RUTGERS
Robert Wood Johnson Medical School
Division of UROLOGY
RESEARCH, CLINICAL, FACULTY, AND RESIDENCY HIGHLIGHTS

Rutgers Urology

Volume 1; Number 5
May 2018

MESSAGE FROM THE CHIEF

Dr. Isaac Y. Kim

It is my honor and privilege to bring you this edition of our division's newsletter. In the next few pages, we have highlighted for our alumni and friends recent changes in our faculty and residents as well as new programs and research projects.

First, Dr. Nikhil Gupta has joined our faculty as an andrologist. In addition to male sexual health, his clinical interests include new technologies in treating benign prostate hyperplasia. Dr. Gupta graduated from Northwestern University Feinberg School of Medicine and completed urology residency at Northwell Health and Long Island Jewish Medical Center. His fellowship was in Andrology under the tutelage of Dr. Kevin McVary at Southern Illinois University.

Second, we have matched two outstanding students this year. They are Hiren Patel, MD, PhD from Stony Brook and Arnav Srivastava, MD, MPH from Johns Hopkins. We look forward to working with them over the next five years.

Third, our division has established a new initiative in Transition Urology. This new and exciting program will help patients with various pediatric urologic diseases who have reached adulthood. Dr. Joseph G. Barone will spearhead this important effort.

Fourth, we have opened two new clinical trials that underscore our division's success. The most exciting study is the SIMCAP trial (Surgery in Metastatic Carcinoma of Prostate). This 27-institution international study will randomize 1:1 190 prostate cancer patients with metastasis to distant lymph nodes and/or bones to the standard of care (androgen deprivation therapy with or without taxane) vs cytoreductive radical prostatectomy plus standard of care. In addition to the survival endpoint, SIMCAP requires whole exome and RNA sequencing as well as quality of life assessment. SIMCAP has been registered with NCI (NCT03456843) and Rutgers-CINJ is the lead site. Any alumni and physicians who treat potentially eligible patients are encouraged to contact Rutgers CINJ.

In closing, I also would like to acknowledge Dr. Hari Tunuguntla. Without his commitment and dedication, this newsletter would not have been possible.

Thank you.

Isaac Yi Kim, MD, PhD, MBA
Acting Chief and Associate Professor
Division of Urology
Department of Surgery
Rutgers Robert Wood Johnson Medical School

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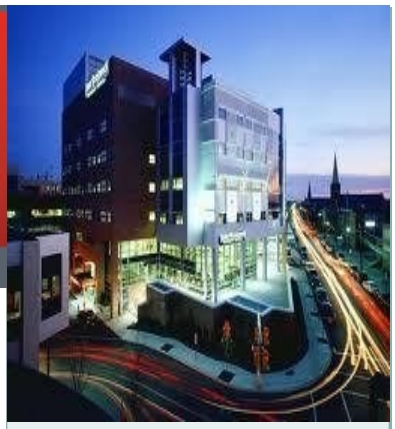
Division of UROLOGY

RESEARCH, CLINICAL, FACULTY, AND RESIDENCY HIGHLIGHTS



From the Editor's Desk

Welcome to the Spring Edition of Rutgers Urology Newsletter.

This year, as always, our dynamic faculty and residents excelled both clinically and in the innovative research. Drs. Jang and Elsamra devised evidence based clinical care pathways for radical prostatectomy and radical cystectomy. These clinical care pathways are anticipated to help improve the patient care experience while providing superior results. Dr. Elsamra was elected as the Director of Robotic Operations at RWJ University Hospital. Our Pediatric Urology continues to be the leader in managing children with complex urological disorders with Dr. Joseph Barone has teamed with Drs. Sammy Elsamra, Nikhil Gupta, and Hari Tunuguntla, to spearhead the development of section of Transitional Urology, which will be the first of its kind in the state of New Jersey. Congratulations to Dr. Barone. Our resident clinic, overseen by Dr. Joel Goldsmith, has been a cohesive and efficient group providing optimal outpatient care for indigent urology patients.

We greatly appreciate your support of Rutgers Urology and hope to see you at the upcoming AUA Meeting in San Francisco or at one of the Section Meetings.

Hari S.G.R. Tunuguntla, MD, MS, MCh
Associate Professor of Urology, Department of Surgery
Voiding Dysfunction, Female Pelvic Medicine & Reconstructive Surgery, Neuro-Urology, Male Lower GU Reconstruction, and Urodynamics
Robert Wood Johnson Medical School, New Brunswick, NJ

INSIDE THIS ISSUE

WHAT IS NEW AT RUTGERS UROLOGY?

Dr. Joseph Barone

TRANSITIONAL UROLOGY

Dr. Barone is spearheading the introduction of a new Program in Pediatric Urology at RWJMS, the TRANSITIONAL UROLOGY.

PROGRAM DIRECTOR: DR. JOSEPH G. BARONE (PEDIATRIC UROLOGY)

ADULT UROLOGY: DR. SAMMY ELSAMRA (ROBOTICS, ONCOLOGY)

DR. NIKHIL GUPTA (INFERTILITY AND SEXUAL MEDICINE)

DR. HARI TUNUGUNTLA (RECONSTRUCTION & NEUROUROLOGY)

NURSE COORDINATOR: PAULA SARDINHA, LPN

The **Transitional Urology Program** is a joint effort between RWJMS Pediatric and Adult Urology. The goal of the program is to transition adult pediatric urology patients to a new model of care that involves both adult and pediatric urologists. Patients can rest assured that they will continued to be cared for by a pediatric urologist, but with the collaboration of specially trained adult urologists with expertise in pediatric urology conditions that affect adults.

Our goal is to provide urological care for adults with pediatric urology conditions.

Some pediatric urology conditions need to be monitored throughout adulthood to maximize health and well being. However, continuity of care is often interrupted due to the inability to find a urologist to care for complex pediatric urology conditions in adults. Our program is designed to provide seamless care for transitioning patients to ensure healthy outcomes.

We are the first and only Transitional Urology Program in NJ
Our program promotes self-advocacy and medical independence, while providing education and support. Our mission is to maximize quality of life and to gain insight into the conditions we treat through clinical research.

Below are some common pediatric urologic conditions that often require long-term follow-up:

Spina bifida

Neurogenic bladder or bowel

Hypospadias or epispadias

Bladder exstrophy or cloacal anomalies

Intersex or disorders of sex development

Infertility and sexual disorders associated with pediatric urological conditions

Vesicoureteral reflux and renal insufficiency

Prune belly syndrome

Posterior Urethral valves and urinary incontinence

Stress urinary incontinence

Bladder chemodenervation

Sacral neuromodulation

Urologic cancers diagnosed in childhood

Any other unresolved urologic problem diagnosed in childhood (bedwetting, testis problems)

Adults patients with an ongoing pediatric urology condition, are encouraged to call for an initial consultation with our Pediatric Urologist, regardless of age. After the initial consultation, patients will have their case discussed by a multi-disciplinary team of pediatric and adult urologists in a Transitional Urology Case Conference to develop the best course for treatment and follow up care. This team-based approach provides uninterrupted care to promote the best of health.

For an initial consultation, please call 732-235-7960

To speak to our nurse coordinator, Paula Sardinha, LPN, please call 732-235-9369

VISITING PROFESSOR CORNER

Dr. Christopher Wood with Rutgers Robert Wood Johnson Urology Residents March 2018

Arthur Smith, MD is Chairman Emeritus of the Department of Urology at Long Island Jewish Medical Center. He is world renowned for the management of kidney and ureteral stones. He developed a minimally invasive technique for removing kidney stones and has performed this procedure in more than 5,000 patients. He started the Endourology Society, and was its President for over 20 years.

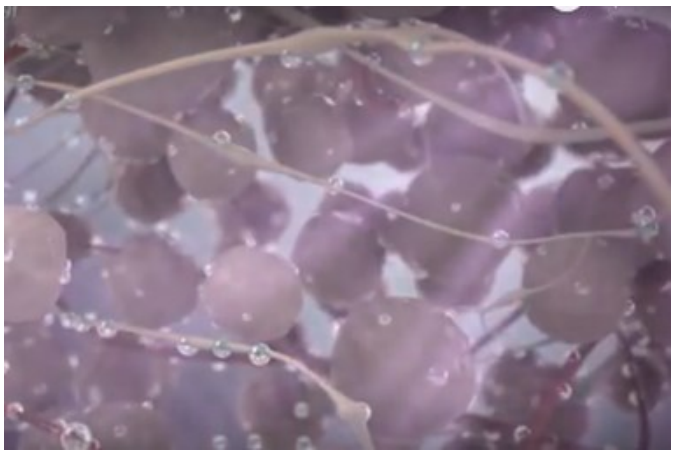
We had two visiting professors from July 2017 to March 2018. Dr. Arthur Smith from the Long Island Jewish Medical Center, New Hyde Park, New York, visited our Division January 2017 and Dr. Christopher Wood (Uro-Oncologist) from the renown M.D. Anderson Medical Center in Houston, TX visited the Division February 2018.

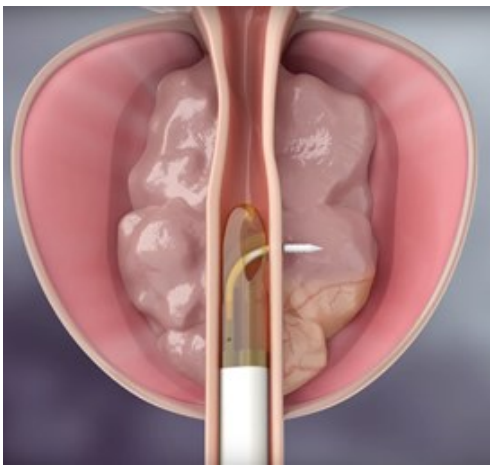
Our residents and faculty had a wonderful and very productive interaction with the visiting professors during these sessions of academic feast.

Are Minimally Invasive Treatments Effective for BPH/LUTS ?

Morbidity associated with transurethral resection of the prostate (TURP) fueled the development of minimally invasive surgical treatment options, especially over the last 5 years. Minimally invasive technologies for the treatment of LUTS due to BPH is a dynamic field. These novel procedures are in various phases of experimental and clinical trial. The emergence of minimally invasive treatment for bothersome lower urinary tract symptoms/benign prostatic hyperplasia (LUTS/BPH) adds to the armamentarium of available therapies before or after initial medical management. This is especially important in patients that cannot tolerate side effects of medications, may not be compliant with long-term use of the medications, or wish to avoid potential complications of TUR prostate. Conductive tissue ablation by heat transfer in procedures including transurethral needle ablation of the prostate (TUNA) and transurethral microwave thermotherapy (TUMT) as alternative to surgical intervention has declined in use.

Contemporary improvements in perioperative morbidity for TURP, however, resulted in an ever-increasing standard that must be met by any new technologies to be compared to this gold standard. Over recent years, there has been a plethora of novel minimally invasive treatments such as the prostatic urethral lift (PUL; UroLift System), convective WAter Vapor Energy (WAVE; Rezum System), Aquablation (AQUABEAM System), Histotripsy (Vortx Rx System) and temporary implantable nitinol device (TIND). Intraprostatic injections (NX-1207, PRX-302, botulinum toxin A, ethanol) have limited efficacy, but may be suitable for selected patients.





Minimally invasive *Rezum* procedure for BPH/LUTS"

Minimally invasive treatments for BPH/LUTS can be undertaken in an office or outpatient setting, with minimal recovery time and morbidity to the patient. The PUL (UroLift System) procedure has demonstrated consistent good functional results similar to TURP up to 3 years and with the advantage of symptom improvement, and at the same time, preserving erectile and ejaculatory function. WAVE (Rezum System) procedure seems promising with functional improvement of BPH/LUTS in a randomized controlled trial. Outcomes of the TIND procedure for BPH/LUTS have been promising, although further validation of results are awaited.

Aquablation (AQUABEAM System) has had favorable results and the phase 3 randomized controlled trial of Aquablation versus TURP is in progress. Histotripsy (Vortx Rx System) remains experimental, with mixed results in animal studies. Human trial of Histotripsy is in progress. Intraprostatic injections with PRX-302 showed interesting and promising results in phase 1 and 2 studies. However, these results require validation in phase 3 studies. NX-1207 treatment was abandoned due to failure to achieve primary endpoints. Onabotulinum toxin type A (BoNT-A) intraprostatic injections have not been shown to be beneficial over placebo in systematic review and meta-analysis.

WAVE procedure utilizes convective radiofrequency (RF) water vapor thermal therapy (Rezūm System; NxThera, Inc., Maple Grove, MN) and received Food and Drug Administration clearance in 2015. The reproducibility of responses and sustained symptom relief with minimal side effects have been demonstrated in a multicenter randomized trial. Continued scrutiny and assessment of durability, however, is important to understand the role of various minimally invasive treatment options in management of patients with LUTS/BPH.

Further validation of the performance of the novel minimally invasive treatment modalities for BPH/LUTS in well-designed studies is warranted in order to evaluate their efficacy, safety and their role in our contemporary clinical practice of patients with BPH/LUTS.

Hari S.G.R. Tunuguntla M.D., MS, MCh.

Dr. Robert Steckler

WHAT IS NEW IN PEDIATRIC UROLOGY?

The anomalous development of the urinary tract routinely recognized in utero, thereby prompting and permitting the evaluation of con-genital uropathies prior to the onset of complications or symp-tomatology. The widespread use of screening maternal and fetal ultrasonogra-phy (US) has revolutionized the specialty of pediatric urology.

In the past most children with congenital uropathies pre-sented with an abdominal mass, sepsis or urinary tract infection, hematuria, voiding dysfunction, urinary incontinence, failure to thrive, ascites or pain. Some patients remained asymptomatic until adulthood, whereas others were discovered serendipitously in the course of some unrelated radiologic investigation.

Congenital uropathies are now detected in utero with regularity. Although antenatal US may not precisely define the pathol-ogy, the impetus for further evaluation is present at birth. Postnatally, with the aid of vari-ous imaging modalities, the na-ture of the pathology can be de-termined and a management plan can be formulated.

Through the detection of urinary tract dilatation or cystic changes, maternal/fetal US identifies those neonates who need early evalua-tion and who potentially would benefit from early treatment. The benefits implicit in early diagno-sis are the ability to intervene prior to the development of complications and the preserva-tion of renal function. A suc-cessful clinical outcome depends upon our capacity to define ob-struction and then prognosticate regarding the potential for recov-ery. Our technologic ability to recognize upper tract dilatation has outpaced our ability to define obstruction. Without such a definition the decision to observe or operate often remains subjective and controversial. Therein lies the urologist's predicament, i.e. who can be managed non-opera-tively, who requires reconstruc-tive surgery, and when should the necessary surgery be per-formed.

Newborns with an-tenatal hydronephrosis require early postnatal evaluation. Cur-rently there is no imaging modality or functional investiga-tion that unequivocally distin-guishes obstructive from non-obstructive dilatation. Despite the fact that some of these infants and young children do well with non-operative management, truly obstructive lesions ultimately jeopardize some or all of the functional renal mass.

Ultrasonography, voiding cys-tourethrography (VCUG) and diuretic renography (DR) are used in various combinations to evaluate the nature of the dilated upper urinary tract. Diuretic renography, more than any other imaging technique, has been widely pro-moted as the test of choice be-cause of its ability to "quantify" differential function and the washout of radioisotope from the upper tracts.

A thorough background in the embryology and anatomy of the urinary tract, and a clear under-standing of transitional nephrol-ogy, are necessary to formulate a strategy for diagnostic imaging and a comprehensive plan of management.

Antenatal Diagnoses

Congenital uropathies are dis-covered in approximately 0.5% of screening maternal-fetal US examinations. Serial US are indicated after discovering ante-natal hydronephrosis in order to assess progression or resolution. Furthermore, extra-urinary anomalies must be sought as the incidence of compounding anomalies approaches 55%. Such a practice helps to establish perspective and facilitates counseling of the expectant parents.

The most common urologic di-agnoses include: hydronephro-sis, posterior urethral valves (PUV), duplex kidneys, multicystic dysplasia, prune belly syn-drome, autosomal recessive polycystic kid-ney disease, Pot-ter's syndrome and renal agene-sis. Classic and cloacal exstro-phies, cloacal anomalies and im-perforate anus, neuroblastoma and mesoblastic nephroma can also be detected.

Hydronephrosis is overwhelm-ingly the most common finding and may be physiologic and nonob-structive or it may be sec-ondary to obstruction at the ureteropelvic or ureterovesical junctions, vesicoureteral reflux, ureteroceles, duplications or bladder outlet obstruction. It is our job to distin-guish between obstructive and nonobstructive processes. The widespread use of maternal/fetal US has created an epidemic of asymptomatic in-fants in whom this clinical ques-tion must be an-swered.

Postnatal Diagnostics & Management

Truly obstructive lesions pro-duce renal ischemia and loss of function. Infection makes mat-ters worse and increases the risk for permanent renal injury. Sur-gical correction of suspected obstruc-tion is highly successful in infants and children of all ages. The natural history of antenatal hydro-nephrosis is still poorly defined however, and the validity of the diagnostic tests used for assessing these dilated upper urinary tracts remains somewhat controversial.

The postnatal US is best delayed until days 3-7 of life. Earlier studies have a good chance of being falsely normal owing to a low glomerular filtration rate and relative dehydration. If hy-dronephrosis is confirmed, it is recommend to place the infant on amoxicillin 10 mg/kg once a day in the evening.

If antenatally there is suspicion for PUV, significant (grade 3 or 4) bilateral hydronephrosis or unilat-eral hydronephrosis in a solitary functioning kidney, then the postnatal US should be per-formed without delay and fol-lowed by the VCUG. In these cases serum chemistries should also be checked closely, and any additional workup (DR in the case of hydronephrosis) or in-tervention (valve resection or vesicostomy in the case of PUV) should be expedited.

A VCUG is performed at one month of age (44 weeks post conception) if the hydronephrosis is So-ciety of Fetal Urology (SFU) grade 3 or 4. More than 40% of those with persistent hydronephrosis will have reflux. If reflux is diag-nosed the children are generally switched over to TMP-SMX or ni-trofurantoin after one month of age and are maintained on antibiotic sup-pression.

In the absence of reflux, DR is performed for SFU grades 3 or 4 hydronephrosis. The DR should be performed in a pediatric nu-clear medicine facility that ad-heres to the "well-tempered renogram" protocol developed by the Society for Fetal Urology and the Pediatric Nuclear Medicine Club.

Criteria for obstruction are in a state of evolution. Obstruction, according to DR, is defined by the following criteria: (1) pro-longed, flat or rising time-activ-ity curves, and (2) T 1/2 $\geq$ 20 minutes. A T 1/2 < 10 minutes by definition connotes prompt drainage, while a T 1/2 between 10 and 20 minutes is equivocal. Surgery for the correction of obstruction is also indicated in the presence of: (1) differential renal function less than 40%, (2) recurrent UTI, (3) increasing hydronephrosis, and (4) compensatory renal growth of the contralateral normal kidney.

If ureteral obstruction is found, (whether it lies at the UPJ, UVJ or elsewhere), surgery is re-quired. If nonobstructive dilata-tion diagnosed, or if the imaging studies are equivocal, then the US should be repeated approxi-mately every 3 months for the first year, and DR is repeated if there is a change for the worse or the clinical situation changes.

Multicystic dysplastic kidneys are followed by serial US stud-ies, with regression the expectation over time. Dysplastic kidneys require removal only if their size pre-sents problems with pulmonary or gastrointestinal function, they increase in size rather than regress, or if they are associated with infection. Asso-ciations between multicystic-dysplasia and hypertension and malignancy remain anecdotal.

Duplex kidneys with or without ureteroceles are managed accord-ing to the clinical situation and the functional effect, if any, on all renal moieties. If a neuro-genic bladder or prune belly syndrome is discovered then bladder function must be as-sessed and efficient emptying must be assured.

Summary

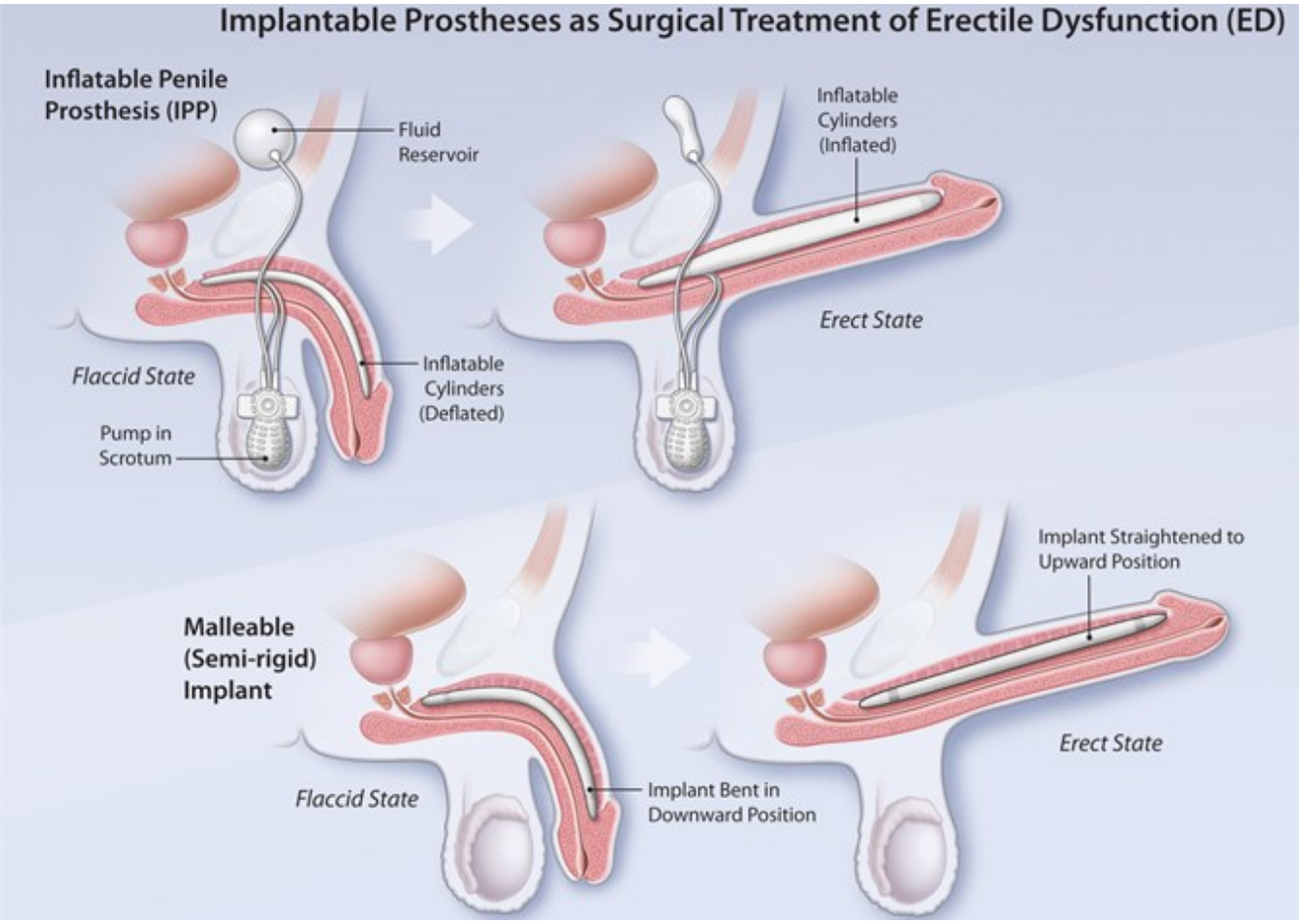
Surgery for the correction of urinary tract obstruction is safe and definitive, and should be performed when obstruction is defined. Unfortunately, there is no absolute gold standard for the evalua-tion of hydronephrosis in neonates and young in-fants. Newer and more refined tests, which assess renal blood flow and glomerular filtration, are necessary. Until such time these improved tests are available, children with antenatally detected hydronephrosis should be thoughtfully, carefully and thoroughly evaluated. Close surveillance can be practiced and continued until the hy-dronephrosis has resolved spontaneously or until obstruc-tion has been proven and repaired.

Robert Steckler M.D.,

From Impotence to the Bionic Man

Erectile dysfunction is an extremely common condition in men over 40 years of age – affecting up to 50% of men age 40-70 in some studies. In fact, treatment of erectile dysfunction has been a topic of interest for doctors, healers, and shamans going back to the ancient Egyptians. Despite the long history of ED, no treatment has been as effective in curing erectile dysfunction as the penile prosthesis.

Despite the high prevalence of erectile dysfunction, only a fraction of these men actively seek treatment. A number of patients receive samples of a PDE-5 inhibitor such as Viagra from their primary care doctor, try the samples once without proper instruction, and give up. PDE-5 inhibitors revolutionized ED treatment and made improved erections much more accessible, but there are still important barriers to treatment. With proper administration, i.e. on an empty stomach and waiting the proper amount of time for onset of action, PDE-5 inhibitors only have about a 60% efficacy rate. In the original trials for sildenafil, men often had to use the drug up to 6 times before seeing an effect. The biggest barrier to treatment with PDE-5 inhibitors, however, is cost. Many private insurances only cover 1 of the types of PDE-5 inhibitors, usually with high co-pays for only 6 pills. For those brands whose patents are expiring, the pharmaceutical companies have tied up the patents in the courts, essentially extending their patents indefinitely. The increased availability of sildenafil 20 mg tablets has helped somewhat but telling a patient he has to take 5 tablets for full effect often results in sideways glances and mistrust.



The second line therapies for ED vary in efficacy and often cause a lot of squeamishness. Intracavernosal injection, while effective with an 80% satisfaction rate, is heavily reliant on sufficient penile blood flow. In addition to the fear many men have of injecting their penises, the idea of having to go to a compounding pharmacy rather than their regular trusted pharmacy to retrieve the medication makes the entire process seem like a caper. Vacuum erection device and intraurethral alprostadil, meanwhile, remain problematic with low efficacy rates around 40% as well as awkward use of equipment and, for intraurethral alprostadil, painful erection in about 1/3 of responders.

Use of the inflatable penile prosthesis, meanwhile, remains as simple and effective as when it was first invented by Dr. Scott in the 1970s. There have, of course, been numerous improvements, including improvements in the plastic coating of the cylinders to prevent device aneurysm, anti-kink tubing, lock-out mechanisms to prevent auto-inflation, and low-profile reservoirs for less conspicuous ectopic placement. One of the biggest improvements was addition of antibiotic coating. All these improvements have brought the efficacy rate of inflatable penile prosthesis to about 91%. Inflatable penile prosthesis also boasts the highest level of partner satisfaction of any erection treatment as well. The ability to coat the implant with antibiotic has greatly improved infection risk, bringing the infection rate in non-diabetic patients down to about 1%. Insertion of an inflatable prosthesis is also covered by Medicare and most private insurances, ironically often making IPP the most affordable treatment for ED for many patients. An IPP can reenergize these patients by improving mood, repairing

relationships, and making them feel like men again. The decision to proceed with surgery should not be taken lightly and these men should be properly counseled with managed expectations, but the ultimately the most reliable way for a man with ED to get reliable, firm, straight erections is with a penile prosthesis.

Nikhil Gupta, M.D.,

RESEARCH AT A GLANCE

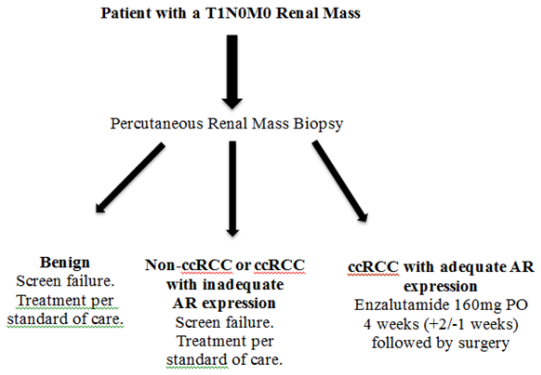
Following are the Division's current active research projects:

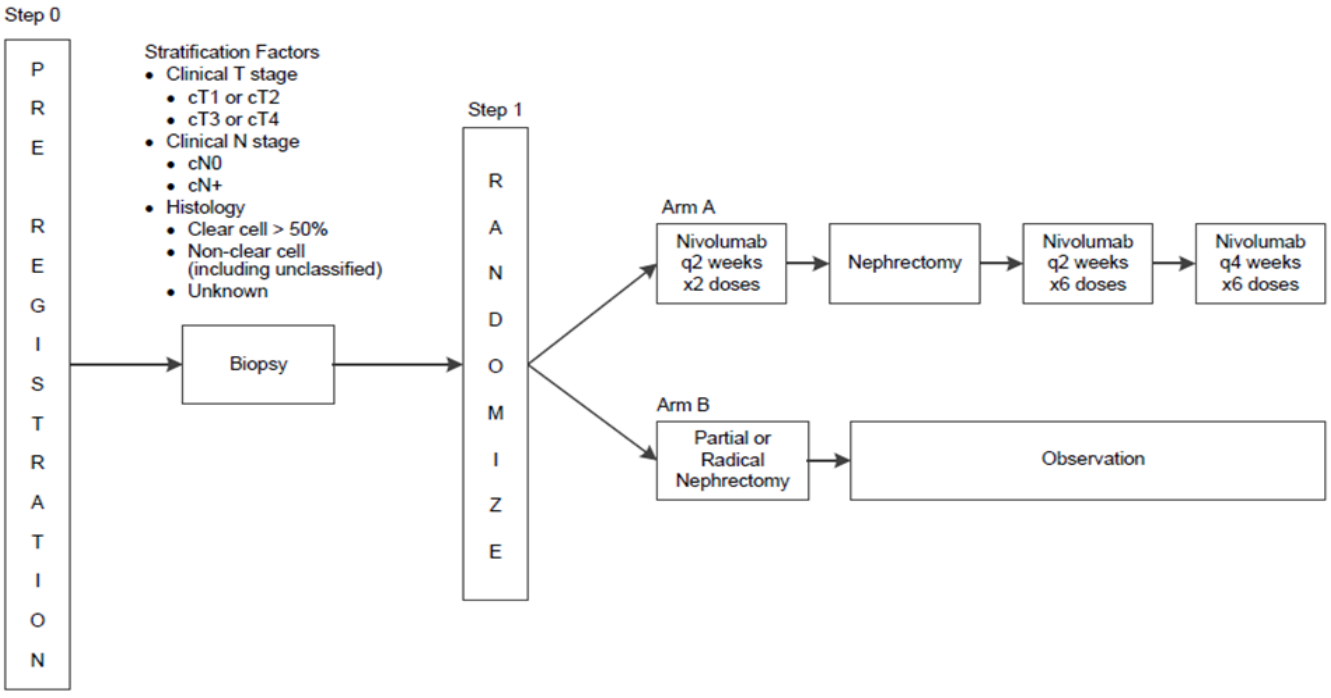
KIDNEY CANCER

#081604: Blockade of the Androgen Receptor with Enzalutamide (BARE) Study

Principal Investigator:

Eric A. Singer, MD, MA, FACS





#081801: Big Ten Durvalumab + Guadecitabine for Advanced Kidney Cancer

Principal Investigator:
Eric A. Singer, MD, MA, FACS
Assistant Professor of Surgery and Radiology
Section of Urologic Oncology
singerea@cinj.rutgers.edu

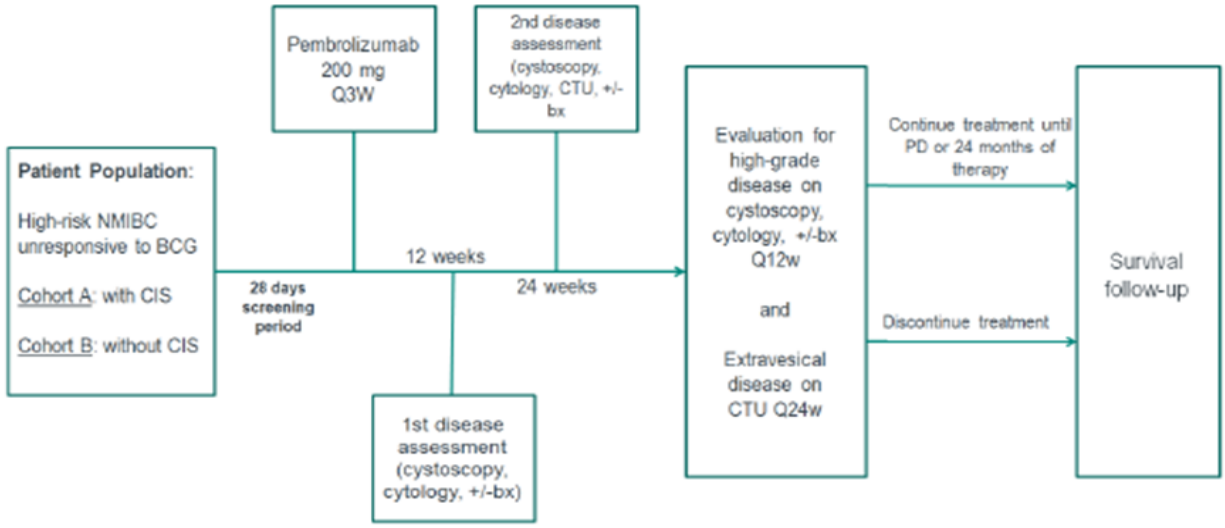
#081407: Perfusion MRI as a Diagnostic Biomarker for Renal Neoplasms

Principal Investigator:
Eric A. Singer, MD, MA, FACS
Assistant Professor of Surgery and Radiology
Section of Urologic Oncology
singerea@cinj.rutgers.edu

BLADDER CANCER

#081602: Merck Pembrolizumab Trial for Nonmuscle Invasive Bladder Cancer (NMIBC)

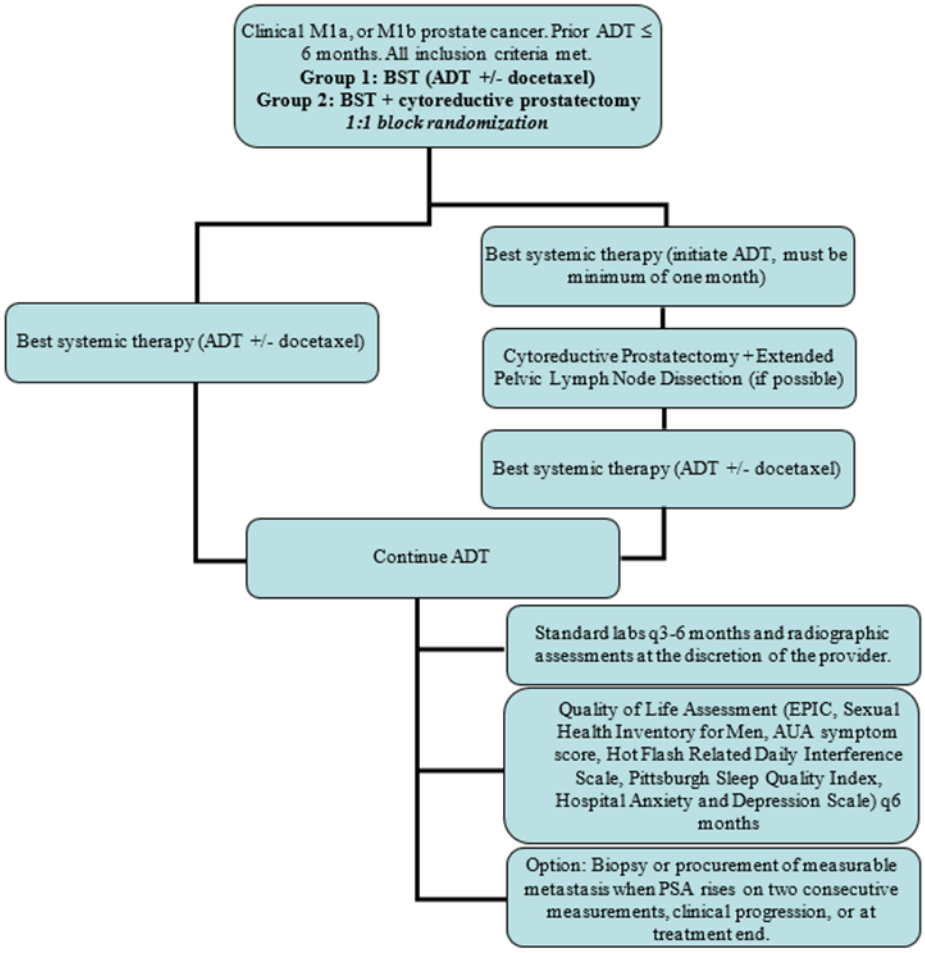
Principal Investigator:
Eric A. Singer, MD, MA, FACS



PROSTATE CANCER

#081707: SIMCAP (Surgery in Metastatic Carcinoma of Prostate)

Principal Investigator:
Isaac Y. Kim, MD, PhD, MBA

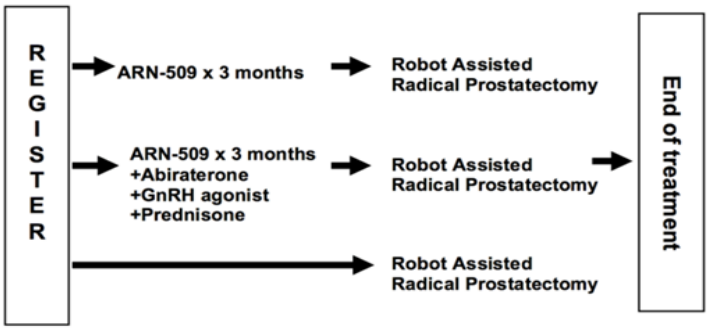


PROSTATE CANCER

#081603: Randomized Three-Arm Trial to Evaluate the Effect of Neoadjuvant Apalutamide Alone or in Combination with Abiraterone Acetate and GnRH Agonist, and Prednisone on Enhancing Surgical Outcome of Nerve-Sparing Radical Prostatectomy in men with High-Risk Prostate Cancer

Principal Investigator:

Isaac Y. Kim, MD, PhD, MBA



TESTICULAR CANCER

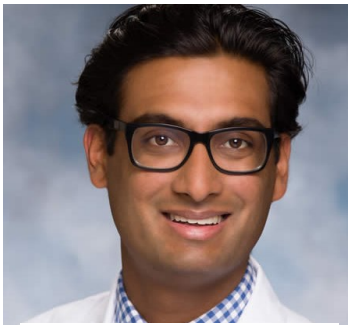
#081710: Surgery in Early Metastatic Seminoma (SEMS): Phase II trial of Retroperitoneal Lymph Node Dissection as first-line treatment for Testicular Seminoma with Isolated Retroperitoneal Disease (1-3cm)

Principal Investigator:

Thomas L. Jang, MD, MPH

KUDOS

Our resident physician, Dr. Kushan D. Radadia, was awarded the Carl J. Levinson Award for the BEST VIDEO (with Honorable Mention) award by the Society of Laparoendoscopic Surgeons during the SLS Annual Meeting during the Minimally Invasive Surgery Week (September 6-9, 2017) in San Francisco, CA, for the video on Robotic Assisted Laparoscpic Pyelolithotomy for "Treatment of Large Renal Stone Burden in a Single Session."



Dr. Kushan Radadia

NEWLY MATCHED UROLOGY RESIDENTS

HIREN PATEL

ARNAV SRIVASTAVA

Please join us in welcoming our newly matched residents Drs. Arnav Srivastava and Hiren Patel.

Dr. Srivastava joins us from Johns Hopkins Medical School. In 2015 he won an award from the Student National Medical Association Research for Characterizing Mechanisms of Disparity. Dr. Patel joins us from Stony Brook School of Medicine where he graduated with distinction in Biochemistry and Molecular Biology.

RUTGERS UROLOGY PRESENCE AT AUA 2018 (SAN FRANCISCO, CA)

"Outcomes of Lymphadenectomy for Non-metastatic Renal Cell Carcinoma: A Propensity Score-Weighted Analysis"

Authors: Nicholas Farber, Zorimar Rivera-Nunez, Sinae Kim, Kushan Radadia, Joshua Sterling, Parth Modi, Sharad Goyal, Rahul Parikh, Robert Weiss, Isaac Kim, Sammy Elsamra, Thomas Jang, Eric Singer

"The Urology Match and Post-Interview Communication"

Authors: Nicholas Farber, Christopher Neylan, Amy Kaplan, Kushan Radadia, Eric Singer, Sammy Elsamra

"Mr. Albarrans and his Bridge"

Authors: J Sterling, N Farber, K Radadia, R Patel, N Gupta

"Kidney stone composition varies according to racial and ethnic background; multi-institutional analysis of stone formers in the Northeastern United States"

Authors: Justin Friedlander, Rutveej Patel, Kevin Rhee, Eric Ghiraldi, Kushan Radadia and Ephrem O. Olweny

"Outcomes and Factors Associated with Receipt of Open versus Minimally Invasive Retroperitoneal Lymph Node Dissection for Men with Testicular Cancer: An Analysis of the National Cancer Database from 2010-2014"

Authors: A Tabakin, S Kim, C Polotti, Z Rivera-Nunez, J Sterling, P Modi, N Farber, K Radadia, R Parikh, R Weiss, I Kim, E Singer, T Jang

The AUA 2018 Instructional Course (CME accredited) on *"Case based approach to the management of adult neurogenic lower urinary tract dysfunction"*

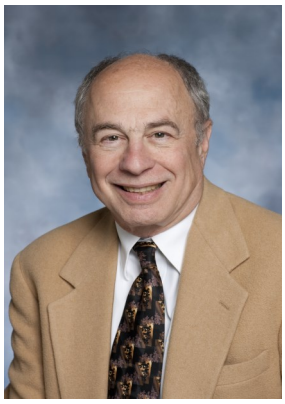
Course director: Hari S.G.R. Tunuguntla M.D., MS, MCh.

Dr. Isaac Y. Kim

Dr. Sammy E. Elsamra

Dr. Ephrem Olweny

Dr. Hari Tunuguntla



Dr. Joel Goldsmith

Dr. Eric Singer

Dr. Nikhil Gupta

Dr. Robert Steckler

FACULTY

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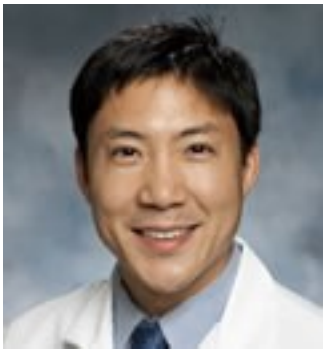

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