Innovative Research, Outstanding Care

WISCONSIN UROLOGY

THE NEWSLETTER FOR ALUMNI AND FRIENDS OF THE UW UROLOGY PROGRAM

SPRING/SUMMER 2014 | Volume 10 • Issue 1

DEPARTMENT OF
Urology
UNIVERSITY OF WISCONSIN
SCHOOL OF MEDICINE AND PUBLIC HEALTH

SKY'S THE LIMIT

Save the date!

On **November 18, 2014**, we will hold our third annual **Sky's the Limit** gala to benefit the Wisconsin Urologic Research Institute (WURI). Last year, a lively crowd of friends and supporters enjoyed a musical cooking extravaganza. We are delighted to announce that celebrity chef Christy Rost will perform a reprise role as the entertaining host of another "culinary concert." Invitations will be mailed and posted on our website in early September. Please join us if you can for this fun evening that helps advance urologic health care. WU

MESSAGE FROM THE CHAIRMAN

Stephen Y. Nakada, MD, FACS

After a long, tough winter in Wisconsin, I hope you find yourself happy, focused, and ready for the warm weather. It has been a wonderful time in the Department, with interest in our work and programs at a record high.

We have an excellent slate of activities on the education and training front. We concluded our Charles and Margaret Lescrenier Lectureship this winter with Dr. Badry Konety from the University of Minnesota, highlighting an outstanding professorship focused on all aspects of bladder cancer. I look forward to an outstanding Robert F. Schnoes Lecture Series this spring, with Dr. Stephen Strup from the University of Kentucky joining us to speak on renal cancer on June 5. Also in June, we will celebrate the graduation of our two current chief residents, Dr. Aaron Potretzke and Dr. Kelvin Wong. They are both moving on to Endourology Fellowships after graduation. We are very proud of them.

The Department will have a strong impression on the upcoming American Urological Association (AUA) annual meeting in Orlando, Florida. Dr. Kris Penniston will be on the AUA plenary this year presenting on animal models of stone disease. Her work in this area has been fantastic. Many other faculty will be integrally involved with the annual meeting, and we are most delighted with our strong abstract showing again at the AUA. Special congratulations to Dr. Patrick McKenna, who will receive a prestigious Distinguished Contribution Award from the AUA this year. I would like to personally invite you to our UW Alumni Reception at the AUA on Sunday, May 18, 5:30-7:30 p.m. at the Hyatt Regency Orlando in Room Celebration 14.

There are a few things I want to mention in regard to our clinical efforts. I would like to acknowledge Dr. David Paolone, who will take on a new role as Vice Chair of Community and Regional Urology. He will be overseeing all aspects of our regional and outreach programs. Congratulations to Dr. Sarah McAchran, who has ably led our new Women's Pelvic Wellness program, along with Drs. Dobie Giles and Heidi Brown from OB-GYN.

Finally, we welcome Dr. Kyle Richards to the Department. He is completing a Fellowship in Urologic Oncology at the University of Chicago and will join us as the head of our VA. Kyle will bring great energy and skill to the program there, particularly in light of the new robot on site.

I hope you are enjoying spring — and enjoyed the success of the UW Basketball team. We will look forward to seeing you at the Alumni Reception at the AUA and at the Schnoes Lectureship! Until then, On Wisconsin. WU

Stephen Y. Nakada, MD, FACS
Chairman and The David T. Uehling Professor of Urology

Male Sexual Health Program Helps Men Overcome Sexual Function Disorders

by Daniel H. Williams, MD

The UW Department of Urology established a Male Sexual Health Program that provides comprehensive treatments for a number of conditions that can impair a man's sexual function.

Erectile dysfunction

Erectile dysfunction is the inability to achieve or maintain an erection that is satisfactory for sexual intercourse. Erectile dysfunction may affect as many as 10 percent of men per decade of life (i.e., 40 percent of men in their 40s up to 70 percent of men in their 70s). It can be devastating to a man's self-confidence, and many men don't seek treatment out of fear, embarrassment, or a concern that nothing can be done to help. In the past, erectile dysfunction was thought to be a natural, untreatable consequence of aging. However, since the molecular processes by which an erection occurs have been elucidated, advances in its treatment have followed.

An important new finding is the association between erectile dysfunction and cardiovascular disease. Many of the risk factors for erectile dysfunction, including high blood pressure, diabetes, elevated cholesterol, smoking, and obesity, are the same risk factors for coronary artery disease. In fact, recent studies have shown that many men will present with erectile dysfunction an average of three years prior to having any symptoms of coronary artery disease. Other conditions that may lead to erectile dysfunction include neurological diseases such as Parkinson's disease and multiple sclerosis, the use of certain medications or drugs, hormonal imbalances, and prior pelvic surgery or radiation to treat cancer.

Erectile dysfunction following surgery or radiation treatments for prostate cancer is an unfortunate side-effect that can occur either immediately after the procedure or following treatment. Advances in nerve-sparing techniques during prostatectomy have improved outcomes and reduced the number of men who suffer this known potential complication. Our program offers the latest techniques in post-prostatectomy penile rehabilitation strategies to improve a man's chances of recovering sexual function. Post-prostatectomy penile rehabilitation involves the early use of treatments for erectile dysfunction including oral medications, penile injections of vasodilators, and vacuum erection devices in a structured and scheduled manner to reduce penile scarring and the loss of smooth muscle that occurs if a man does not have erections for extended periods of time. If penile rehabilitation is unsuccessful, we offer surgical techniques and devices for those men who require placement of an inflatable penile prosthesis for satisfactory treatment of their erectile dysfunction.

Peyronie's disease

Peyronie's disease is a connective tissue disorder that presents with painful erections, penile curvature, and a palpable plaque or nodule along the penile shaft. Although the exact cause of Peyronie's disease is unknown, the most widely-accepted theory is that trauma to the penis results in deposition of scar tissue in the elastic lining of the erectile chambers. Since scar tissue lacks the elasticity of the normal erectile tissue, the penis will bend in the direction of the plaque during an erection. Oral medications generally are not effective in treating Peyronie's disease. Verapamil injections into the scar tissue can help soften the plaque and reduce penile curvature and pain with erections. Surgical treatment of Peyronies disease includes incision of the scar tissue and placement of an elastic graft material, as well as placement of plicating sutures to straighten the penis during erections. Men with both penile curvature and erectile dysfunction are often best treated with placement of an inflatable penile prosthesis.

Premature ejaculation

The most common male sexual dysfunction – premature ejaculation – may affect as many as one in three men. Although strict parameters of premature ejaculation are difficult to define, it is generally considered to occur when a man ejaculates earlier than he or his partner desires, lacks a sensation of control over his ability to ejaculate, and suffers psychological distress from the early occurrence of ejaculation. A combination of behavioral strategies and oral medications can be used to treat this frustrating yet very prevalent condition.

Hypogonadism

Low testosterone, or hypogonadism, can occur in conjunction with the other conditions affecting a man's sexual and urological health. While low libido and erectile dysfunction are common symptoms of low testosterone, men may also note fatigue, loss of muscle mass and strength, difficulty concentrating, and mood swings. Medical consequences of low testosterone include decreased bone strength and possible links to insulin resistance and cardiovascular disease. Our clinical team is adept at screening men for hypogonadism, and we offer the latest treatments to restore testosterone to normal levels including transdermal gels and patches, intramuscular injections, and oral medications.

Our Male Sexual Health Program provides expertise and experience in caring for men with sexual health concerns. An integrated approach allows a comprehensive assessment of each man to better understand the nature of his sexual dysfunction and screen for associated cardiovascular, metabolic, and endocrine conditions. We provide specialized medical and surgical care to help restore satisfying and fulfilling sexual function. WU

Department Events *by Tricia Maier*

Past Lectureships

2014 Charles and Margaret Lescrenier Lectureship

Badrinath R. Konety, MD, MBA
Professor and Chair
Department of Urology
Dougherty Family Chair in Uro-Oncology
The University of Minnesota

The Charles and Margaret Lescrenier Lectureship occurred on February 27, 2014. Dr. Badrinath Konety was our keynote speaker that evening. Dr. Konety gave the excellent lecture, "Is Bladder Cancer Care Stuck in the Mud?" at our event. The following day Dr. Konety spent quality time with our residents.

Badrinath R. Konety, MD, MBA, is professor and chair of the Department of Urology and holds the Dougherty Family Chair in uro-oncology as well as being the director of the Institute for Prostate and Urologic Cancers and associate director for clinical affairs of the Masonic Cancer Center at the University of Minnesota.

Dr. Konety has authored or co-authored over 120 original publications and numerous book chapters and been principal or co-investigator on grants funded through the Department of Defense, National Institutes of Health, American Geriatrics Society, and Centers for Disease Control and Prevention. He received the Jahnigen Career Development Scholar Award, and is an active member of numerous professional medical societies including the American Urological Association, the American College of Surgeons, Societe Internationale D'Urologie (SIU), and the International College of Surgeons. He is currently the Adjunct General Secretary of the SIU and Associate Editor of *The Journal of Urology*.

Upcoming Lectureships

Robert F. Schnoes Lecture Series

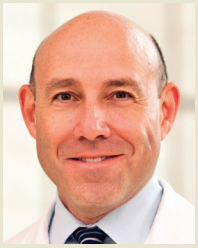
June 5, 2014 – 5:30–6:30 p.m.
Room 1220 – Medical Foundation Centennial Building (MFCB)

Stephen E. Strup, MD, FACS
Chief, Division of Urology
James F. Glenn Endowed Professor/Chair in Urology
The University of Kentucky

Dr. Stephen Strup is the James F. Glenn Professor and chief of urology at the University of Kentucky. Dr. Strup is a native of northwest Ohio and attended DePauw University, graduating summa cum laude in 1984. Dr. Strup received his medical degree from the University of Indiana in 1988. He completed his residency in urology in 1994 at Thomas Jefferson University in Philadelphia and then completed a Urologic Oncology Fellowship in 1996 at the National Cancer Institute in Bethesda, Maryland. Dr. Strup returned to Thomas Jefferson University where he was one of the early adopters of the hand-assisted laparoscopic nephrectomy and laparoscopic radical prostatectomy techniques. In 2003, Dr. Strup moved to the University of Kentucky in Lexington, where he was appointed the director of minimally invasive urologic surgery and, in 2006, residency program director. Dr. Strup was then named the James F. Glenn Chief of Urology in 2007. Dr. Strup's clinical interests include urologic oncology, minimally invasive and robotic surgery, and living donor nephrectomy.

2014 Uehling Lectures

October 24, 2014 – 8:00 a.m.–5:30 p.m.
Fluno Center, Madison, Wisconsin



Mark S. Litwin, MD, MPH
Professor and Fran & Ray Stark Foundation Chair of Urology
Professor of Health Policy & Management
Schools of Medicine and Public Health
University of California, Los Angeles

Dr. Litwin holds a bachelor's degree in economics from Duke University, earned his MD from Emory University, and trained in urology at Harvard Medical School's Brigham and Women's Hospital. He was a Robert Wood Johnson Clinical Scholar at RAND and UCLA, where he earned his MPH. He is a translational population scientist who has authored numerous original articles, reports, reviews, and book chapters in urologic oncology and health services research. Dr. Litwin published the first validated quality-of-life instrument to track outcomes in men with prostate cancer and has been an international leader in this area. Dr. Litwin's research includes medical outcomes assessment, quality of care, health-related quality of life, epidemiology, costs and resource utilization, patient preferences, and health care access for malignant and benign diseases in urology. Dr. Litwin's post-doctoral research fellows hold academic positions at institutions throughout the world.

In 2001 he received the AUA Gold Cystoscope for his foundational work in establishing the discipline of urological health services research. In 2010, he received the AUA Foundation's Distinguished Mentor Award. In 2011, he received the AUA Distinguished Service Award for his continuing work in this field.

His work has been funded by the NIDDK, NCI, Department of Defense, American Cancer Society, California Department of Public Health, and other organizations. He has been continuously NIH-funded since 1997. His current grants include a $95 million state-funded program involving prostate cancer care for low-income uninsured men in California, as well as a $24 million epidemiologic study of the burden of urologic diseases in America. He teaches in UCLA's Schools of Medicine and Public Health and practices urologic oncology at UCLA. WU

UW Urology at the AUA *by Tricia Maier*

The 2014 UW Urology Alumni Reception at the American Urological Association (AUA) Annual Meeting in Orlando, Florida, is scheduled for Sunday, May 18, 5:30-7:30 p.m., in the room Celebration 14 (Convention Level) of the Hyatt Regency Orlando. We enjoy seeing and catching up with all of our alumni and friends!

Courses, Lectures and Panels

Sara Best, MD, is a presenter for the educational course "Urolithiasis: Metabolic Evaluation and Medical Treatment," Sunday, May 18, 8:30-11:30 a.m. This course reviews the pathophysiology of stone disease with a focus on the metabolic and environmental risk factors that lead to stone formation.

Kristina Penniston, PhD, RD, is a presenter for the educational course "Nutrition Counseling for the Prevention of Urolithiasis," Saturday, May 17, 1:00-3:00 p.m. This course will review the different stone-forming mechanisms as they pertain to dietary management.

Kristina Penniston, PhD, RD, will participate in the Plenary I panel discussion "Animal Models in Stone Disease." Dr. Penniston will be discussing the swine animal model, Monday, May 19, 8:53-9:18 a.m.

Stephen Nakada, MD, will moderate the session "Social Media and Your Department and Practice: What Is Right in 2014?" during the Society of University Urologists meeting, Friday, May 16, 8:00-9:00 a.m.

Stephen Nakada, MD, will moderate "PCNL Is On Its Way Out" during the Plenary program *Crossfire: Controversies in Urology*, Friday, May 16, 2:30-3:00 p.m.

Stephen Nakada, MD, will give the lecture "Endourological Management for Upper Urinary Tract Urothelial Carcinoma" and will serve as the moderator for the panel discussion "Upper Urinary Tract Urothelial Carcinoma" during The 9th AUA/JUA International Affiliate Society Meeting, Sunday, May 18, 3:00-4:00 p.m.

Stephen Nakada, MD, is an educational course director for "Urolithiasis: Surgical Management, Percutaneous, Shock Wave Lithotripsy, and Ureteroscopy," Monday, May 19, 6:00-8:00 a.m. Dr. Nakada's course will offer the practicing urologist a comprehensive, case-based review of the surgical management of urolithiasis. Leading experts in the field of urology will present the latest techniques and innovations in percutaneous renal surgery, ureteroscopy, and shock wave lithotripsy.

Stephen Nakada, MD, will moderate the session "Controversies in Stone Disease" during the Research on Calculus Kinetics (ROCK) Society meeting, Monday, May 19, 4:20-5:00 p.m.

David Jarrard, MD, will lead the annual 2014 spring meeting of the Society for Urologic Oncology on Saturday, May 17. This cancer meeting is held in conjunction with the AUA annual meeting and will include topics on renal cancer heterogeneity, new options for castrate resistant prostate cancer and neoadjuvant therapy for muscle-invasive bladder cancer.

Podium and Poster Presentations

Risk factors for major complications and perioperative mortality following surgical resection of renal cell carcinoma with upper level IVC thrombus: a contemporary multi-center experience. E. Jason Abel, R. Houston Thompson, Vitaly Margulis, Jennifer E. Heckman, Megan M. Merril, Oussama M. Darwish, Laura-Maria Krabbe, Stephen A. Boorjian, Bradley C. Leibovich, Christopher G. Wood.

Intraoperative blood transfusion during radical cystectomy increases the risk of death from bladder cancer compared to postoperative transfusion. E. Jason Abel, Brain J. Linder, Tracy M. Downs, Tyler M. Bauman, R. Houston Thompson, Prabin Thapa, Octavia N. Devon, Robert F. Tarrell, Igor Frank, David F. Jarrard, Stephen A. Boorjian.

Core muscle size predicts 6-month mortality in patients undergoing radical cystectomy. Hailey Allen, E. Jason Abel, Daniel D. Shapiro, Aaron Potretzke, Fangfang Shi, David F. Jarrard, Tracy M. Downs.

Curative surgery in RCC with thrombus; a comprehensive risk model from a modern multicenter analysis. Tyler M. Bauman, Vitaly Margulis, Christopher G. Wood, William P. Christensen, Vishnukamal Golla, Oussama M. Darwish, Laura-Maria Krabbe, David F. Jarrard, Tracy M. Downs, E. Jason Abel.

Characterization of fibrillar collagens and extracellular matrix of glandular benign prostatic hyperplasia nodules. Tyler M. Bauman, Tristan M. Nicholson, Brett M. Becker Wei Huang, William A. Ricke.

Obese patients taking potassium citrate are less prone to calcium phosphate calculi than non-obese. Sara L. Best, Matthew Houlihan, Kristina L. Penniston, Stephen Y. Nakada.

High Powered Microwave Ablation of T1a renal cancer: preliminary safety and clinical efficacy. Sara Best, Anna Moreland, Timothy Ziemlewicz, J. Louis Hinshaw, Meghan Lubner, Marci Alexander, Christopher Brace, Douglas Kitchin, Sean Hedican, Stephen Nakada, Fred Lee, E. Jason Abel.

Success of diabetic control as measured by hemoglobin A1C is directly associated with 24hr urinary risk factors for uric acid stone formation. Sara Best, Jonathan Shiau, Rachel Bell, Kristina L. Penniston.

Quantification of renal cell optical biomarkers using second harmonic generation imaging. SL Best, T Thimm, Y Liu, M Houlihan, J Bredfelt, KW Eliceiri.

Disruption of CHD8-CTCF chromatin complex in prostate cancer alters DNA methylation patterns. Nathan Damaschke, Wei Huang, Chee Lin Jin Lee, David Jarrard.

Aleatoric large dataset analysis framework: a practical approach to mining public expression data for cancer researchers. Jonathan A. Ewald, Howard H. Bailey, William A. Ricke, Tracy M. Downs.

Ureteroscope damage in clinical use. Jennifer E. Heckman, Kelly A. Healy, Scott G. Hubosky, Demetrius H. Bagley.

Prostatic inflammation triggers voiding dysfunction by neural cross-talk. Sanghee Lee, Guang Yang, Jerry Gipp, Wade Bushman.

Protease activated receptor-3 expression is decreased in human benign prostatic hyperplasia. Tristan Nicholson, Tyler Bauman, Priyanka Sehgal, Tihomir Miralem, Wei Huang, William Ricke.

Colocalization of androgen receptor and estrogen receptor alpha in the stromal microenvironment supports a role for estrogens in early prostate cancer progression. Tristan Nicholson, Priyanka Sehgal, Sally Drew, Wei Huang, William Ricke.

Combination therapy with an aromatase inhibitor is needed in one out of six hypogonadal men treated with clomiphene citrate. Tristan Nicholson, Brett Johnson, Andrew Brunk, Tracy Downs, William Ricke, Daniel Williams.

Estrogen receptor-alpha is a key mediator and therapeutic target for bladder complications of benign prostatic hyperplasia. Tristan Nicholson, Kristen Uchtmann, Michael Moses, William Ricke.

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AUA Abstract Podium and Poster Presentations

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Identifying patients at high-risk for readmission after radical cystectomy using the national surgical quality improvement program database. Katherine E. Omernick, E. Jason Abel, Sarah E. Tevis, Daniel D. Shapiro, David F. Jarrard, Gregory D. Kennedy, Tracy M. Downs.

Convergent validity of a new outcome measure for patients with urolithiasis: the Wisconsin stone quality of life survey. Kristina L. Penniston, Rachel Bell, Stephen Y. Nakada.

Stone prevention with medical management: factors affecting compliance and adherence. Kristina L. Penniston, Rachel Bell, Stephen Y. Nakada.

Does socioeconomic status, age, or gender alter compliance with medical stone management? Brian C. Sninsky, Stephen Y. Nakada, Kristina L. Penniston.

Characteristics of pediatric stone formers with positive family history – single center experience. Necole M. Streeper, Kristina L. Penniston, Stephen Y. Nakada.

Degree of family history influences stone recurrence risk in adult and pediatric stone formers. Necole M. Streeper, Kristina L. Penniston, Stephen Y. Nakada.

Patients prefer the use of a patient decision-making aid when discussing surgical options for nephrolithiasis. Necole M. Streeper, Brian C. Sninsky, Kristina L. Penniston, Sara L. Best, Stephen Y. Nakada.

Does combination therapy with tamsulosin and tolterodine improve ureteral stent discomfort compared to monotherapy with tamsulosin? A randomized controlled trial. Necole M. Streeper, Sri Sivalingam, Priyanka D. Sehgal, Brian C. Sninsky, Sara L. Best, Stephen Y. Nakada.

Increased iysozomal B-galactosidase (GLB1) expression is a senescence marker and identifies indolent prostate cancer. Jennifer Wagner, Matthew Truong, Nathan Damaschke, Bing Yang, Chad Guenther, Wei Huang, David F. Jarrard.

Estimating patients' intake of stone-related foods and nutrients with a food frequency questionnaire. Margaret Wertheim, Rachel Bell, Kristina L. Penniston. WU

Department Research

Micro-scale Cell Culture and Urologic Research: A Marriage of Technology and Personalized Medicine

by Ashleigh B. Theberge, PhD, *NIDDK K12 KURe Scholar*
and William A. Ricke, PhD, *Director of Research*

The prostate undergoes numerous changes at the cellular and molecular levels with age. In many men, these changes create an environment conducive to diseases such as benign prostatic hyperplasia (BPH), which can be defined as an increase in cellular proliferation, ultimately leading to a visit to your urologist. BPH afflicts nearly all men as they age and can result in frequent urination, weak stream, and nocturia (the need to urinate at night); annual costs are estimated to be $3.9 billion in the United States.

Medical therapies for BPH are limited, hence there is a clear need to better understand this disease process. Current in vitro models for BPH lack physiologic relevance, need a large number of cells, and are expensive to test. Research at the University of Wisconsin's Department of Urology is leading the way in the development of innovative engineering tools for growing and treating prostate cells in vitro to better understand how to treat BPH.

Researchers in the Department of Urology are working with biomedical engineers on the development of novel micro-chambers with defined architectures that provide a better physiologic environment for cell growth, which will lead to a better understanding of cell signaling processes in BPH. These micro-chambers allow one to precisely control the configuration of cells in culture in order to mimic interactions between cell types as they occur within the human body. Micro-chambers are typically a few millimeters (less than ¼ inch) in length and contain features that are on the order of 10 microns (smaller than the diameter of a human hair).

The microscale dimensions enable increased sensitivity in capturing and studying cell signaling processes and allow for multiple cell type interactions in an unprecedented manner. For example, we have recently cultured two different predominant cell types found within the prostate (epithelial and stromal cells) and observed how interactions between these cell types regulate the effects of hormones (e.g. estrogen) on proliferation. We have also developed methods to integrate chemical analysis methods with the micro-chambers, enabling us to sample the cell culture milieu and isolate molecules of interest that could serve as biomarkers in monitoring prostatic disease. Combining these micro-scale methods with advances in mass spectrometry has enabled detection of small molecules produced by cells in precisely defined culture environments, providing us with a view into disease processes at the molecular level.

The micro-chambers enable cell culture in miniscule volumes, e.g., 50- to 1,000-fold smaller than traditional methods. This enables one to culture limited cell samples, such as cells derived from patients, and still maintain soluble factors at physiologically relevant concentrations. In an effort to move toward personalized medicine, we are currently developing methods for micro-scale culture of cells from men suffering with BPH. This work is particularly important for this disease because the molecular mechanisms that account for variability among the patient population are poorly understood and are likely multi-factorial.

Although BPH is common among aging men, some men do not experience lower urinary tract symptoms and symptoms may change over time. Additionally, many men suffering from clinical BPH do not have hyperplastic prostates. Thus, one of our goals is to develop methods for examining the heterogeneity in the patient population at the cellular and molecular levels to enable targeted treatment of BPH. Micro-scale culture models show great potential for disentangling the complex relationships among cell types and understanding the chemistry responsible for heterogeneity in these interactions.

From an experimental approach, use of cells at the micro-scale will allow for large platform screens of thousands of medicinal compounds for future research. Moreover, the ability to grow and treat cells from individual patients at the micro-level may lead to the identification of a specific treatment that is effective for that individual. WU

Pediatric Continence Program Helps Children Achieve Dryness

by Sarah Novinskie

Pediatric incontinence affects more than 10 million children nationwide and has traditionally been managed with invasive tests and a combination of medication and surgery. Thanks to an innovative new approach instituted last year at American Family Children's Hospital (AFCH), incontinence and related issues like recurring urinary tract infections are now treated through a combination of education, biofeedback technology utilizing computer games, and judicious use of medication. "We have patients that after 10 years of other treatments have achieved dryness in six months with our program," Dr. Patrick McKenna says. "For the first time that I can remember, we have kids that refer other kids to the program."

This program is a breakthrough in how pediatric incontinence is handled. It involves a complete, non-invasive evaluation to categorize patients and uses computer games originally developed by NASA to help astronauts practice muscle strengthening while in space. The computer games use biofeedback to teach children how to flex and relax the pelvic muscles that control the bladder. The children then must use their abdominal and pelvic muscles to master the game. "It can be very difficult to teach children what muscles to contract and relax. That is why the games are such an important part of the program," Dr. McKenna explains.

This breakthrough had its beginnings more than 15 years ago while Dr. McKenna was working with a resident, Dr. Anthony Herndon, now Chief of Pediatric Urology at the University of Virginia. The initial study involved eight boys and 33 girls who completed the therapy, with 90 percent reporting improvement after an average of six sessions. That number improved as testing continued, especially when the biofeedback therapy was combined with patient education. Dr. McKenna notes, "The education is crucial to the program's success and would not be possible without our nursing staff. This component alone is so powerful that it can cure about 20 percent of our patients."

This conservative approach is helping numerous children achieve dryness. "Once daytime dryness is achieved, it usually helps any associated nighttime wetting issues," Dr. McKenna explains. Since implementing the program, recurring urinary tract infections have decreased by 95 percent and surgeries for vesicoureteral reflux have gone from 120 annually to close to zero. The use of medication has also dropped by more than 90 percent.

The biofeedback program has grown rapidly, with a second location at UW Health East Clinic and plans underway to add further capacity to meet the high demand. The program was also recently featured on the Big Ten Network. WU

CLINICAL RESEARCH UPDATE

by Kristina Penniston, PhD, RD

Clinical research is a priority for us. Our faculty and staff conduct investigations of outcomes related to surgical techniques, treatments for urologic conditions, and predictors of disease severity and progression.

Surgical innovations

Urologists routinely assess the outcomes of their surgical cases. Over time, and after gathering follow-up clinical data, the effectiveness of certain techniques can be gauged. More importantly, new techniques can be developed to improve on older ones. Examples of this include **Dr. Wade Bushman's** novel and collaborative surgical approach to urinary diversions for patients with, for example, untreatable urinary incontinence or chronic urinary infections. He is currently analyzing the results of clinical outcomes in these patients. **Dr. Stephen Nakada** recently described the use of intracorporeal lithotripsy, a surgical technique commonly used for kidney stones, in patients with biliary stones (Sninsky et al, J Endourol 2014). This study endorses and promotes the use of urologic techniques in a patient population with a non-urologic condition. **Dr. Granville Lloyd** is also studying surgical techniques but with respect to bladder tumors. His study may shed light on how the methods used to remove tumors impact patients' clinical outcomes following surgery.

Medical treatments

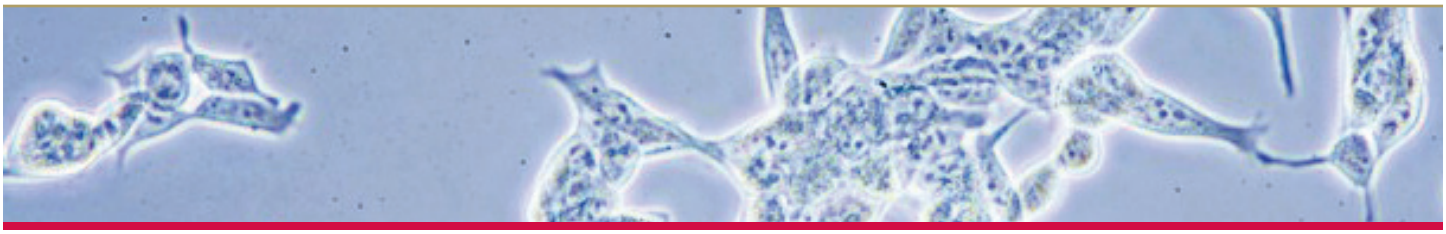
Dr. Sara Best, as well as **Dr. Nakada, Dr. Necole Streeper** (endourology fellow), and associate scientist **Kristina Penniston, PhD, RD**, are actively involved in several studies examining the effects of medical management on the prevention of kidney stones. With collaboration from **Dr. Allan Jhagroo**, a nephrologist in our Metabolic Stone Clinic, they are assessing the quality of life of stone formers as it relates to stone recurrence and stone surgeries, the management of pain from urinary stents, and nutritional interventions to prevent urinary oxalate excretion and calcium oxalate stone formation. **Margaret Wertheim, MS, RD**, and **Brian Sninsky, MD**, (soon to be a urology resident in our department) are key members of this stone research team. In our Division of Pediatrics, **Dr. Patrick McKenna** and research analyst **Tina Sauder, MS**, are busy designing several exciting and highly collaborative studies. They include:

- Piloting a non-invasive clinical technique to identify pelvic floor dysfunction in children with urinary incontinence (collaboration with researchers)
- Examining the association of psychosocial comorbidities on treatment outcomes in children with urinary incontinence (collaboration with researchers in the Department of Psychiatry)
- Developing a hydronephrosis registry to warehouse data of patients diagnosed prenatally with hydronephrosis in order to develop evidence-based guidelines for treatment (partnership with University of Virginia)

Clinical predictors

Dr. David Jarrard has two studies to better predict outcomes in men with prostate cancer. Recently, he reported a new clinical nomogram that identifies men with higher vs. lower risk of aggressive prostate cancer (Truong et al, Cancer 2013). He and his research staff continue to develop a urine test to identify men with higher-risk prostate cancer progression and allow for earlier clinical and surgical decision-making. **Dr. Tracy Downs** recently reported the validation of a simple calculation, the neutrophil-lymphocyte ratio, derived from a common preoperative blood test, that identifies bladder cancer patients who could enjoy improved outcomes with post-operative chemotherapy (Potretzke et al, Urol Oncol 2014).

Department of Urology faculty and research staff will present many of these studies at upcoming meetings such as the American Urological Association, and in multiple publications. WU



NOTEABLE & NEWSWORTHY

- The American Urological Association (AUA) selected **Dr. Patrick McKenna**, professor and chief of our division of pediatric urology, as the 2014 recipient of its Distinguished Service Award. AUA cited Dr. McKenna's "extraordinary efforts and exemplary service" as the chair of the association's Judicial & Ethics Committee.
- The Wisconsin Medical Alumni Association (WMAA) honored **Dr. Reginald Bruskewitz** with the 2014 Clinical Sciences Emeritus Faculty Award, which recognizes a clinical scientist who demonstrates long and effective service to the UW School of Medicine and Public Health.
- **Dr. Richard Graf** retired from the Department of Urology on March 28, 2014. He began his urology practice in 1964, eventually becoming part of Physicians Plus Medical Group, which merged with UW Medical Foundation in 1998. In recent years, Dr. Graf has worked primarily at outreach clinics in Boscobel, Darlington, Dodgeville, Lancaster and Platteville.
- **Dr. Andrew Graf** has achieved promotion to the rank of Clinical Professor effective July 1, 2014. Dr. Graf has been a member of our faculty since 1998 and is a two time winner of the department's Wear Faculty Teaching Award.
- Congratulations to **Ms. Tristan Nicholson**, who will be receiving a "BEST ABSTRACTS" award at the American Urological Association Meeting, which will take place in Orlando, Florida, May 16-21, 2014. Her dissertation research assessing the role of estrogen receptors in voiding dysfunction will be discussed. Ms. Nicholson is earning an MD/PhD from the University of Rochester; she is conducting her research at the University of Wisconsin under the mentorship of Dr. Will Ricke.
- **Dr. Will Ricke**, along with Dr. Chad Vezina (Department of Comparative Biosciences), received a pilot project grant from the UW's Molecular Environmental Toxicology Center. The funded research aims to assess the role of the endocrine-disrupting chemical dioxin in the development of lower urinary tract dysfunction. This research falls under a broader research area termed FEtal Basis of Adult Disease, or FEBAD, which stipulates environmental chemicals have long-term effects after early-life exposure, that is: environmental exposures of the fetus may cause predisposition to diseases decades later.
- **Dr. Dale Bjorling** has been awarded a P20 supplement from an award to Mark Zeidel, Chair of the Department of Medicine, Harvard University. Dr. Bjorling and colleagues (Drs. Bushman, Ricke, and Vezina) are pursuing studies in collaboration with Dr. Zeidel's laboratory to correlate lower urinary tract function with genotype in various strains of mice. The long-term goal is to identify genes that may regulate urinary function and look for human homologues of these genes. WU

PROGRAM NEWS

by Barb Lewis, RN, MS

2014 Residency Match Results

Daniel D. Shapiro – University of Wisconsin School of Medicine & Public Health, Madison

Brian C. Sninsky – University of Florida College of Medicine, Gainesville

Jonathan H. Wang – University of Washington School of Medicine, Seattle

2014-2016 Urologic Oncology Fellow

We are pleased to announce **Michael L. Blute, Jr., MD**, joined the Department of Urology in April as our Urologic Oncology Fellow. Dr. Blute graduated from the College of the Holy Cross, Worcester, Massachusetts, with a BA in history. He completed his medical degree at the Royal College of Surgeons in Ireland and his urology residency training at North Shore/Long Island Jewish Hospital in Long Island, New York.

Dr. Blute's interest in urologic oncology was well established throughout his residency, focusing on genitourinary cancer research and presenting data at the SUO and AUA. He begins his fellowship looking to contribute in both translational and clinical research in such areas as prostate cancer diagnosis and development of contemporary biomarkers for kidney cancer. He looks forward to his educational experience as a fellow.

We welcome Dr. Blute to the Department of Urology. WU

DONATION OPPORTUNITIES

INVEST IN WISCONSIN'S UROLOGIC HEALTH

BY DEBORAH HOBBINS

It's hard to believe it has only been a little over a year since I began working on behalf of the Department of Urology (DOU). So much has happened during the last year, and I have learned a great deal about the wide range of health care the department provides for men, women, and children. I continue to learn about the outstanding research conducted in the department and observe the dedication and commitment of the urology residents. I have also had the great honor and pleasure of meeting and speaking with many of you — the DOU's friends and supporters. It has been a terrific year.

Last fall we launched our new Community Urologic Education Series (CUES), which is free and open to the public. For me, the CUES acronym stands for "cues" to better health. We have had wonderful and enthusiastic attendance at our two initials talks. After our last talk on prostate cancer, we decided to do a survey and see what our attendees thought. We had a great response and comments such as, "I have made changes nutritionally because of the information presented to me." And, "Wasn't sure what to expect, but it hit the mark. Keeping patients educated helps the doctor-patient decision making a lot more informed. It's a great service to the community to have these lectures." Our next CUES will focus on men's urologic health and will be held on Wednesday, June 25, in Health Sciences Learning Center (HSLC), next to UW Hospital and Clinics.

While the health care the DOU provides is highly skilled and specialized, the commitment to public health and prevention is evident throughout the department. The CUES talks are just one example of the extra effort given to help people stay healthy and informed.

We heard from many of you at the end of the year through our annual appeal and we thank you. Your financial support continues to play an important role in the department's work. Every research institution is faced with funding challenges, and your support — truly no matter the size — helps advance and sustain the work of the department. I love meeting with people who have been touched by the care the department provides or have an interest in urologic research. I hope you will be in touch if you would like to learn more about the DOU. Like me, you will discover a whole new world. We hope to see you at our next CUES, and of course, at our third annual Sky's the Limit event November 18. You won't want to miss it.

I hope you will be in touch.

Deborah Hobbins WU

Financial Stewardship

All funds are held and managed at the University of Wisconsin Foundation, a 501(c)(3) organization.

If you have any questions about making a financial contribution, a planned gift, or establishing a named fund for the Department of Urology, please contact **Deborah Hobbins** at **(608) 263-0043** or **development@urology.wisc.edu**.

How to Make a Contribution

Use our new contribution envelope or log onto **www.urology.wisc.edu** and click on the ***Donate*** button. Or, you may simply make a check payable to the **UW Foundation – Urology "Fund Name"** and mail it to:

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DONATION OPPORTUNITIES

The financial investments you make in the Department of Urology are essential to advance the mission of the department: To provide innovative care focused on improving the quality of life of our patients, while shaping the future of urology through education and research. We consider our supporters our partners in this work, helping to ensure the highest quality urologic health care is available in Wisconsin and beyond.

Wisconsin Urologic Research Institute Endowment (WURI) (Fund #12587556): This endowed fund supports our commitment to advancing the full range of urologic research. Our team of dedicated physicians and scientists who work within WURI are focused on research to treat and prevent urologic conditions and improve the quality of life of our patients. This work includes:

- Prostate, kidney, bladder, and other urologic cancers
- Incontinence
- Benign prostate conditions
- Male infertility
- Prevention and wellness within urologic health
- Stone disease
- Pediatric urology
- Male sexual health
- Educating the next generation of outstanding urologists

Urology Academic Fund (Fund #12587023): This fund was established with generous contributions from grateful patients and friends of the Department of Urology. This fund helps advance the educational mission of the Department of Urology including: residency training, fellowships, and medical student activities to train the next generation of outstanding urologists.

Robert F. Schnoes Memorial Urologic Cancer Research Fund (Fund #12587556): This fund will further advance the department's cutting-edge renal cancer research. This endowment fund is a wonderful legacy — its lasting effects will be felt in perpetuity.

This list is by no means complete. Again, we would be delighted to tailor any investment opportunity to suit your interest, and contributions of any size are gratefully appreciated and extremely important. WU

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