D.C. on Saturday, May 16 (8:00 a.m.-5:00 p.m., Marriott Marquis). The morning session will once again be a collaboration with the SBUR (Society for Basic Urologic Research). This year the joint SBUR/SUO scientific session will focus on emerging molecular diagnostics in urological cancers, including the use of novel assays to diagnose tumors, predict aggressiveness and/or recurrence and identify new pathways for treatment.

A variety of speakers across multiple disciplines will discuss their research and review the newest findings in the field. In addition, the Donald Coffey lecture will be given by Dr. Gabe Kwong, whose research focuses on the use of nanosensors for noninvasive molecular diagnostics.

For the afternoon session Program Chairs Drs. John Gore and Surena Matin have organized an exciting program. The session will highlight several contemporary challenges in urological cancer care. For bladder cancer have biomarkers emerged that better discriminate cancer severity and treatment response? Have newer systemic therapies changed our approach to neoadjuvant therapy? In the area of kidney cancer the meeting will address the complex clinical challenge of managing tumors in bad kidneys and caring for those with chronic kidney disease.

Lastly, for prostate cancer we will review the most indolent and most aggressive cancers. A session on focal therapy will review patient selection and novel technologies. A session on high risk prostate cancer will examine the contemporary treatment landscape and how to best disentangle treatment decision making.

YUO/SUO Reception

Immediately after the program we invite our members and attendees to join us for a cocktail hour with drinks and appetizers. This event is cosponsored by the YUO (Young Urologic Oncologists) subsection, an increasingly vital component of our society. The YUO comprises nearly a third of our total membership and has been instrumental in fostering relationships among our fellows, recent graduates and senior members.

New WUO Subsection

The SUO has formalized the creation of WUO (Women in Urologic Oncology), another subsection of the society. An informal group of women who had been organizing themselves during the last few years within the SUO will now officially host a gathering at the SUO annual/winter meetings and will develop a directory of female members of SUO. Please look out for news and upcoming events for this group.

EAU Exchange Program

This year will be the third iteration of our Young Urologist Exchange Program with the EAU (European Association of Urology). This program sponsors 1 of our YUO members to study at a European institution for 2
SUO at AUA2020

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weeks and attend the EAU Congress abroad.

Dr. Katie Murray from the University of Missouri was our second scholar. She traveled to San Raffaele University to identify operative techniques and clinical skills that improve patient satisfaction and quality of life outcomes, as well as to identify mechanisms of tracking and reporting these outcomes for future studies and advancement of the urological field of medicine. Applications for the 2021 Exchange will open this summer and we encourage all YUO members to apply.

SUO Research Scholars

The SUO has partnered with the UCF (Urology Care Foundation) for the last 5 years to provide an endowment for 3 Research Scholar Awards. These awards have contributed significantly to the careers of the award winners and are an investment in improving the lives of patients with malignant urological diseases.

In an effort to increase diversity in the field, SUO leadership made a commitment to funding a fourth endowment with the UCF to provide an additional Research Scholar Award specifically designated for a researcher from a minority or under-served background.

Winter Meeting 2020

The SUO 21st annual meeting will be held December 2-4 at the Sheraton Dallas Hotel in Dallas, Texas. Program chairs Drs. Edward Schaeffer and Peter Clark are developing another excellent program, so be sure to save the date and join us.

The SUO and the AUA continue to enjoy an outstanding partnership steeped in a rich tradition of collaboration, education and scientific discovery. Like the AUA, the SUO has been growing in membership and diversity. We are proud of our past achievements, but we are also aware that our future successes will be tied to continued growth that will rely in part on an active membership that includes a combination of youth, diversity and experience.

We look forward to your participation in the SUO at AUA2020.

The Society of Women in Urology at AUA2020

Kathleen Kieran, MD, MSc, MMME
President, SWIU
Seattle, Washington

The Society of Women in Urology (SWIU) will host its annual SWIU at the AUA meeting in Washington, D.C. on Sunday, May 17 (6:45-10:00 a.m., Renaissance Hotel). This meeting will start with the annual members-only SWIU Business Meeting before opening to all interested persons for the general meeting, which will begin with networking over a breakfast buffet and an update from AUA President-Elect Dr. Scott K. Swanson.

This year the SWIU is delighted to welcome Dr. Melina Kibbe as our keynote speaker. Dr. Kibbe is a vascular surgeon and the Colin G. Thomas, Jr., MD Distinguished Professor and Chair of the Department of Surgery at the University of North Carolina. Dr. Kibbe is a renowned and well-funded researcher, a leader in multiple surgical subspecialty societies, has published more than 200 peer reviewed articles and is widely recognized as an innovative thinker and a collaborative mentor to colleagues at all levels of training and practice.

New to this year’s meeting is a panel of women urologists from around the world. Although the AUA and SWIU are based in the United States, both societies have a strong history of partnership with colleagues in other countries. Current SWIU board member Dr. Angie Smith and past president Dr. Suzette Sutherland traveled to Brazil in 2019 and participated in that country’s inaugural Women in Urology Group.

In Brazil these female urologists are known as “The Orchids.” In solidarity, attendees at this year’s Annual Clinical Mentoring Meeting received enamel orchid pins, some of which will be available on Sunday morning. As the number of female urologists worldwide increases, the SWIU looks forward to additional collaborations across the globe.

Closer to home, Dr. Lindsey Kerr will give a short update on advocacy issues pertinent to urologists in general and SWIU members in particular. Dr. Kerr is stepping down from advocacy work after many years of excellent service. We thank her for her outstanding work and welcome Dr. Priya Padmanabhan to the role.

On Sunday morning we will also present multiple awards. Dr. Lauren Cooley from Northwestern University will receive the Elizabeth Pickett Research Award for her project entitled, “Gender Differences in Immunoregulation of Bladder Cancer.” The SWIU/SBUR Award for Excellence in Urological Research and the SWIU-Intuitive Robotic Research Scholarship will be awarded as well.

The Christina Matthos Mentoring Award will be presented to Dr. Claire Yang from the University of Washington. In addition to serving as a SWIU board member for many years, Dr. Yang has mentored women at all levels of training in numerous settings. The Outstanding Resident Award will be presented to Dr. Julie Cheng from Loma Linda University and Dr. Meena Davuluri from Montefiore Medical Center. Finally, the Best Podium Presentation and Best Poster Presentation winners from the Ninth Annual Clinical Mentoring Conference (held earlier this year in New Orleans) will be recognized. Dr. Tyler Overholt from Wake Forest Baptist Medical Center won Best Podium Presentation this year for “Molecular Analysis of Three Phenotypically Distinct Interstitial Cystitis/Bladder Pain Syndrome Patient Subgroups,” and Dr. Kelly Harris from Johns Hopkins Medical Institutions won Best Poster Presentation for “Delayed Primary Closure of Classic Bladder Exstrophy: How Late is Too Late?”

Donors to the SWIU Resident Travel Awards will be recognized at the SWIU at the AUA meeting. Donations from individuals, corporate sponsors and 7 of the 8 AUA Sections have provided financial support for residents in training to attend the Annual Clinical Mentoring Meeting.

Although the AUA Annual Meeting is a busy time for all, we welcome all AUA attendees to the SWIU at the AUA meeting. Please continue to help the SWIU support and promote the success of women in urology.

Urologic Care for the ADVANCED PRACTICE PROVIDER

Bring the Entire Care Team to AUA2020

This popular two-day program is dedicated to the topics most relevant to advanced practice providers (APPs) in urology.

Saturday, May 16 8 a.m.-5 p.m.
Sunday, May 17 8 a.m.-5 p.m.

Explore more AUA2020 programming for APPs at AUA2020.org/APP

March 2020 13
This year's annual ASMH (American Society for Men's Health) meeting at AUA2020 in Washington, D.C. on Sunday, May 17 (7:30 a.m.–11:30 a.m., Marriott Marquis) will build on the framework of the 2014 AUA Men's Health Checklist. This checklist has provided urologists and urology allied health professionals with a detailed guide for addressing many aspects of nonurological health care components. But exactly how widespread is its use?

The ASMH symposium will build on these recommendations while presenting current evidence-based guidelines across all aspects of men’s health. Our aims are to more broadly define men’s health, to propose who “owns” it. As the AUA Men’s Health Checklist and other resources become more accessible, urology providers will contemplate the scope of their practices outside of routine urological care.

As the Affordable Care Act has provided the opportunity for men to gain insurance and access in the health care system, it has become increasingly important for young men to seek preventive services and engage in appropriate screening. Current USPSTF (U.S. Preventive Services Task Force) guidelines will be presented through a comprehensive review of the well male examination.

Discoveries in Renal Cancer Lead to the Nobel Prize

Aria F. Olumi, MD
Chair, AUA Research Council
Boston, Massachusetts

Discoveries related to the von Hippel-Lindau tumor suppressor gene, which is commonly responsible for initiation and progression of renal cell carcinoma (RCC), have paved the way for investigation into how oxygen regulation in cells has a fundamental role in cellular metabolism (see figure).

The studies advanced our understanding of why hypoxia in the tumor microenvironment leads to poor prognosis. The findings led to development of the first targeted cancer therapies by development of tyrosine kinase inhibitors including sunitinib and sorafenib, which are now standard treatment choices for the management of advanced renal cancer.

The 2019 Nobel Prize in Physiology or Medicine was awarded to Dr. William Kaelin, Jr. at the Dana-Farber Cancer Institute in Boston, Massachusetts, Dr. Gregg Semenza at Johns Hopkins University in Baltimore, Maryland and Sir Peter Ratcliffe at Oxford University and the Francis Crick Institute in London.

The investigators defined how life under low oxygen conditions leads to the accumulation of reactive oxygen species (ROS), subsequently leading to increased hypoxia inducible factor (HIF), a molecule known to promote progression of RCC.

With the help of HIF, hypoxic cancer cells adapt to high ROS production by activation of the hypoxia-inducible transcription factor (HIF), a molecule known to promote progression of RCC.

Stimulation of HIF results in increased gene expression of the protein HIF1A, which helps tumor vascularity, blood flow and survival (see figure).

Figure. HIF mediated metabolic reprogramming in VHL deficient RCC cells. Reprinted with permission from Chappell JC: J Clin Invest 2019; 129: 422.

HIF regulating propyl hydroxylase compounds have potential in the development of new compounds for conditions such as myocardial infarction, stroke and chronic lung disease.

We are fortunate that urological researchers are at the forefront of fundamental scientific discoveries that translate to new treatments for the ultimate benefit of our patients. Moreover, this underscores the critical importance of the AUA's investment in our surgeons-scientists and researchers.
Crossing the Border of Urological Surgery: Robotic Approach for Pelvic Nodal Invasive Melanoma

Luca Cindolo, MD,
FEBU, PhD
Vasto, Italy

Bernardo Rocco, MD
Modena, Italy

Robotic assisted pelvic nodal dissection (ND) is a common procedure for the staging and management of malignancies in the urological and gynecologic fields. High risk lower limb cutaneous melanoma (eg with a positive sentinel node biopsy or radiological evidence of pelvic nodal involvement) requires superficial as well as deep nodal dissection.² The deep dissection should include external iliac, internal iliac, common iliac and obturator nodes. As suggested by the ASCO (American Society of Clinical Oncology) guidelines on malignant melanoma from 2012, the procedure could achieve good regional disease control.²

Robotic assisted pelvic ND for metastatic melanoma has scarcely been reported in the literature.²⁴ Given the confidence of urological surgeons in the pelvic area, with extended pelvic ND as a part of radical prostatectomy and cystectomy, the management of pelvic metastatic melanoma is part of routine urological practice at our institution.

Nodal spread from melanoma could be remarkable, as in the case of a 79-year-old female patient who had an occasional finding of left leg epithelioid melanoma (Clark level IV, Breslow 10 mm). Sentinel node biopsy was positive and, thus, pathological stage was pT4b, pN1. In such cases inguinal plus pelvic ND is mandatory.

Open inguinal ND and robotic pelvic ND were planned. Intraoperatively the nodal spread appeared bulky in the inguinal and in the pelvic location. Remarkably the burden of the latter appeared to infiltrate the vein and the obturator nerve (fig. 1). A gentle, energy-free and blunt dissection made the debridement possible, resulting in a 10 cm bulky nodal spread retrieved en bloc (fig. 2). A total of 16 melanoma metastatic nodes were pathologically reported. At the current 6-month followup the patient is disease-free while receiving nivolumab.

Pelvic ND is a familiar procedure for urological surgeons. The open approach is well established but traditionally impaired by a number of complications, often requiring medical and surgical management. Adverse events could delay the initiation of adjuvant therapies.

The most common side effect is lymphocele, which may require drainage and prolonged antibiotic therapy if symptomatic.³ The robotic approach has several advantages including better visualization and more precise dissection of nodes. The symptomatic lymphocele rate from a published series of more than 1,300 robotic pelvic NDs performed during prostatectomy was as low at 1.49% and 2.83% for the transperitoneal and extraperitoneal approach, respectively.³

The overall and recognized advantages of robotics in the field of pelvic ND may result in a faster recovery. Use is advisable especially for high risk diseases, such as melanoma, that require prompt multimodal management.◆

Intralesional Collagenase Injection Therapy for Peyronie’s Disease

The FDA (U.S. Food and Drug Administration) approved intralesional injection of collagenase Clostridium histolyticum (Xiaflex®) in 2013. In clinical trials intralesional collagenase reduced penile curvature by approximately 35% with acceptable safety outcomes.1

Traditional determination of treatment effectiveness relies on a patient’s subjective reporting of symptoms and completion of standardized questionnaires, along with office goniometry to quantify curvature improvement and occasionally patient photographs of the erect penis. Although patient reports and office goniometry provide qualitative and quantitative measures of curvature improvement, they do not characterize quantitative changes in penile cavernosal blood flow or noncurvature abnormalities like hourglass deformities. Other researchers have assessed whether cavernosal blood flow is affected by intralesional collagenase. In a retrospective study by Diao et al of 51 men undergoing intralesional collagenase for Peyronie’s disease (PD), no significant difference was found in peak systolic velocity (PSV), end diastolic velocity, resistive index or International Index of Erectile Function scores before and after treatment.2

Despite these findings, our urology practice and others have continued to observe patient reported improvements in erectile rigidity after treatment with collagenase. In particular, we noted that men subjectively report increased rigidity distal to the point of maximal curvature.

Guided by these observations we sought to determine whether men in our cohort experienced any change in penile vascular parameters after intralesional collagenase therapy. We hypothesized that post-collagenase PSV differences may be found distal to the location of the PD plaque. We further hypothesized that these differences may be more apparent in men with hourglass deformities as goniometry is ineffective in assessing change in hourglassing.

We retrospectively analyzed a single surgeon database of 125 men who underwent a complete course of 8 intralesional collagenase injections. Before and after treatment all patients completed goniometry and penile duplex Doppler ultrasonography (PDDU) after pharmacologically induced erection with trimix (30 mg/ml papaverine, 1 mg/ml phentolamine, 10 mcg/ml alprostadil).

Assessments in all patients were made by a single provider who was not the injecting physician. Pretreatment and posttreatment goniometry measurements and PSV data were extracted for univariate statistical analysis.

Of the 125 men who completed intralesional collagenase therapy 28 had an hourglass deformity. Pretreatment and posttreatment penile curvatures for the total cohort were 46.1±16.5 degrees (range 20 to 95) and 35.8±16.6 degrees (range 0 to 90), respectively, for a percent reduction in curvature of 21.0%.

Isolating only the 28 men with hourglass deformities, percent reduction in curvature was 22.5%. To assess curvature in an hourglass deformity we used the angle of internal deviation using a standard goniometer. Proximal and distal PSV were measured using PDDU in all men before and after intralesional collagenase (fig. 1). Pretreatment and posttreatment proximal PSV were 28.5±20.8 and 29.1±9.9 cm per second, respectively (p=0.91). Pretreatment and posttreatment distal PSV were 19.9±10.1 and 23.5±9.7 cm per second, respectively (p <0.001). The hourglass subset of men was analyzed separately, and no difference was found between pretreatment and posttreatment PSV proximally (27.6±12.0 vs 28.5±10.7 cm per second, p=0.57) or distally (19.8±10.6 vs 21.5±9.4 cm per second, p=0.43, fig. 2).

We found a modest but statistically significant improvement in PSV values distal to the locations of PD plaque following intralesional collagenase therapy. This suggests that the anecdotal observation of improved erectile rigidity in the distal penis following treatment may have a vascular explanation related to sequelae of PD plaque dissolution.

PDDU offers critical assessment of vascular changes in the penis that may occur with PD treatment, although further deliberate study in large trials would be needed to determine whether this is a meaningful adjunct for outcomes measurement.

There may be a role for future animal model or human tomographic evaluation of PD plaques to identify an anatomical association between plaque characteristics and penile cavernosal anatomy that may explain the effect of PD on penile vascular function.

This study is not without limitations. In particular, this is a retrospective evaluation of all corners for the treatment of PD with intralesional collagenase. The hourglass subset has a sample size of 28 men, which is underpowered to detect a meaningful statistical difference in PSV with treatment due to variability.

We further recognize that goniometry and PDDU are subject to provider interpretation, particularly if pharmacologically induced erection is not maximally rigid. To minimize variability and standardize measurements, a single provider performed all in-office measurements with goniometry and PDDU.

In conclusion, penile duplex Doppler ultrasonography may be a useful adjunct for assessment of penile vascular parameters after intralesional collagenase injection therapy for Peyronie’s disease. Based on our data peak systolic velocity distal to the plaque location may improve with plaque dissolution. Further multi-institutional studies are warranted.◆


A 10-hour-old boy was transferred from a community hospital due to concern for neonatal torsion. The patient was a healthy term baby born vaginally. He had a normal prenatal anatomy scan and there were no other relevant histories. The right testicle was abnormal on postnatal examination, prompting the transfer.

On arrival, the right testicle was firm and slightly enlarged with a small right hydrocele. On close inspection subtle ecchymosis was noted on the right side. The remainder of the examination was normal.

Scrotal ultrasound demonstrated hyperemia of the right testicle with normal flow on the left. There was clear peripheral and central arterial flow with a waveform seen in the testicles bilaterally (fig. 1). However, the right testicle had a heterogeneous appearance with a thickened tunica vaginalis and swirl sign of the peritesticular spermatic cord.

While flow was still present, the abnormal ultrasound appearance and examination led to the decision to obtain consent and proceed to the operating room for scrotal exploration using spinal anesthesia. We explored the scrotum and identified a hydrocele with a right 180-degree extravaginal testicular torsion with a necrotic testis (fig. 2). Left orchiopexy was performed. The right testicle was again examined and continued to appear necrotic. Thus, right orchiectomy was completed.

Final pathology showed a loss of normal architecture, with the majority of seminiferous tubules and interstitium replaced by diffuse hemorrhage consistent with testicular torsion. There were no complications and the patient did well at followup.

Scrotal swelling in the neonate remains a diagnostic challenge and can represent testicular torsion. Neonatal torsion is seen more commonly in term babies born via vaginal delivery and is caused by extravaginal twisting of scrotal contents around the spermatic cord.1

Fewer than 20% of these cases occur in the postnatal period and most are asymptomatic. Intrauterine stress and high risk delivery are associated with neonatal torsion and it is hypothesized that extreme cremasteric tension during delivery may induce torsion.2

Few neonatal torsed testicles are salvageable at the time of scrotal exploration due to established infarction,1 and while bilateral neonatal torsion is rare, early surgical intervention is generally performed to secure the contralateral testicle. The decision to expose a neonate to anesthesia is not without hesitation given growing data on anesthetic risks, which have led to recent controversy surrounding this practice. However, the devastation of anorchia pushes many providers to secure the remaining testicle.

Nonoperative causes of neonatal scrotal swelling must be excluded.

Pittsburgh, Pennsylvania

Figure 1. Scrotal ultrasound images at presentation, with sagittal Doppler image of bilateral testes with blood flow (A), transverse Doppler image of right testis with arterial wave forms (B, left), transverse Doppler image of right testis showing heterogeneous echotexture (B, right) and transverse Doppler image of right testis with swirl sign (C).

Figure 2. Scrotal exploration showing extravaginal torsion with ischemic right testis (later revealed after tunica vaginalis was breached).
Doppler ultrasonography is a key tool in the selection of operative candidates. However, established limitations must remind the practicing urologist to evaluate the entire clinical picture.1

There are reports of normal testicular flow on ultrasound in adolescents with proven testicular torsion at the time of subsequent exploration. Atkinson et al found that detection of flow in the very small prepubertal testis was unreliable.4 Given that blood flow can be difficult to visualize in the neonatal testicle, other radiographic findings are crucial. The swirrl sign or twisted appearance of the spermatic cord, while not always visualized with extravaginal torsion in the neonate,5 has been shown to be a better predictor of childhood testicular torsion compared to color flow sonography.6 Described as a “snail shell-shaped mass,” it is an accurate predictor of torsion in up to 96% of cases.7

Testicular hyperemia can be observed in torsion-detorsion, a condition not generally seen in the neonate. The ischemia and repuffusion trigger the generation of reactive oxygen species, which leads to apoptosis and manifests as a testicle with hyperemia on ultrasound. Torsion with partial detorsion may explain the ultrasound findings in this case, which has only been described once in the neonatal population.8


Ergonomic Injuries are More Than a Pain in the Neck: Suggestions for Reducing Pain and Fatigue in the Operating Room

Neil H. Baum, MD
New Orleans, Louisiana

A growing problem in healthcare, particularly for urologists, is ergonomic injuries. Back and neck pain are considered occupational hazards of our specialty. We have seen a large number of articles calling our attention to the topic of burnout in our profession, which affects more than 50% of physicians.

Perhaps one of the causes of burnout is the pain and discomfort that occurs with chronic back and neck pain, which are common after years of bending over the operating room table and standing for long periods of time. It makes the workplace safer. Direct and indirect costs associated with back injuries in the health care industry are an estimated $15 billion to $20 billion annually. That estimate is just back injuries. When you factor in lost workdays, and health care costs and disability costs for all the other musculoskeletal disorders, the cost is astronomical.

Since I became a urologist in 1976 we have seen the introduction of minimally invasive surgery with the implementation of robotic surgery in the last 2 decades. To my knowledge there have not been any modifications in operating rooms, nor have there been any adjustments to their design and layout. Because the current operating tables were originally designed for open surgery, they are not optimal for minimally invasive and robotic surgery. You can reduce neck related symptoms by keeping your viewing angle between 15 and 30 degrees below the horizontal. If the display monitor appears at or above the urologist’s eye level, the urologist’s neck is extended in an ergonomically compromising position.

Now video display screens are mounted on flexible booms that allow the urologist to alter the position of the monitor and obtain the ideal angle 15 to 30 degrees below eye level and the monitor.

Position the patient as close to you as possible. If you are involved in a long case, take short surgery breaks to stretch and adjust your posture. I have never heard of adverse surgical outcomes if the surgeon takes a 30 to 45-second stretch every couple of hours.

To avoid lower back pain you should also try changing positions frequently. Request that your operating room have a footrest or a foot rail. If you do multiple laparoscopic cases consider using a sternal support to lean on and take the stress off the back and neck.

Back and neck pain are the most common risk factors, but you also want to consider preventing eye fatigue. If possible, decrease the intensity of surgical lighting with a dimmer switch, or use goggles or glasses with antiglare lenses. Finally, ask for brushed steel instead of polished steel instruments to significantly reduce glare.

If you are experiencing peripheral edema after performing long cases, wearing compression stockings could help, as could using gel insoles or antifatigue floor mats.

I know it is tempting to use peripheral music and headphones during surgery but you can reduce the risk of headaches by keeping the ambient noise below 60 dB. If you are a considerate surgeon, offer the operating room staff (perhaps even the patient during induction of anesthesia) their music preference.

It was not common for urologists a few decades ago to complain of neck and back pain. I hear this more from cardiologists and radiologists who were required to wear heavy lead aprons. Today that has changed, and urological surgeons are experiencing back and neck pain in greater numbers.

Try a few of these suggestions and I think you will find your neck and back will thank you. If you have any suggestions or ideas for reducing back and neck pain, please let me hear from you and I will share them with our colleagues.

As a chief resident pondering my impending transition to autonomy, I asked one attending when he felt comfortable and confident as a robotic surgeon. His deadpan response was “any day now.” The subtext of this quip from a prominent urologic oncologist rings true for us all deep beneath our white coats, where vulnerability resides.

Recently there has been buzz around physician burnout and the medical bureaucracy. While these issues are central, there seems to be a lack of candidness regarding the transition to independent practice. As any young urologist can attest, this critical period is arguably the most difficult of our physicianship.

In a culture built on decisiveness and confidence, there appears to be little room for insecurity and doubt. This construct begets a lonely majority who fear transparency regarding their limitations and uncertainty. Abundant resources exist with AUA guidelines and treatment protocols, yet we lack vital support for creating balance, establishing identity and setting the framework for practice. Imagine a community brave enough to be honest with one another about the challenges of this transition. Perhaps the following could be effective.

Make a Practice Plan

Be honest with yourself about how you want your days to be structured. Educate yourself about the different options for practice (academic, employed, private etc). Know your vision for patient care. Define the key values and responsibilities of importance. Well-developed goals will aid in creating and abiding by an action plan so that you are satisfied with the scope of your practice.

Be open to new ideas but set boundaries for your time, obligations and clinical responsibilities. Be wary of bending yourself into any situation outside of these limits, as sustainable expectations are essential to staving off burnout and promoting health and wellness.

Make a Financial Plan

We are facing a financial landscape completely different from that of our predecessors. Now, as part of an ever changing reimbursement structure and saddled with excessive student debt, our playbook has to change.

Be shrewd and use the multitude of finance directed physician resources (books, blogs, websites) to set yourself up for success and pragmatism. The cornerstones of this approach are to eliminate student debt expeditiously, educate yourself and create a safety net. Thus, your future can be one of independence so that you may practice by choice and not by necessity.

Form a Support Network

Stack the deck in your favor. Be the mainland, not the island. Foster connectedness and inspiration from your family and friends, co-trainees or partners, mentors, and personal and professional affiliations. Let each of them be pillars of support and the keys to keeping you grounded and focused on what matters.

Be humble, authentic and inquisitive. As surgeons, it will be impossible to be present for everyone vying for your time, but you should focus on the quality of connection and not quantity. Your priorities will always be changing, but as long as you have something that makes you smile at the end of the day, you are moving in the right direction.

Learn more at AUA2020.org/Research

Who doesn’t enjoy a good round of “we told you so”? The authors sought to determine the extent to which USPSTF (U.S. Preventive Services Task Force) 2012 Grade D recommendations against prostate specific antigen screening may have impacted recent prostate cancer incidence patterns in the United States across stage, risk groups and age groups.

They calculated annual prostate cancer incidence rates from 2010 to 2015 for men 50 years old or older according to American Joint Committee on Cancer stage at diagnosis (localized vs metastatic), NCCN® (National Comprehensive Cancer Network®) risk group (low vs unfavorable [intermediate or high risk]) and age group (50 to 74 vs 75 years old or older). Age adjusted incidences per 100,000 persons with corresponding year by year incidence ratios were calculated using the 2000 U.S. Census population.

From 2010 to 2015 the incidence (per 100,000 persons) of localized prostate cancer decreased from 195.4 to 131.9 (p trend <0.001) and from 189.0 to 123.4 (p trend <0.001) among men 50 to 74 and 75 years old or older, respectively. The largest relative year by year decline occurred between 2011 and 2012 in NCCN low risk disease (IR 0.77, 0.75–0.79, p <0.0001 and IR 0.68, 0.62–0.74, p <0.0001 for men 50 to 74 and 75 years old or older, respectively). From 2010 to 2015 the incidence of metastatic disease increased from 6.2 to 7.1 (p trend <0.001) and from 16.8 to 22.6 (p trend <0.001) among men 50 to 74 and 75 years old or older, respectively.

The authors conclude that this illustrates recent prostate cancer reverse migration away from indolent disease and toward more aggressive disease beginning in 2012. The incidence of localized disease decreased across age groups from 2012 to 2015 with the greatest relative declines occurring in low risk disease. Additionally, the incidence of distant metastatic disease increased gradually throughout the study period.


Everyone knows that if you say “it’s really quiet” when you are on call, the consults and disasters will rain down. Finally someone has decided that evidence-based medicine should come to the rescue.

This prospective, randomized, controlled, noninferiority study was conducted in the microbiology department of a large teaching hospital. Each day was randomly allocated to either saying “today will be a quiet day” (intervention group) or refraining from saying the word “quiet” (control group) in any context. Workload was measured each day during a 61-day period (May 1 to June 30, 2019).

A mean of 139.0 clinical episodes occurred on control days vs 144.9 on days when the experimental intervention was uttered, with a difference of 5.9 (95% CI -12.9–24.7). The upper bound was less than the specified margin of 30, providing evidence for noninferiority. No evidence of a difference in workload was found between interventions with any of the 4 components, whether considering unadjusted or adjusted analyses, or looking at the subgroups of weekdays or weekends.

The authors conclude that their study refutes the long held superstition that utterance of the word “quiet” impacts clinical workload and therefore it should not be avoided. In the era of considerable staff shortages and increased work related stress, doctors should look to other methods to increase resilience and protect their well-being and mental health.

Barnett A, Mewburn I and Schroter S: Working 9 to 5, not the way to make an academic living: observational analysis of manuscript and peer review submissions over time. BMJ 2019; 367: l6460.

We have heard the adage, “everyone gets 2 research days, Saturday and Sunday.” How much academic work is done on our own time?

As 1 metric, the authors wanted to determine whether researchers are submitting manuscripts and peer reviews to BMJ journals out of hours and whether this practice has changed over time. They examined manuscript and peer review submissions on weekends and national holidays, and by hour of day (to determine early mornings and late nights).

Logistic regression was used to estimate the probability of manuscript and peer review submissions on weekends or holidays. The analyses included more than 49,000 manuscript submissions and 76,000 peer reviews.

Little change over time was seen in the average probability of manuscript or peer review submissions occurring on weekends or holidays. The levels of out of hours work were high, with average probabilities of 0.14 to 0.18 for work on weekends and 0.08 to 0.13 for work on holidays compared with other days in the same week.

Clear and consistent differences were seen among countries. For the U.S. the submissions were slightly less likely than average to be submitted on the weekend and slightly more likely than average to be submitted on a holiday. Chinese researchers most often worked on weekends and at midnight, whereas researchers in Scandinavian countries were among the most likely to submit during the week and the middle of the day. Canadians were the least likely to submit on a holiday. (Beer consumption was not a covariate!) From these findings the authors conclude that the differences between countries that persist over time show that a culture of overwork is a literal thing, and not just a figure of speech. ♦

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In 2019 the AUA celebrated record growth in a number of areas, including the addition of more than 2,200 new members, expansion of our international outreach and patient education efforts, research funding, new advocacy activities and more educational opportunities than ever for our members around the world.

2020 is already shaping up to be another good year for urology. One of the earliest milestones for growth that we see each year is the Urology Residency Match. Based on 2020 results, the future of urology continues to look very bright.

Urology Match Day is a rite of passage for medical students and other applicants from around the world, and a strong barometer for the future of urology as match results can be predictors of future trends in physician workforce shortages and supply.

The AUA is proud to have performed the Urology Match on behalf of the Society of Academic Urologists for 35 years.

Despite the workforce challenges that urology and other specialties face, the number of residency slots continues to grow, although slowly. The practice of urology also continues to attract strong interest from an ever-growing pool of highly talented medical students.

This year, the Urology Residency Match celebrated a number of milestones, including the number of applicants, number of positions offered and filled, and number of female applicants applying and matching with programs.

- A total of 484 students applied for the Match this year, which is an increase of 50 applicants than in 2019 and the highest number of applicants since 2014. In addition, 441 applicants submitted lists this year compared to 389 last year.
- This year 354 positions were offered by urology programs, an increase of 15 residency slots compared to 2019, and of those positions offered in 2020 only 1 was unfilled.
- The number of females participating in the Match this year was record-setting as 105 of 122 female participants (86%) matched with programs versus 85 of 103 (83%) in 2019.

In our media statement AUA President Dr. John Lynch put it well. “Each year the program gets stronger and the applicants are more talented than ever,” he said. “It’s an honor to watch a growing number of young physicians choose urology and to be a part of this milestone event for our specialty.” I couldn’t agree more.

For more information about the Residency Match for Urology or to learn more about AUA’s programs for residents and medical students, please visit www.AUAnet.org.
As the AUA Assistant Secretary who oversees our partnerships with the Middle East, Europe and Africa, I have gained an increasing understanding and admiration of the AUA’s international efforts. These areas of the world are as diverse in their needs as in their technological and scientific advances. As with all collaborations, many individuals and groups have partnered with the AUA to provide educational opportunities for patients, trainees and caregivers.

In Africa the AUA assists with and participates in many ongoing efforts to improve access to care as well as educate caregivers who in turn provide education to patients and other caregivers. There are too many individuals to list who have devoted time, resources and financial aid in these efforts.

While access to care may not be a primary issue in some areas of Europe, it continues to be a significant concern in others, especially in Eastern Europe. The AUA has actively partnered with multiple national associations to improve access to the online support that the AUA provides to its members and associated societies. Established exchange programs have expanded, and the desire of trainees to widen their knowledge base continues to impress all of us as they turn to the AUA for unbiased, accurate and up-to-date information.

The Middle East continues to host many joint AUA programs, and expansion is anticipated in a variety of educational efforts that the AUA and its faculty will provide. Although certain drugs may not be available in this region, cutting-edge technology is under evaluation in an attempt to provide the most modern technological advances to patients. Again, the thirst for educational materials and interaction with AUA faculty result in a win-win collaboration that strengthens our ties to all urological caregivers and their patients.

Each individual country, society and/or region has its pressing needs as well as its strengths, and what the AUA hopes to accomplish through respectful collaboration and needs assessment is individualization of the best possible ongoing educational program.
When Dr. Larry Lipshultz became the first Urology Care Foundation Research Scholar in 1975 he was determined to explore what was causing male infertility. “I was trying to find out clinically how to treat male patients,” he said. “At the time, more and more (obstetricians and gynecologists) were starting to treat female infertility, but there wasn’t much going on for male infertility.”

Fast-forward to today. What began as a focus on male infertility research has grown into a passion to enhance men’s health. Dr. Lipshultz’s innovations and discoveries have extended beyond the treatment of male infertility and have led to new approaches to testosterone replacement therapy, erectile dysfunction and men’s health overall.

His journey serves as a shining example of Foundation supported research driving improvements in patient care. As he explains, “What started as male infertility research has expanded into a larger area of men’s health. I don’t think that would have ever been possible if it wasn’t for the Urology Care Foundation Research Scholar Award.”

Today Dr. Lipshultz is a world-renowned expert in male reproductive medicine and microsurgery. He has trained many current leaders in the field, including more than 100 fellows, leaving an enduring legacy for countless lives at home and abroad. He has also published more than 400 journal articles.

Now we are honored to count him as one of our physician board members. His dedication to paying it forward through his work on the Foundation’s Board of Directors, as well as his significant financial contributions to the Urology Care Foundation, are a wonderful testament to the importance of the support the Urology Care Foundation provides to students, physicians and researchers.

The Research Scholar Awards program has grown during the past 45 years and continues to thrive today. The Foundation has supported more than 750 outstanding young scientists with more than $30 million in research funding since 1975, which has led to better care and treatments and an improved quality of life for millions of people around the world.

We simply do not make advances in patient care without research. Monetary support of the Foundation and of our future leaders and their research is critical. Our programs serve as a way to support researchers at many leading institutions throughout the country and to make a deep and lasting contribution to the urological research community.

Dr. Lipshultz recognizes the importance of the support he received from the Foundation. Your generosity is important and we invite you to consider giving back to the Foundation today. Visit www.UrologyHealth.org/Research to learn more about the available urology research award programs and how you can make a difference.
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–Adam Kinnaird, MD PhD FRCSC, 2019-2020 Fellow

Applications are now being accepted for July 2020
Interested applicants should directly contact:
Dr. Leonard Marks at lmarks@mednet.ucla.edu


**Youtube Channel:** targetedProstateBiopsy.com

*CA licensure/eligibility a pre-requisite.

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**Urologist**
**Cambridge Health Alliance (CHA)***

Cambridge Health Alliance (CHA), is a nationally recognized, award-winning public healthcare system located in the Boston metro area. We are currently recruiting a Urologist to join our existing department (3 MDs & 1 PA). CHA is comprised of three hospital campuses and an integrated network of primary and specialty outpatient care sites.

CHA is an academic affiliate of Harvard Medical School (HMS) and Tufts University School of Medicine. Incoming MD will have opportunity to teach HMS Medical Students, HMS IM residents and Tufts FM residents.

- Academic appointment at HMS available commensurate with medical school criteria
- Call is 1:4. 24-hour consult triage, phone triage, and inpatient care is provided by in-house PA and surgical residents
- Fully integrated EMR (Epic)
- Research opportunities available
- Patient population provides unique opportunities if interested in health care disparities
- Salary commensurate with experience

CHA offers a collaborative practice environment and innovative clinical model. Candidates should possess excellent clinical and communication skills, and a commitment to our diverse, underserved patient population.

To confidentially apply visit [www.CHAProviders.org](http://www.CHAProviders.org) or email your CV/cover letter to Kasi Marchini at ProviderRecruitment@challiance.org.

We are an equal opportunity employer and all qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability status, protected veteran status, or any other characteristic protected by law.

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**AUANews Classified Advertising Information**

Classified space is for advertising positions available, open faculty positions, course announcements, seminars, meetings and educational courses.

**Display Advertising Rates**

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**Blind Box Services $40 per issue**

**Line Advertising Rates**

-$260 for the first 50 words
-$5.00 for every word thereafter

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Copy must be received six weeks in advance of the month in which the ad is to appear. Cancellation requests must be made in written form by fax, e-mail or postal mail and will be honored for the earliest applicable issue.

**Contact:**
Rhonda Truitt
rhonda.truitt@wt-group.com
P: 443-512-8899 x. 106 F: 443-490-4003

All Ads Must Be Prepaid
24-year-old patient with poor-risk metastatic NSGCT s/p chemotherapy and autologous stem cell transplantation. Normalized tumor markers with growing teratoma syndrome (>25cm mass). Post-chemo RPLND aborted at outside institution - mass deemed unresectable. At USC Urology, he underwent adhesionolysis (~3 hrs); resection of RP tumor; en-bloc resection of infra-renal IVC, aorta, both common iliac arteries; interposition grafting (by vascular surgery); left radical nephrectomy. Pathology: teratoma, sarcomatoid differentiation. Patient alive & NED one year later without systemic treatment.


Dual Prosthetic Implantation After Radical Cystoprostatectomy and Neobladder: Outcomes of the Inflatable Penile Prosthesis and Artificial Urinary Sphincter in Bladder Cancer Survivors.

Jeffrey C. Loh-Doyle, MD; Akbar Ashrafi, MD; Azadeh Nazemi, MD; Saum Ghodoussipour, MD; Eli Thompson, MD; Kevin Wayne, PA-C; Stuart D Boyd, M.D. Urology. 2019; May 127: 127-132.

160 men underwent focal cryoablation for localized PCa (82% were >GG3). Results at 5-years: treatment failure-free survival (FFS) 85%; biochemical FFS 62%; clinically significant PCa-free survival 89%; metastasis-free survival 100%. Pad-free continence 97%; potency rate 73%. No rectal fistula or mortality. Conclusions: Hemi-gland cryoablation provides good mid-term oncologic and functional outcomes. Patients with higher PSA or >GG3 PCa are at increased risk for failure (p=0.04).

Nature Communications
Glomerulus-on-a-chip to recapitulate the human glomerular filtration barrier.

The glomerular filtration barrier is a complex structure in charge of renal ultrafiltration. Our team has engineered a glomerulus-on-a-chip for disease modeling, where human podocytes and human glomerular endothelial cells seeded into microfluidic chips, separated by an extracellular matrix resembling the in vivo basement membrane. In long-term cultures, cells maintain their morphology, form capillary-like structures and express slit diaphragm proteins. This system recapitulates functions and structure of the glomerulus. We also show its applicability for renal disease modeling and high-throughput drug testing. A total of 2000 independent chips were analyzed. The study of the pathophysiology of the glomerulus and identification of therapeutic targets is also feasible using this chip.

Urology
Hemi-gland Cryoablation of Low, Intermediate & High Risk Prostate Cancer: Outcomes at 5 Years


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