

UPDATE IN

UROLOGY

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UPMC Physician Resources

Expanding Services in Reconstructive and Trauma Urology



Paul J. Rusilko, DO, FACS, is a specialist in reconstructive and trauma urology who joined the UPMC Department of Urology in 2015. Dr. Rusilko obtained his medical degree from the Lake Erie College of Osteopathic Medicine, followed by residency at Northeast Ohio Medical University, and a reconstructive and trauma urology fellowship at the Detroit Medical Center under the mentorship of Richard Santucci. Before joining UPMC and the University of Pittsburgh, Dr. Rusilko held appointments at George Washington University School of Medicine and Health Science in Washington, D.C.

Dr. Rusilko's clinical practice specializes in the treatment of urethral stricture disease, adult-acquired buried penis, Peyronie's disease, and prosthetic surgery for a variety of urologic conditions. "Joel Nelson, chair of the Department of Urology, had a desire to expand the Department's clinical services for reconstructive and trauma surgery. The Department's reputation in the field of urology is exemplary, so it was an easy decision to join when the opportunity arose and apply my training in reconstructive and trauma urology to a patient population in a geographical area that has few specialists in this field," says Dr. Rusilko.

Because of the relative rarity of specialists in reconstructive and trauma urology across the United States, Dr. Rusilko will consult and perform surgery on patients who are out of the normal catchment area for UPMC. It is common for patients to travel from out-of-state for care because of the shortage of specialists in the discipline.

In addition to his patient duties in the Department of Urology, Dr. Rusilko also is a member of the multidisciplinary UPMC Adult Spina Bifida Clinic, the only one of its kind in the region providing coordinated, comprehensive care for adult spina bifida patients. Furthermore, Dr. Rusilko treats patients at the VA Pittsburgh Healthcare System for a variety of urologic conditions, including those individuals who have sustained a previous battlefield trauma or other service-related injury.

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UPMC LIFE CHANGING MEDICINE

Reconstructive and Trauma Urology *Continued from Page 1*

International Work and Training Experiences

During his fellowship, Dr. Rusilko had the opportunity to travel to India to study and practice. While in India, Dr. Rusilko gained experience in trauma and reconstructive surgery in a case mix that differs in many respects from the types of cases and causes for surgery that usually present themselves in the United States.

“You see a different type of patient in India and other places around the world. This experience was of tremendous help in my education. It exposed me to different types of cases and varied surgical reconstruction techniques that I would otherwise rarely see or perform. Many cases are the result of traumatic, crush-type injuries from automobile and farming accidents. Operating on these types of cases has proved helpful in my work with veterans who have experienced various degrees of trauma. This training was preparative in a way that I could not have achieved by only training in the United States,” says Dr. Rusilko.

Dr. Rusilko is a member of the Society of Genitourinary Reconstructive Surgeons (GURS), and he is active in international outreach and travel to teach and learn from colleagues in the field from across the world. “Many of the fellows who have trained in India, myself included, return every other year for an international conference and two-week platform organized by the GURS to conduct workshops, train, and treat patients. It is an important part of my ongoing training,” says Dr. Rusilko.

Surgical Practice and Specialties

Congenital malformations, traumatic and iatrogenic injuries, urethral stricture disease, damage from infection, and other cases all are a part of Dr. Rusilko’s daily surgical practice at UPMC. “For several conditions I use an augmented urethroplasty technique,

where we harvest oral mucosal tissues to repair aspects of the urethra or to replace regions of scar tissue. The oral mucosa, from our understanding over many years, has properties that are strikingly similar to tissues of the urinary system. The oral mucosa tissues have similar elasticity, vascularization, and healing characteristics, making them a suitable substitute for native anatomy in these procedures,” says Dr. Rusilko.

The incidence of adult-acquired buried penis has steadily increased in recent years, and so too has the number of cases Dr. Rusilko treats. The subject also has been a focus of Dr. Rusilko’s most recent published research and review articles. “The disease process, which can vary, entails either the complete or partial inability to exhume the penis for activities of daily living, such as urination, hygiene, and sexual activity. The condition is more common than most would imagine, and it can lead to serious, sometimes life-threatening complications. One of the more common causes is obesity, and with the rising rates of obesity in this country, we are seeing more cases of acquired buried penis in adults,” says Dr. Rusilko.

Surgical reconstruction for these patients can significantly improve quality-of-life and avoid some of the complications inherent with the disease. “Specialists or primary care providers who do not have experience with the condition may not understand that it can be treated through surgical intervention. Some patients will have seen four, five, or even six specialists before they get to me. Every patient is different of course, and our evaluations and consultations lead us to determine the optimal treatment for every case,” says Dr. Rusilko.

In recent years, Dr. Rusilko and colleagues from the Department of Urology have published on various aspects of adult-acquired buried penis. “Part of our work, outside of our research, is to assist our general urology colleagues and primary care providers with the knowledge that

these cases are amenable to treatment by a specialist. Now, again, there are relatively few reconstructive and trauma urologists out there, but just getting the word out and publishing what we can on the diagnosis will likely lead to a better overall understanding of the condition and a greater number of patients receiving efficacious life-altering surgery,” says Dr. Rusilko.

Hot Topics in Reconstructive Urology

From Dr. Rusilko’s perspective, there are several other hot topics that the field of reconstructive urology is grappling with at present. The effects and complications associated with radiation therapy in cancer patients is one such topic. “The entire field has seen an increase in patients with late-effects of radiation from treatments designed to cure a variety of malignancies. Whenever we are dealing with an irradiated tissue, it increases the complexity of the case greatly. It changes the type of procedures we can do, the complications that are possible, and even the failure rates of procedures,” says Dr. Rusilko.

These late-effects of cancer therapy are not unique to urology; they can manifest in all areas of physiology and are a consequence of patients living longer after cancer therapy as treatment modalities have become more successful.

“Late-effects of cancer therapies are a potential for almost all cancer patients who survive long-term. Our field of reconstructive urology, as well as many other specialties, are actively investigating how to best manage these patients after they have received some form of radiation therapy. I expect many research and clinical advances to manifest in the coming years that will have substantial effects on the surgical treatments for these patients.”

Further Reading

Below is a selection of recent publications authored by Dr. Rusilko on a variety of subjects in reconstructive and trauma urology.

Sharbaugh AJ, Yecies TS, Rusilko PJ, Dasyam AK, Turner RM 2nd. Cowper's Gland Syringocele. *Urology*. 2018. Epub ahead of print.

Theisen KM, Fuller TW, Rusilko PJ. Surgical Management of Adult-acquired Buried Penis: Impact on Urinary and Sexual Quality of Life Outcomes. *Urology*. 2018 Jun; 116: 180-184.

Fuller TW, Theisen KM, Shah A, Rusilko PJ. Surgical Management of Adult Acquired Buried Penis. *Curr Urol Rep*. 2018 Feb 28; 19(3): 22. Review.

Fuller TW, Theisen K, Rusilko P. Surgical Management of Adult Acquired Buried Penis: Escutcheonectomy, Scrotectomy, and Penile Split-thickness Skin Graft. *Urology*. 2017 Oct; 108: 237-238.

Fuller TW, Theisen K, Rusilko PJ. Safety and Surgical Outcomes of Same-day Anterior Urethroplasty. *Urology*. 2017 Apr; 102: 229-233.

Theisen KM, Kadow BT, Rusilko PJ. Three-Dimensional Imaging of Urethral Stricture Disease and Urethral Pathology for Operative Planning. *Curr Urol Rep*. 2016 Aug; 17(8): 54. Review.

UPMC Physician Resources

For the latest free CME courses, news, and events at UPMC, visit UPMCPhysicianResources.com/Urology. A selection of offerings in adult and pediatric urology include:

CME Courses

Prostate Cancer: Update on Screening and Management



Presented by Bruce L. Jacobs, MD, MPH

Dr. Jacobs, assistant professor of urology at the University of Pittsburgh discusses prostate screening and management. In this presentation, Dr. Jacobs reviews several case studies and discusses current controversies surrounding prostate cancer screening.

Video Rounds

Health Services Research in Urologic Oncology

Bruce L. Jacobs, MD, MPH

Fusion MRI and Prostate Cancer

Benjamin J. Davies, MD

Diagnoses and Treatment of Kidney Stones During Pregnancy

Michelle Jo Semins, MD

American Urological Association Annual Meeting 2018

Faculty members from the UPMC Department of Urology presented new research and clinical advances at the AUA Annual Meeting in May 2018.

Below is a selection of presentations from Department faculty members. A complete list of Department activities at the meeting are posted at UPMCPhysicianResources.com/Urology. Poster abstracts for all of the presentations are available by visiting the AUA website.

Plenary: Surgical Techniques — Tips and Tricks, An Open Mind

Surgeons included: Joel Nelson, MD

Differential Distribution of Hyperpolarization-Activated Channels in Peptidergic and Cholinergic Fibers of the Human Bladder

Pradeep Tyagi, PhD; Mahendra Kashyap, PhD; and Naoki Yoshimura, MD, PhD

Effects of Triple Inhibition of Receptors of VEGF, FGF, and PDGF on Bladder Dysfunction and Remodeling in Mice With Spinal Cord Injury

Eiichiro Takaoka, MD; Takahisa Suzuki, MD; Anthony Kanai, PhD; and Naoki Yoshimura, MD, PhD

Oncologic Outcomes of Simple Enucleation Partial Nephrectomy in Sporadic Type 2 Papillary Renal Cell Carcinoma

Avinash Maganty, MD, MSCR; Jathin Bandari, MD; Ronald Hrebinko, MD; Benjamin Davies, MD; Jodi Maranchie, MD; and Stephen Jackman, MD

Fluoroscopy Pulse Rate and Radiation Absorbed Dose Demonstrate a Near-Perfect Linear Correlation

Todd Yecies, MD; Michelle Semins, MD; Michael Sheetz; Mark Durango, MD; and Rajeev Chaudhry, MD

Surgical Management of Adult-acquired Buried Penis: Impact on Urinary and Sexual Quality of Life Outcomes

Katherine Theisen, MD; Thomas Fuller, MD; and Paul Rusilko, DO, FACS

Reframing Readmission Reduction Incentives After Radical Cystectomy

Bruce Jacobs, MD, MPH, and Ken Urish, MD

Evaluation of the Risks and Benefits of CT Urography for Assessment of Gross Hematuria

Todd Yecies, MD; Jathin Bandari, MD; Bruce Jacobs, MD, MPH; and Benjamin Davies, MD

Modeling the Risk of Radiation From CT Urography in the Evaluation of Asymptomatic Microscopic Hematuria

Todd Yecies, MD; Jathin Bandari, MD; Benjamin Davies, MD; and Bruce Jacobs, MD, MPH

ABOUT THE UPMC DEPARTMENT OF UROLOGY

The Department of Urology at UPMC is at the forefront of providing clinical services, innovative treatment strategies, and fundamental research for diseases of the male and female urinary tract and the male reproductive organs.

We offer a multidisciplinary approach to care, with our team of nationally recognized clinicians and researchers working together to offer the very latest in diagnostic and treatment options for urologic disease.

Through the Comprehensive Prostate and Urologic Cancer Center, we strive to provide state-of-the-art treatments and therapies for those with prostate and urologic cancers.

We are nationally renowned for our expertise in highly specialized technologies and minimally invasive surgical techniques, many of which have been developed or refined by UPMC surgeons.

Fellowship Programs

The Department of Urology at the University of Pittsburgh currently offers three fellowship training programs for interested candidates:

- Urologic Oncology — Fellowship Director: Benjamin J. Davies, MD
- Pediatric Oncology — Fellowship Director: Francis X. Schneck, MD
- Endourology, Laparoscopy, and Robotics — Fellowship Director: Timothy Averch, MD

To learn more about the UPMC Department of Urology, please visit UPMCPhysicianResources.com/Urology.

UPMC
PHYSICIAN RESOURCES

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A \$19 billion world-renowned health care provider and insurer, Pittsburgh-based UPMC is inventing new models of patient-centered, cost-effective, accountable care. UPMC provides more than \$900 million a year in benefits to its communities, including more care to the region's most vulnerable citizens than any other health care institution. The largest nongovernmental employer in Pennsylvania, UPMC integrates 85,000 employees, 40 hospitals, 600 doctors' offices and outpatient sites, and a 3.4 million-member Insurance Services Division, the largest medical insurer in western Pennsylvania. As UPMC works in close collaboration with the University of Pittsburgh Schools of the Health Sciences, *U.S. News & World Report* consistently ranks UPMC Presbyterian Shadyside on its annual Honor Roll of America's Best Hospitals. UPMC Enterprises functions as the innovation and commercialization arm of UPMC, and UPMC International provides hands-on health care and management services with partners around the world. For more information, go to UPMC.com.