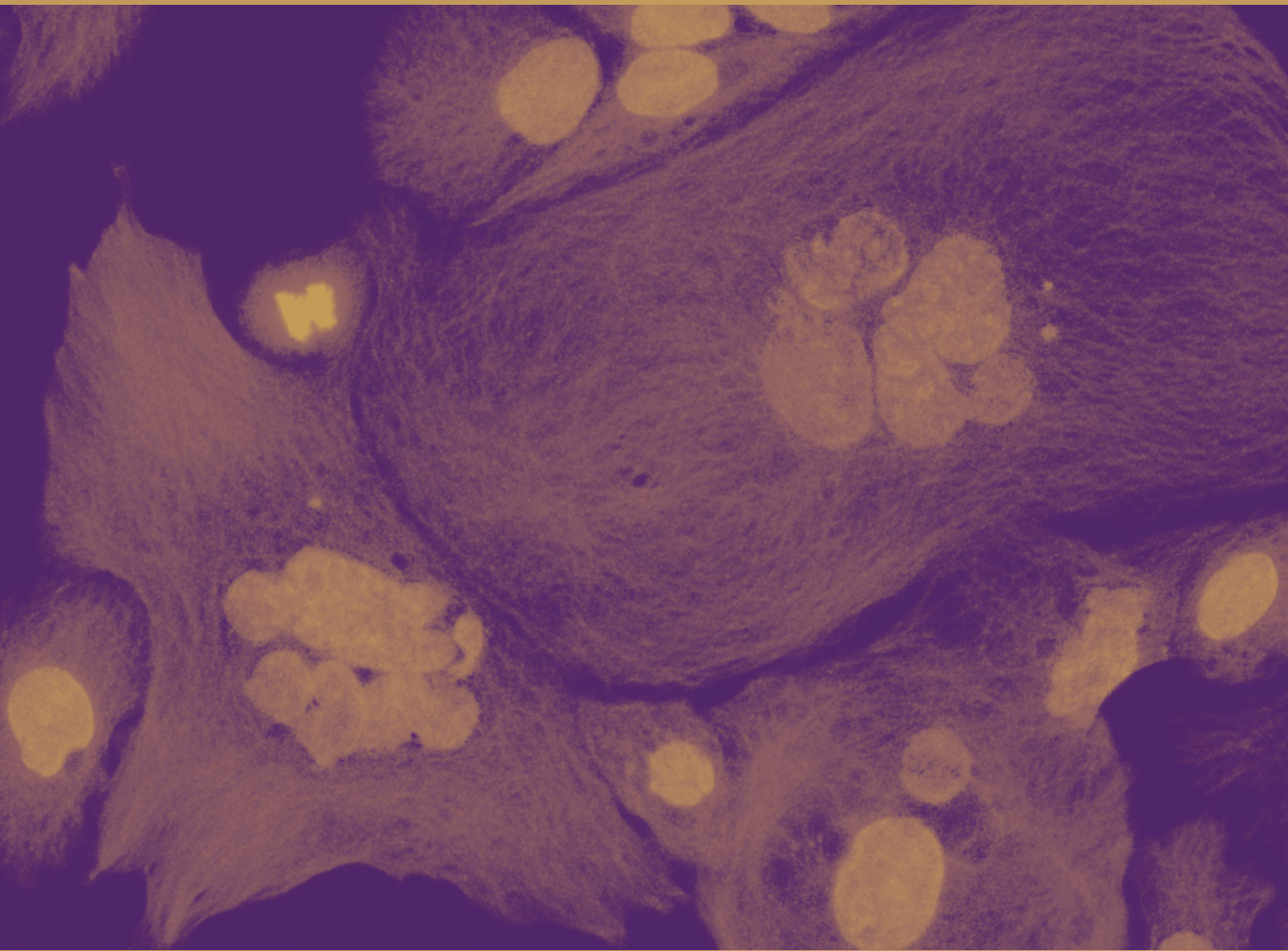




Urology

2017 YEAR IN REVIEW



Top 15

IN U.S. NEWS &
WORLD REPORT

Pioneer

IN GENDER-AFFIRMING
SURGERY & FOCAL
ABLATION

Top 10

IN NIH FUNDING
FOR UROLOGY

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 On the cover: Immunofluorescent light micrograph of cancer cells of the human bladder, stopped in the process of rapid cell division

MESSAGE FROM THE CHAIR

Dear Colleagues and Friends:

As 2017 drew to a close, I took great pride in reflecting on the many ways our doctors, basic scientists, and entire healthcare and research teams are making a difference, advancing the delivery of patient-centered care, unraveling the mechanisms of urological diseases, and bringing these advances to the urology community through presentations at national meetings and educational outreach, including our four postgraduate courses and our Case of the Month series.

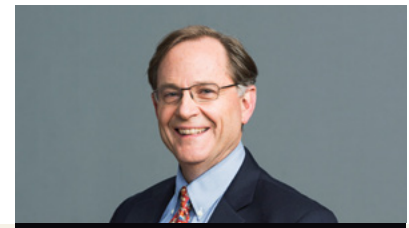
This past year, we passed the 15-year mark in collecting data for our radical prostatectomy prospective database, the longest continuously collected database, capturing both survival and quality of life outcomes. Begun just after the turn of the millennium and now with more than 2,000 men enrolled, the database continues to provide insights on long-term outcomes following this procedure, insights that are highly relevant because functional outcomes, such as continence, sexual function, and lower urinary tract symptoms, are also affected by aging. In 2017, our long-term data provided encouraging news for men who are considering or who have undergone radical prostatectomy to treat prostate cancer. It is through rigorous outcomes assessment that we have refined and advanced the surgical management of prostate cancer.

In early 2017, the FDA approved the first-ever, immune system-boosting treatments for cisplatin-ineligible bladder cancer. Based primarily on clinical trials led by medical oncologist Arjun V. Balar, MD, assistant professor of medicine and director of Perlmutter Cancer Center's Genitourinary Medical Oncology Program, the FDA approved

atezolizumab and pembrolizumab as first-line treatments.

Providing outreach to the larger community, Danil V. Makarov, MD, is working to ensure that veterans receive recommended prostate cancer care while avoiding unnecessary procedures. He recently received a \$1 million grant from the U.S. Department of Veterans Affairs to improve utilization of prostate cancer imaging procedures among veterans at 10 participating clinical sites nationwide.

Our department was highly visible at the 2017 annual American Urological Association (AUA) meeting held in Boston, which is testament to the cutting-edge clinical and basic urological research ongoing at NYU Langone Health and our faculty's reputation as leaders in the field and superb communicators. A group of NYU Langone urological surgeons won the Best Video award at the 2017 AUA meeting. Produced by urology resident Dmitry Volkin, MD, and faculty members Lee C. Zhao, MD, and Marc A. Bjurlin, DO, the video is a demonstration of a complex and innovative robot-assisted urethral reconstruction. Our postgraduate medical education courses continue to attract hundreds of urologists each year, and our faculty contribute to



HERBERT LEPOR, MD

A handwritten signature in black ink that reads "Herbert Lepor".

Professor, Urology and Biochemistry and Molecular Pharmacology

Martin Spatz Chair of the Department of Urology

Chief, Urology

the development of clinical best practices by serving on national guidelines committees. Samir S. Taneja, MD, the James M. Neissa and Janet Riha Neissa Professor of Urologic Oncology, and Andrew B. Rosenkrantz, MD, led an expert panel on the use of MRI in repeat prostate biopsy that resulted in a joint consensus statement. The two lent their years of prostate imaging experience to the panel and were the lead authors of the AUA and SAR (Society of Abdominal Radiology) joint consensus publication.

In the pages that follow, we offer highlights from a year that saw tremendous strides in bladder and prostate cancer treatment, female pelvic medicine, genitourinary reconstructive surgery, pediatric urology, and endourology, all of which are core strengths of our department. I am deeply grateful to the urology faculty for their commitment to excellence and innovation at the bench and the bedside. They are having a tremendous impact in transforming the future of urology.

Department of Urology

PATIENT CARE

10+

SUBSPECIALTIES

Prioritizing Detection

& FOCAL ABLATION OF CLINICALLY SIGNIFICANT PROSTATE CANCER

while helping to preserve men's quality of life

Dual-Surgeon, Cross-Specialty Team

ONE OF THE VERY FEW

that perform robotic "bottom" genital surgery

EDUCATION

4

UROLOGY CME COURSES

offered annually at NYU Langone

1 in 8

PRACTICING U.S. UROLOGISTS

have attended NYU Langone for postgraduate education

Diverse

PRACTICE SETTINGS

Public, private, and VA health systems

RESEARCH

P01

NCI PROGRAM PROJECT GRANT

with a focus on molecular tumorigenesis of bladder cancer

65

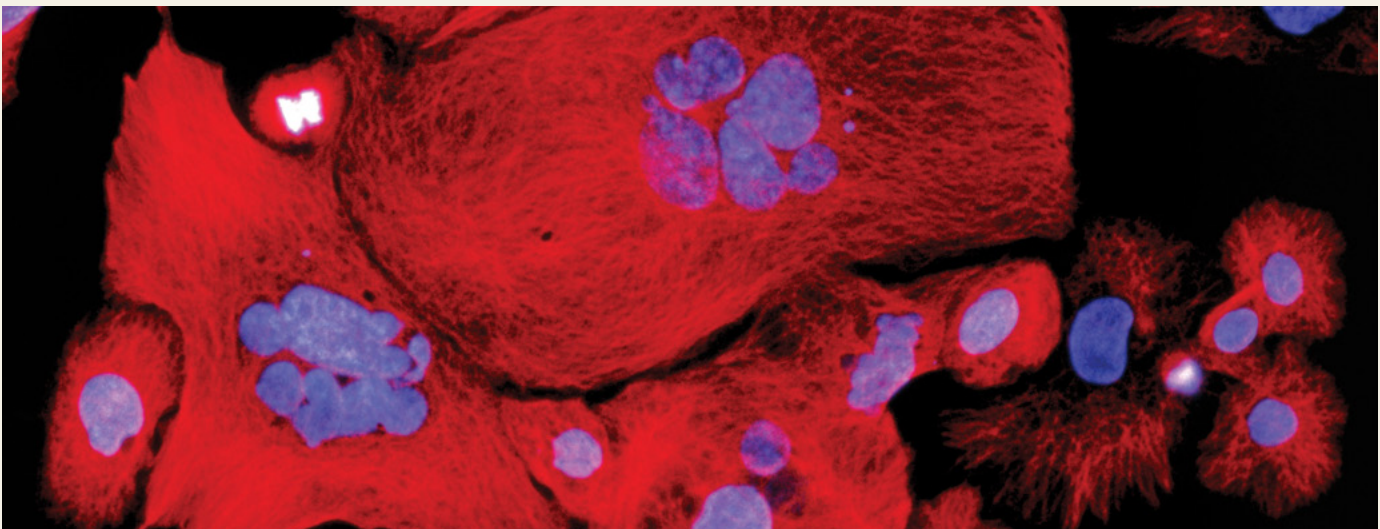
PRESENTATIONS & ABSTRACTS

presented at the AUA 2017 meeting

250+

PUBLICATIONS

produced by urology faculty in FY17



Bladder cancer cells

NYU Langone Health

View of NYU Langone Health's main Manhattan campus, including renderings of the new Science Building (left) and the Helen L. and Martin S. Kimmel Pavilion (right), both set to open in 2018. (Image credit: Ennead Architects)



#19

IN THE NATION

and nationally ranked in 12 specialties: Rehabilitation, Orthopedics, Rheumatology, Neurology & Neurosurgery, Geriatrics, Urology, Cardiology & Heart Surgery, Gastroenterology & GI Surgery, Diabetes & Endocrinology, Pulmonology, Cancer, and Nephrology



#12

IN THE NATION BEST MEDICAL SCHOOLS FOR RESEARCH

and a leader in innovation in medical education, including accelerated pathways to the MD degree



Leader

IN QUALITY CARE AND PATIENT SAFETY

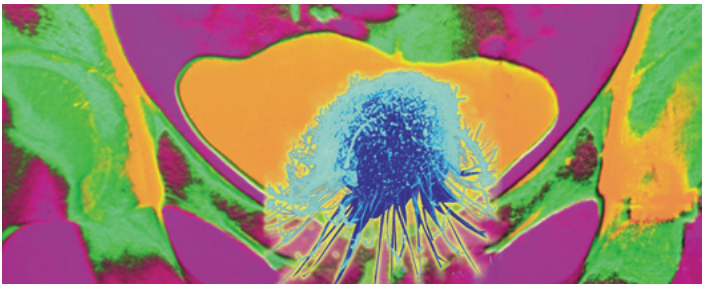
For the past four years, NYU Langone has received top rankings for overall patient safety and quality of care from Vizient, Inc., formerly the University HealthSystem Consortium. In 2017, NYU Langone received two significant awards from Vizient—the Bernard A. Birnbaum, MD, Quality Leadership Award and the Ambulatory Care Quality and Accountability Award for demonstrated excellence in delivering high-quality, patient-centered outpatient care.

5 Star Rating

FROM CMS HOSPITAL COMPARE

NYU Langone Health is the only full-service hospital in New York State and one of 9 percent of hospitals nationwide to receive a five-star rating from the Centers for Medicare and Medicaid Services (CMS). The rating reflects overall safety, quality, and patient experience.

Building on Existing Programs and Forging New Ground



↑ Conceptual colored X-ray showing cancer of the bladder. The bladder is the large distended orange area at lower center. The bones of the pelvis (green/orange) are seen around the bladder. Superimposed on the bladder is a colored scanning electron micrograph of a cancer cell.

Understanding Bladder Cancer in Molecular Detail

NYU Langone Health's urology research program is leading a major effort to better understand and treat bladder cancer. Its five-year, \$8.2 million National Cancer Institute program project grant in bladder cancer is unique in its focus on the fundamental mechanisms underlying the occurrence and progression of bladder cancer. Xue-Ru Wu, MD, the Bruce and Cynthia Sherman Professor of Urological Research and Innovation, professor of urology and pathology, and vice chair for Urological Research, and his team of investigators put out nearly 60 publications over the last four years on the underlying molecular mechanisms that contribute to the initiation and progression of bladder cancer. Dr. Wu is director of the Goldstein Family Bladder Cancer Research Group and a member of Perlmutter Cancer Center. Additional support for bladder cancer research is generously provided by J. Weinstein Foundation, Inc.

The multidisciplinary team includes experts from urology, cell biology, pathology, medical oncology, environmental medicine, and Perlmutter Cancer Center and is currently the only funded program project grant in the nation devoted to basic research on bladder cancer. In 2017, a research team led by Dr. Wu and NYU Langone collaborators identified a molecular pathway that explains why advanced bladder cancer often becomes resistant to treatment with standard-of-care cisplatin. That research, published in the journal *Scientific Reports* in April 2017, could lead to new treatments to overcome resistance to chemotherapy.

NYU Langone–Led Studies Offer Bladder Cancer Patients New Hope

Clinical trials led by bladder cancer specialist Arjun V. Balar, MD, assistant professor of medicine and director of the Genitourinary Oncology Program at Perlmutter Cancer Center, revealed that immunotherapy can provide lasting remission for patients with advanced bladder cancer. Based mainly on these trials, the FDA-approved atezolizumab (Tecentriq®) and pembrolizumab (Keytruda®) as first-line treatments for advanced bladder cancer in early 2017.

→ [Read more on](#)
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\$8.2
million

NATIONAL CANCER INSTITUTE

program project grant in
bladder cancer

Advancing Knowledge of Focused Tissue Ablation for Low-Risk Prostate Cancer

For men diagnosed with localized and low-risk prostate cancer, partial ablation has emerged as a potential option for eradicating disease while preserving urinary and sexual function.

Samir S. Taneja, MD, the James M. Neissa and Janet Riha Neissa Professor of Urologic Oncology Professor of Urology and Radiology, was lead investigator of a multicenter phase II clinical trial conducted at five institutions in the United States evaluating targeted photodynamic therapy as a treatment option for 30 men with low-risk disease. The results, published in the *Journal of Urology* in 2016, suggest that hemiablation effectively eliminated disease in most men receiving optimized dosing. Of 21 men treated, 15 had a negative biopsy in the treated lobe. The treated men reported minimal effects on urinary and sexual function. The study authors stressed the importance of evaluating longer-term cancer control in larger, randomized cohort studies.

New Research and Unique Perspectives Reinforce Long-Term Quality of Life Outcomes for Prostate Cancer Patients

When it comes to prostate cancer, experience can make a critical difference in treatment outcomes. From leadership in analyzing long-term surgical outcomes data to advanced MRI image-guided biopsy to active surveillance, the team at NYU Langone's Smilow Comprehensive Prostate Cancer Center offers insights into incontinence, surprising benefits of prostate removal, and focal ablation.

[→ Read more on](#)
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Advancing Science, Improving Assessment for Men at Risk of Prostate Cancer

Urologist Samir S. Taneja, MD, and radiologist Andrew B. Rosenkrantz, MD, established MRI image-guided biopsy as a valuable tool in identifying potentially cancerous lesions in the prostate and then led a select expert panel in developing consensus about its use in repeat biopsy. Dr. Taneja and Dr. Rosenkrantz were the lead authors of the AUA (American Urological Association) and SAR (Society of Abdominal Radiology) Prostate Joint Panel Consensus Statement, which appeared in the December 2016 issue of the *Journal of Urology*.

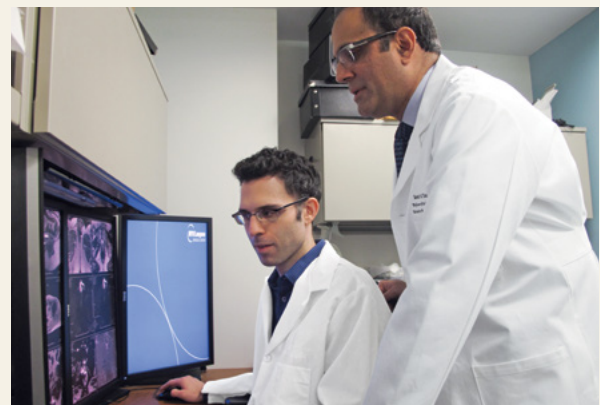
Drawing on their large database of patient outcomes, Dr. Rosenkrantz, associate professor of radiology and urology, and Dr. Taneja, the James M. Neissa and Janet Riha Neissa Professor of Urologic Oncology, professor of urology and radiology, member of Perlmutter Cancer Center, and director of Urologic Oncology, and colleagues recommend that any patient considered for a repeat biopsy receive a prostate MRI when experienced providers are available. They further stress that such imaging and the subsequent interpretation should be done in accordance with PI-RADS version 2 guidelines.

The guidance also covers scenarios for imaging under different patient risk classifications and technology availability, as well as varying operator proficiency.

"Radiologists interpreting MRI images should maintain strict adherence to quality assessments as well as to continuing education to ensure the quality of their MRI interpretations," says Dr. Taneja. "In skilled hands, MRI-guided biopsy can improve diagnostic yield and facilitate detection of clinically significant disease."

Dr. Taneja's work is funded in part by the Joseph S. and Diane H. Steinberg Charitable Trust.

↓ Andrew B. Rosenkrantz, MD, and Samir S. Taneja, MD



Growing Interest in Active Surveillance for Patients with Low-Risk Prostate Cancer

U.S. physicians and cancer care professionals should be encouraged to offer close supervision and monitoring to their patients diagnosed with low-risk prostate cancer, according to new research led by Stacy Loeb, MD, assistant professor of urology and population health.

In Sweden, where physicians routinely encourage patients who have been diagnosed with low-risk disease to consider active surveillance (AS), 91 percent choose that option, whereas only about 40 percent of patients in the United States choose it.

In the United States, the National Cancer Institute estimated that in 2017, 181,000 men would be

diagnosed with prostate cancer, mostly in its earliest stages. If more U.S. men opted for active surveillance, Dr. Loeb says, it could go a long way toward minimizing overtreatment of nonaggressive prostate cancer.

Dr. Loeb's research has been made possible in part by the generous support of the Edward Blank and Sharon Cosloy-Blank Family Foundation as well as from the Gertrude and Louis Feil family.

➔ [Read more on](#)
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Save the Date: Continuing Medical Education

MARCH 23-24, 2018

**Update in Female Pelvic Medicine
and Reconstructive Surgery**

➔ Course Director
Victor W. Nitti, MD

JUNE 15-16, 2018

**Advances in Screening, Detection,
and Treatment of Prostate Cancer**

➔ Course Director
Herbert Lepor, MD

DECEMBER 6-8, 2018

**Surgical, Pharmacological, and
Technological Advances in Urology**

➔ Course Director
Herbert Lepor, MD



↑ CME course at NYU Langone



↑ Danil V. Makarov, MD, MHS

Improving Prostate Care for Vets

Danil V. Makarov, MD, MHS, assistant professor of urology and population health and a member of Perlmutter Cancer Center, is working to ensure that veterans receive recommended prostate care while avoiding unnecessary procedures. He recently received a \$1 million grant from the U.S. Department of Veterans Affairs to improve prostate cancer imaging procedures among veterans at 10 participating clinical sites nationwide.

Dr. Makarov has received generous support from the Gertrude and Louis Feil family to support his work in guideline adherence as well as from the Edward Blank and Sharon Cosloy-Blank Family Foundation.

NYU Langone Develops New Class of Compounds with Therapeutic Potential

A unique cross-campus collaboration among urologists, research biologists, and chemists from NYU Langone and its Perlmutter Cancer Center has developed into an award-winning commercial venture with clinical potential. Susan K. Logan, PhD, associate professor of urology and biochemistry and molecular pharmacology, and Michael J. Garabedian, PhD, professor of microbiology and urology, worked with Kent Kirshenbaum, PhD, professor of chemistry, and colleagues to develop unique peptide-like compounds that show potent anticancer activity in prostate cancer cell lines and animal models.

As described in a report that appeared in the September 2016 issue of *Cancer Research*, the bioactive compound, named multivalent peptoid conjugate 6 (MPC6), suppressed the proliferation of androgen receptor-expressing prostate cancer cell lines, including those lines that did not respond to enzalutamide, the current standard of care for castration-resistant prostate cancer. In autumn 2016, the BioAccelerate program, which funds NYC-based research with strong commercial potential, announced that it had awarded the MPC6 project \$250,000 in seed funding.

The researchers received a second round of funding from the Partnership Fund for New York City and are using this to test MPC6 in models of prostate cancer bone metastasis, the most common metastasis in prostate cancer, for which current therapies are ineffective, and to chemically modify MPC6 to enhance its potency in order to attract the interest of the pharmaceutical industry.

AUA Recognition for National Leadership in Gender-Confirming Robotic Surgery Techniques

A leader in the development of surgical techniques allowing gender affirmation, Lee C. Zhao, MD, assistant professor of urology, has made strides in both female-to-male and male-to-female surgeries that avoid urological complications such as urethral strictures, fistulas, and stenosis. Dr. Zhao pioneered some of the first gender-confirming robot-assisted surgical procedures, using the da Vinci® surgical system available in NYU Langone's Robotic Surgery Center.

→ [Read more on](#)
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Reducing Unnecessary Risk for Women Undergoing Pelvic Procedures

Surgery for pelvic organ prolapse (POP) is twice as common as surgery for incontinence, but dual procedures are often performed. After the FDA issued a Public Health Notification about use of transvaginal mesh, many women became wary of mesh placement procedures. A recent comparison by NYU Langone Health female pelvic medicine specialists noted that the number of patients choosing to undergo midurethral sling placement at the time of POP repair fell after the FDA notification. Yet, the postoperative incidence of urethral bulking or sling placement remained relatively constant and infrequent (approximately 4 percent). The results suggest an overuse of anti-incontinence procedures. The study, led by Alice Drain, MD, a urology resident, and Victor W. Nitti, MD, professor urology and director of the Female Pelvic Medicine and Reconstructive Surgery Program, appeared in the *Journal of Urology* in April 2017.

A risk reduction study looking at radiation exposure among patients undergoing videourodynamic study (VUDS) at NYU Langone revealed that women with higher body mass index (BMI) and larger bladder capacity, among other factors, were exposed to more radiation. Study investigators attributed the differences in radiation exposure to necessary differences in positioning of the patient.

[→ Read more on](#)
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FDA warning

ABOUT USE OF TRANSVAGINAL MESH

prompted a decrease in the number of patients choosing to undergo midurethral sling placement at the time of POP repair

Erectile Dysfunction Drugs Again Cleared of Melanoma Risk

According to new data, Viagra® and other erectile dysfunction (ED) drugs do not appear to increase melanoma risk as previously reported. The data were published by an international team led by NYU Langone Health's Stacy Loeb, MD, MSc, assistant professor of urology and population health and a member of Perlmutter Cancer Center.



↑ Stacy Loeb, MD, MSc

The team performed a meta-analysis of five large-scale studies, published between 2014 and 2016, examining ED medication users and melanoma. In total, the studies included 866,049 men, of whom 41,874 were diagnosed with melanoma. The results of the meta-analysis appeared in the August 2017 issue of the *Journal of the National Cancer Institute*.

Although ED drug users had a slightly increased risk of a melanoma diagnosis, the research team attributed that risk to detection bias. In addition, the researchers reasoned that if ED medications cause melanoma, people who take them would develop more aggressive disease. In fact, those who took the medications were not at increased risk for aggressive melanoma compared with nonusers. The authors concluded that patients likely to take erection medicines are also more likely to see a doctor and therefore more likely to be diagnosed with stage 0 melanoma than other men of a similar age.

In 2016, the FDA placed Viagra and other phosphodiesterase type 5 (PDE5) inhibitor drugs on a safety watch list, in response to a 2014 report in *JAMA Internal Medicine* suggesting a link between PDE5 inhibitor use and melanoma.

"Overall, Viagra and other PDE5 inhibitors are safe medications as long as men are not taking nitrates, which carry a risk of reducing blood pressure," Dr. Loeb says. "Since the evidence does not support a causal relationship between these medications and melanoma, physicians and patients should not be concerned about their use on account of worry about melanoma."

With regard to the study, Dr. Loeb reported the following disclosures: honoraria for lectures from Boehringer Ingelheim and MDxHealth, consulting fees from Lilly, and reimbursement for travel to a conference from Minomic.

Expanding Urology Services in Brooklyn

PEDIATRIC UROLOGIST GRACE S. HYUN JOINS NYU LANGONE HOSPITAL—BROOKLYN TEAM

Grace S. Hyun, MD, has joined NYU Langone Health as clinical associate professor of urology and chief of Pediatric Urology at NYU Langone Hospital—Brooklyn. Dr. Hyun, who previously served as associate director of Pediatric Urology at Mount Sinai Medical Center, brings expertise in all aspects of pediatric urology, including treatment and management of varicoceles, undescended testicles, hypospadias, kidney stones, and congenital anomalies of the kidneys and urinary tract (e.g., ureteropelvic junction obstruction, vesicoureteral reflux, and ureteroceles), to the collaboration with NYU Langone Health's highly experienced pediatric nephrology team, which also offers minimally invasive surgery.

Dr. Hyun received her doctor of medicine degree from Cornell University and completed her urological training at New York Presbyterian Hospital—Columbia. She subsequently completed a fellowship in pediatric urology at Children's Hospital of Philadelphia. Dr. Hyun adds her expertise to the well-established program developed by Ellen Shapiro, MD, professor of urology and director of Pediatric Urology at Hassenfeld Children's Hospital at NYU Langone.

MRI-FUSION BIOPSY AND ROBOTIC PROSTATE SURGERY EXPANDING IN BROOKLYN

Under the direction of Frederick A. Gulmi, MD, clinical associate professor of urology, NYU Langone Hospital—Brooklyn's urology team is making precision targeted biopsy and robotic prostate surgery more widely available in Brooklyn. Marc A. Bjurlin, DO, clinical assistant professor of urology and director of Urologic Oncology, directs the program.

Complex Pediatric Case: Antenatal Hydronephrosis

Antenatal hydronephrosis, a finding observed in 1 percent to 2 percent of pregnancies on routine ultrasound during the second trimester, is often transient and clinically insignificant, but it also may represent a congenital anomaly of the kidney or the urinary tract that can result in impaired renal development or injury to the nephron. The congenital anomalies of the kidney or urinary tract most commonly implicated in fetal hydronephrosis are ureteropelvic junction obstruction and vesicoureteral reflux, with other causes including urethral atresia, posterior urethral valves, megaureter, ureterocele, ectopic ureter, and multicystic dysplastic kidney.

Two patients with fetal hydronephrosis were recently referred to NYU Langone Health's pediatric urology team for evaluation and management. The urology team worked with the parents and their radiology colleagues to provide individualized options and the best possible outcomes.

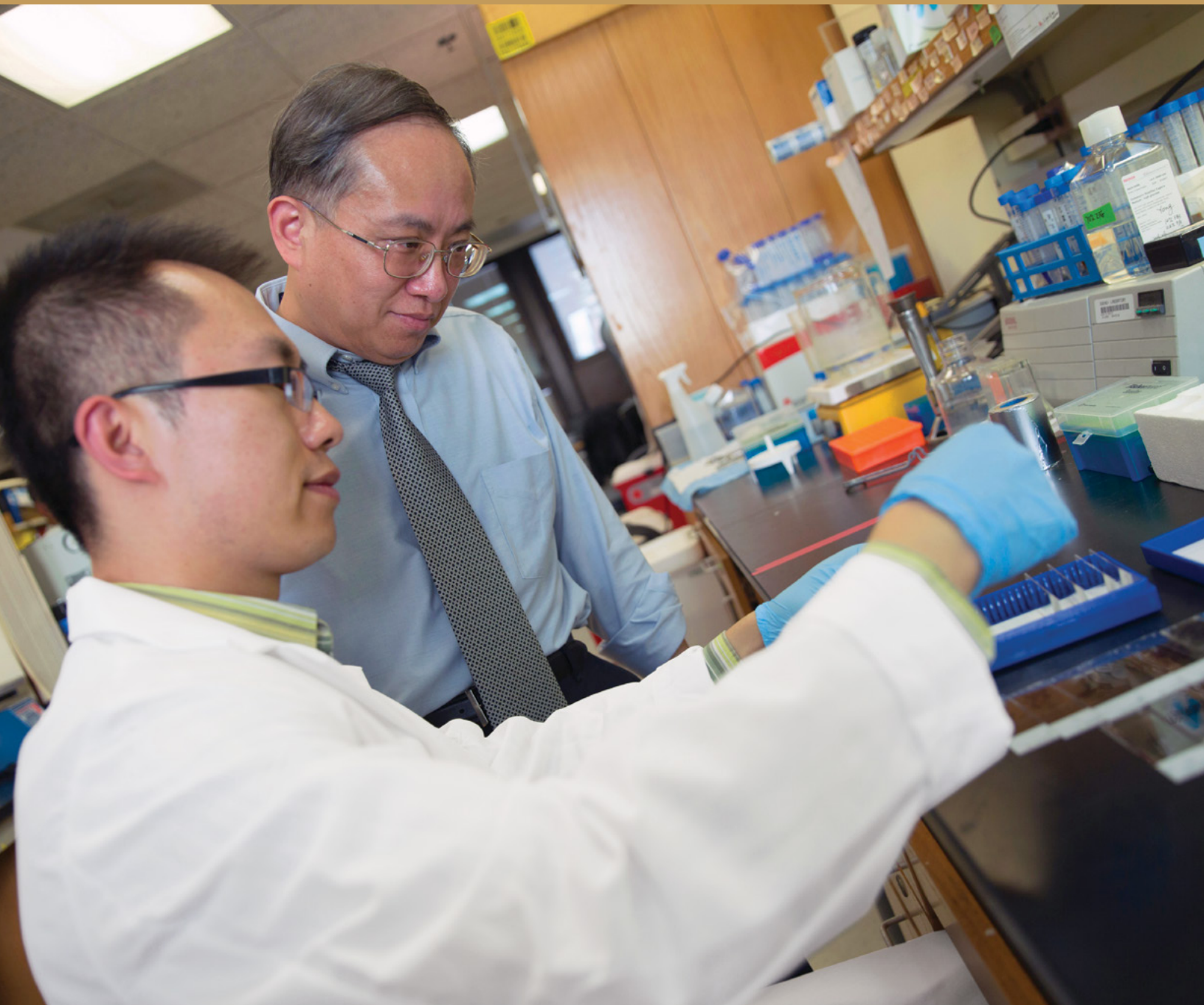
[→ Read more on
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NYU Langone Hospital—Brooklyn



2017 IN DEPTH

Clinical and Research Expertise Meets Innovation



↑ Yong Xia, PhD, and Xue-Ru Wu, MD

First Effective Treatments for Advanced Bladder Cancer in Three Decades

As recently as 2016, when a patient with advanced bladder cancer was too medically frail to take the standard-of-care chemotherapy agent cisplatin, oncologists had no effective alternatives to offer.



↑ Arjun V. Balar, MD

By harnessing the immune system to target bladder cancer, researchers have yielded two discrete new treatment agents. Based primarily on clinical trials led by Arjun V. Balar, MD, assistant professor of medicine and director of the Genitourinary Medical Oncology Program at Perlmutter Cancer Center, the FDA in early 2017 approved atezolizumab (Tecentriq®) and pembrolizumab (Keytruda®) as first-line treatments for these particularly frail patients with

advanced bladder cancer. These immune system-boosting agents are the first-ever FDA-approved treatments for cisplatin-ineligible bladder cancer.

In the clinical evaluation of atezolizumab, published in *The Lancet* in January 2017, bladder tumors shrank by at least 30 percent and new tumor growth stalled in 28 (24 percent) of 119 patients. All study participants received the medication as their initial therapy for the disease. Similarly, pembrolizumab shrank tumors by at least a third in 24 percent of patients. Of those, 6 percent saw their tumor lesions disappear. The pembrolizumab study was published in *The Lancet Oncology* in November 2017. All patients enrolled in the study were ineligible for cisplatin because of medical frailty.

“Responses with non-cisplatin chemotherapy, the previous standard, are short-lived, and patients die within 10 months, on average,” says Dr. Balar. “Immunotherapy harnesses the immune system to generate durable responses and

is better tolerated than chemotherapy. Immunotherapy is the most important advance in bladder cancer therapy in more than 30 years, and it has charted a new path in how we will approach understanding and treating this cancer moving forward.”

“Beyond breakthrough therapies, patients also benefit greatly from the team’s expertise in robotic-assisted surgery and diagnostic imaging.”

—William C. Huang, MD

E-CIGARETTES MAY PRIME THE BLADDER FOR CANCER

Far from a benign alternative to cigarettes, e-cigarettes and their vapors can damage DNA in bladder cells and thus increase the risk of bladder cancer, according to a collaborative research study conducted at NYU Langone Health. Perlmutter Cancer Center investigators, led by environmental medicine researcher Moon-Shong Tang, PhD, professor of environmental medicine, medicine, and pathology, conducted the study in mouse and human urothelial cells. The team, which included William C. Huang, MD, associate professor of urology and co-director of the

Robotics Program, found that e-cigarette smoke makes its way to the bladder and causes DNA damage in cells lining the organ. Since this same kind of DNA damage to cells is already known to increase the risk of bladder cancer, the researchers concluded that e-cigarette users may be at increased risk of bladder cancer. The study findings were presented by associate research scientist Hyun-Wook Lee, PhD, at the 2017 American Urological Association meeting and published in the April 2017 issue of *The Journal of Urology*.

Prostate Cancer: Men Living Longer, Maintaining Quality of Life

The NYU Langone Health radical prostatectomy prospective database is one of few enabling long-term longitudinal tracking of post-prostatectomy survival and quality of life outcomes. New findings offer encouraging news for men who are considering or who have undergone radical prostatectomy to treat prostate cancer.



Herbert Lepor, MD

URINARY INCONTINENCE RATE AFTER RADICAL PROSTATECTOMY MIRRORS RATE IN GENERAL AGING POPULATION

Despite surgical advances, the development of urinary incontinence following open and robotic radical prostatectomy remains a feared limitation of the treatment. In 2004, Herbert Lepor, MD, professor of urology and biochemistry and molecular

pharmacology and the Martin Spatz Chair of Urology, and colleagues reported that 97 percent of men undergoing radical prostatectomy regained urinary continence within two years. A recent review of long-term patient data led by Dr. Lepor, presented at the 2017 Asia-Pacific Prostate Cancer Conference in Melbourne, Australia, revealed that over a period of 15 years, urinary continence rates declined to 89.8 percent. These 15-year incontinence rates were independent of age at the time of surgery, suggesting that men of all ages should be counseled that incontinence may develop years after the surgical procedure.

Prospective studies from Scandinavia have indeed demonstrated that as they age men in the general population are at risk of developing urinary incontinence as a result of bladder outlet obstruction from the enlarging prostate. According to Dr. Lepor, while radical prostatectomy may cause urinary incontinence by compromising sphincter function, removing the malignant prostate prevents urinary incontinence that would have developed from the benign enlargement of the prostate.

PROSTATE REMOVAL MAY PROTECT AGAINST SOME URINARY SYMPTOMS

Nearly all men—from 25 percent of 40-year-olds to 90 percent of 80-year-olds—experience some benign prostatic hyperplasia (BPH) as they age. Although prior studies have shown that many men experience worsening urinary symptoms due to BPH over time, the long-term prospective outcomes study shows this does not occur in men who have undergone radical prostatectomy.

Approximately 40 percent of men have moderate to severe lower urinary tract symptoms (LUTS) immediately prior to undergoing radical prostatectomy. Following radical prostatectomy, these men will experience marked symptom improvement, which is durable over 15 years. Of the men who have mild LUTS immediately prior to undergoing radical prostatectomy, very few develop progressive and bothersome LUTS. The annual cost of managing BPH is approximately \$4 billion in the United States alone. Radical prostatectomy appears to alleviate the economic burden and adverse quality of life impact of BPH.

15 years of long-term data

from NYU Langone show urinary symptoms plateau 2 years after surgery and remain unchanged 15 years later

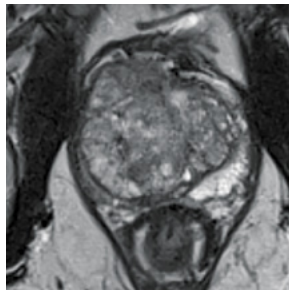
FOCAL ABLATION MAY CONTROL PROSTATE CANCER, PAIRED WITH ACTIVE SURVEILLANCE

Organ-sparing surgery for prostate cancer has the potential to circumvent the side effects of radical prostatectomy, but whether it would control disease has been unclear, since prostate cancer is typically multifocal. A team led by Dr. Lepor has recently demonstrated that in select patients, focal ablation may achieve an acceptable level of disease control when paired with careful postsurgical monitoring.

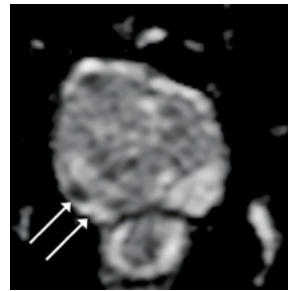
The study, published online in *Urology* in October 2017, relied on rigorous MRI-guided prostate mapping to identify 59 men who were candidates for focal ablation but chose radical prostatectomy between 2012 and 2016. The criteria included a single reported MRI lesion concordant with a biopsy Gleason score (GS) less than eight, no gross extraprostatic extension on MRI, no GS above six or six with a core length greater than five millimeters contralateral to the reported MRI lesion.

Reviewing postsurgical radical prostatectomy specimens, the investigative team concluded that 43 (72.9 percent) harbored multifocal

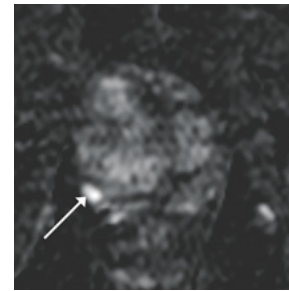
Advanced MRI identifies optimal cases for focal ablation



T2-weighted MR images



Apparent diffusion coefficient



Dynamic contrast-enhanced ultrasound

disease. In addition, the MRI correctly identified the pathological index lesion, defined by the highest GS and tumor volume, in 55 of 59 cases (93.2 percent), reinforcing the value of MRI in identifying the disease that drives the biology of the cancer. The researchers concluded that focal ablation would have eradicated all Gleason pattern 4 disease in most cases and that any remaining Gleason pattern 4 extrafocal disease would have been very low volume. The potential for recurrent disease necessitates ongoing active surveillance, both within and outside the treatment zone.

“Skeptics of focal ablation should remember that more than half of men

whose low-risk disease is managed with active surveillance have undiagnosed Gleason pattern 4 disease,” says Dr. Lepor. “Ultimately, the efficacy of focal ablation will need to be confirmed through randomized control studies comparing it with other treatment options,” he adds.

NYU Langone and its Perlmutter Cancer Center, recognized as a center of excellence for image-guided detection and focal ablation, will play an instrumental role in defining candidates for focal ablation and optimizing oncological and functional outcomes following this novel approach to treating prostate cancer.

LONGEST LONGITUDINAL STUDY OF MEN UNDERGOING RADICAL PROSTATECTOMY

In 1982, Dr. Herbert Lepor was a co-author of the landmark publication study describing nerve-sparing anatomic radical retropubic prostatectomy, which greatly improves oncological and functional outcomes.

Dr. Lepor initiated a prospective Institutional Review Board-approved outcomes study in October 2000. The study examined factors such as survival and disease recurrence as well as functional outcomes such as lower urinary tract symptoms,

urinary continence, and sexual function following nerve-sparing anatomic radical retropubic prostatectomy.

Since then, more than 2,000 men have been enrolled into what has become the longest longitudinal study of men undergoing radical prostatectomy. More than 90 percent of men enrolled in this study were reported alive 10 years after radical prostatectomy, and aging exhibits effects independent of functional outcomes.

Active Surveillance a Safe Option for Men with Low-Risk Prostate Cancer

Active surveillance (AS) is gaining momentum among Swedish men with low- and very-low-risk prostate cancer, according to a new study by Stacy Loeb, MD, MSc. These findings may prompt more physicians and patients to consider AS in their treatment plan.



↑ Natalia Byrne and Stacy Loeb, MD, MSc

OPTIONS FOR MEN WITH LOW-RISK DISEASE

Along with an international research team from Sweden and England, Dr. Loeb, assistant professor of urology and population health and a member of Perlmutter Cancer Center, evaluated data

from Sweden's National Prostate Cancer Registry, one of only a few national databases in the world. The researchers found that Swedish men with very-low-risk cancer are more likely to choose AS when presented with the choice between AS and immediate treatment. The study,

published online in *JAMA Oncology* in October 2016, reported an increase from 57 percent of Swedish men with very-low-risk prostate cancer choosing AS in 2009 to 91 percent choosing AS in 2014. For Swedish men with low-risk prostate cancer choosing AS, the figures increased from 40 percent to 74 percent during the same period.

Among American men with low-risk prostate cancer, the AS rate is 40 percent to 50 percent in most studies. According to Dr. Loeb, although this percentage is increasing, it remains lower than it could be. "American men should be informed that active surveillance is a safe option that is recommended by the guidelines and given a solid understanding of the extent of their cancer, so that more men with low-risk disease might opt for surveillance," adds Dr. Loeb.

Years of research, including studies conducted at NYU Langone Health, have shown that carefully selected patients who remain on AS for low- or very-low-risk prostate cancer have a very low risk of dying from prostate cancer. Similarly, a large study published in the October 2016 issue of *The New England Journal of Medicine* showed no difference in prostate cancer-specific death rates a decade after diagnosis between those who chose AS for low-risk prostate cancer and those who chose immediate treatment. Moreover, immediate treatment carries the burden of a greater risk of side effects. Dr. Loeb cautions that side effects and oncological outcomes have not been published for the Swedish men in the current study who were recently diagnosed with prostate cancer.

40% to 50% and Rising

ACTIVE SURVEILLANCE RATES

in most studies among U.S. men with low-risk prostate cancer, reports Stacy Loeb, MD, MSc

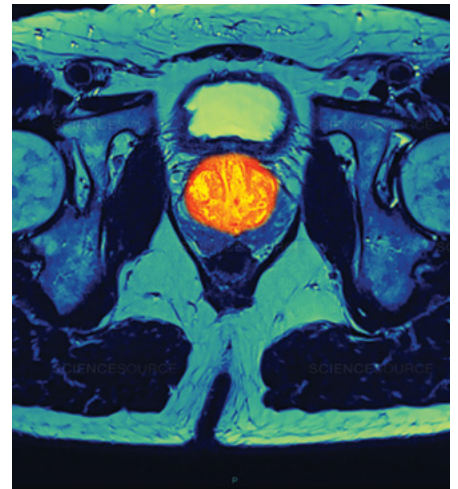
MINIMIZING OVERTREATMENT OF NON-AGGRESSIVE DISEASE

The National Cancer Institute estimates that in 2017, 181,000 men will be diagnosed with prostate cancer, mostly in its earliest stages. More American men opting for AS could go a long way toward minimizing overtreatment of nonaggressive prostate cancer, says Dr. Loeb.

“Our findings, combined with the earlier findings concerning outcomes, should encourage U.S. physicians and cancer care professionals to offer close supervision and monitoring to their patients with low-risk disease,” says Dr. Loeb.

USE OF mpMRI INCREASES CONFIDENCE IN ACTIVE SURVEILLANCE

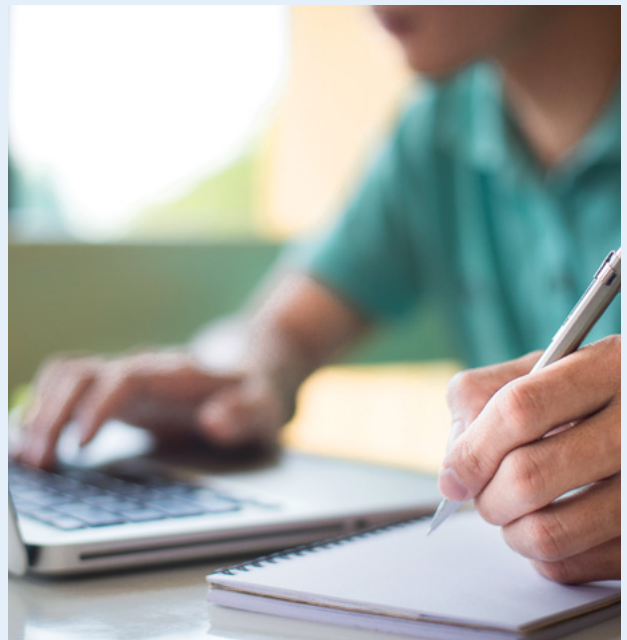
Separately, in a commentary published in January 2017 in the journal *Oncology* (Williston Park, NY), Dr. Loeb and the National Cancer Institute’s Peter Choyke, MD, argued that use of multiparametric MRI (mpMRI) can increase clinicians’ confidence in recommending AS and patients’ confidence in choosing AS. The use of mpMRI can more precisely characterize cancers detected during biopsy, pointing toward AS as a prudent choice.



↑ Prostate cancer MRI

PHYSICIANS AND PATIENTS SEEK UNBIASED INFORMATION ON ACTIVE SURVEILLANCE

In a first-in-kind study, a team of investigators from NYU Langone Health’s Department of Urology has uncovered an unmet need for quality information on active surveillance (AS) among both physicians and patients. Through focus groups interviewing physicians and patients undergoing AS at NYU Langone and the VA New York Harbor Health Care System (Manhattan Campus), the team found that patients are uncertain about the quality of online information about AS and that physicians report a need for additional digital resources about AS. The interviews, published in *Patient Education and Counseling* in September 2017, also demonstrated a desire among physicians and patients for computer-assisted tools that predict outcomes of AS. In addition, patients reported a need for unbiased information on the monitoring tests used during AS, data on the various treatment options, and a clearer understanding of prostate cancer grading. Insights from the study signal an opportunity for physicians and educators to create unbiased online and printed resources addressing prostate cancer prognosis, monitoring practices, and lifestyle modification.



Innovations Reduce Complications in Reconstructive Urological Surgery

NYU Langone Health experts are combining traditional and robotic approaches to refine reconstructive procedures and optimize outcomes for patients seeking gender-affirmation surgery. They are also developing and deploying new techniques to provide relief for individuals with urethral and ureteral strictures.

NEW TECHNIQUES MINIMIZE COMPLICATIONS IN GENDER-AFFIRMING SURGERIES

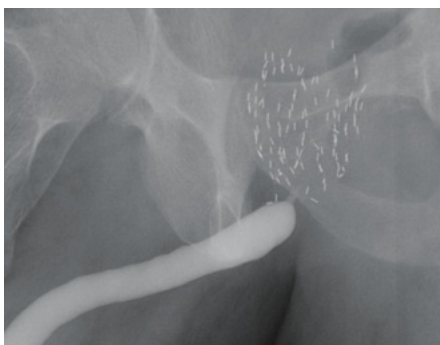
Lee C. Zhao, MD, assistant professor of urology, director of Male Reconstructive Surgery, pioneered the world's first gender-affirming robot-assisted surgical procedures, using the da Vinci® Surgical System in NYU Langone's Robotic Surgery Center.

Dr. Zhao's recent innovations in both female-to-male and male-to-female surgeries help avoid common urological complications such as urethral strictures and fistulas. In 2017, Dr. Zhao presented the results of two of these procedures.

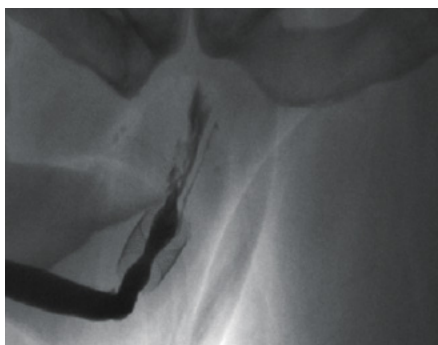
The first procedure, for those undergoing a female-to-male transition, is a robot-assisted laparoscopic transabdominal approach to neophallus construction, which allows the individual to void while standing. The surgery, which lengthens the urethra and provides supporting muscle, was performed without urethral complications in 11 transgender men from mid-2016 to mid-2017. Dr. Zhao presented this development at the Sexual Medicine Society of North America Fall 2017 Scientific Meeting in San Antonio, Texas.

Separately, for those undergoing a male-to-female transition, Dr. Zhao developed a robot-assisted technique for

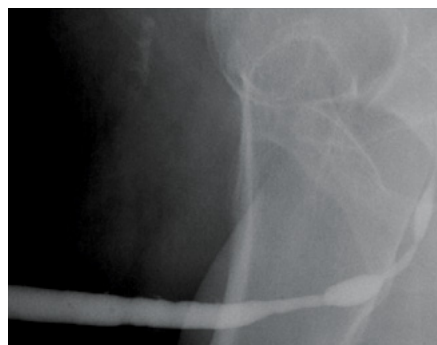
the dissection of the perineum and the creation of a neovaginal canal—one of the most challenging aspects of penile inversion vaginoplasty (PiV). Dr. Zhao presented the outcomes for 15 transgender women who underwent PiV at NYU Langone at the 2017 American Urological Association (AUA) annual meeting in Boston, Massachusetts. The complex, four- to six-hour procedure requires mobilization of tissue flaps or abdominoplasty and skin graft harvest. The technique achieved desired vaginal length in a reproducible manner, with only two patients experiencing postsurgical complications that required additional treatment.



↑ Patient who developed urethral stricture after prostate cancer treatment with brachytherapy



↑ Patient with two urethral strictures after previous endoscopic treatment



↑ Patient with recurrent urethral stricture despite urethral stent placement

PIONEERING APPROACHES OFFER GREATER VISUALIZATION AND CONTROL

With patients surviving longer after prostate cancer treatment, lingering complications can pose difficult reconstructive challenges. In particular, patients who experience stenosis and strictures of the urethra after radiation treatment often struggle with a lower quality of life.

Addressing the need for new surgical techniques to ameliorate complex urethral damage, Dr. Zhao has pioneered approaches that are providing excellent outcomes for patients. “Improved visualization and technical control with a robotic approach, coupled with urethral mobilization and dissection from a perineal approach and muscular flap coverage, provide definitive reconstruction for patients with complex

posterior urethral disease following radiation,” says Dr. Zhao.

Recently, Dr. Zhao developed a robot-assisted procedure to salvage the bladder of a 69-year-old patient experiencing urethral complications 15 years after brachytherapy treatment for prostate cancer. Using a combined robotic and perineal approach, Dr. Zhao performed a salvage prostatectomy that included excision of a urethral stricture.

Dr. Zhao presented the innovative surgical technique at the 2017 meeting of the Société Internationale d’Urologie in Lisbon, Portugal.

INSTRUCTIONAL RECONSTRUCTION VIDEO WINS RECOGNITION AT AUA ANNUAL MEETING

A group of NYU Langone urological surgeons won the “Best Video” award at

the 2017 AUA annual meeting. The educational demonstration of a complex surgical reconstruction involved two ureteral strictures with appendiceal onlay. The video demonstrated the approach, which included robotic excision, on a patient in their sixties. Six months after the surgery, the patient had no urinary infections or flank pain. The team concluded that for the appropriate patient, ureteral reconstruction using an onlay of appendix and bladder is feasible and effective. Urology resident Dmitry Volkin, MD, led the group, which included Dr. Zhao and Marc A. Bjurlin, DO, clinical assistant professor of urology and director of Urologic Oncology at NYU Langone Hospital—Brooklyn.

TOTAL HEALTHCARE FOR INDIVIDUALS SEEKING GENDER-AFFIRMING PROCEDURES

NYU Langone Health is at the forefront of research and innovation in gender-affirming procedures, conducting studies to improve patient outcomes and satisfaction and to contribute to the competent total healthcare of transgender individuals. NYU Langone’s multidisciplinary team provides medical services for transgender adults and adolescents, including surgery, hormone therapy, reproductive health services, and mental health services.

Lee C. Zhao, MD, assistant professor of urology and director of Male Reconstructive Surgery, who came to NYU Langone in 2013, has pioneered the use of robotic techniques to make transgender procedures safer, faster, and less invasive. Dr. Zhao often collaborates with Rachel Bluebond-Langner, MD, the Laura and Isaac Perlmutter Associate Professor of Reconstructive Plastic Surgery, who joined NYU Langone’s Hansjörg Wyss Department of Plastic Surgery in 2017 from the University of Maryland School of Medicine. Dr. Zhao and Dr. Bluebond-Langner are part of a growing team of specialists at NYU Langone who care for transgender patients. Together, they have established one of the country’s few dual-surgeon, cross-specialty programs that perform robotic “bottom” genital surgery for vaginoplasty and phalloplasty, which many experts agree presents safer and more effective results.



↑ Lee C. Zhao, MD, and Rachel Bluebond-Langner, MD

NYU Langone Health has been recognized as leader in lesbian, gay, bisexual, transgender, and queer (LGBTQ) healthcare equality by the Human Rights Campaign Foundation in its 2017 Healthcare Equality Index.

Improving Outcomes for People with Incontinence

For those living with incontinence, recent studies offer insights into why patients with multiple sclerosis may not seek urological care for incontinence, new imaging protocols can help manage radiation exposure risk during videourodynamic diagnostic procedures, and findings appear to indicate that diminished use of the urethral sling in prolapse surgery does not affect incontinence rates.

STUDY REVEALS PHYSICIAN–PATIENT COMMUNICATION BARRIERS TO INCONTINENCE CARE AMONG MULTIPLE SCLEROSIS PATIENTS

Although most multiple sclerosis (MS) patients report that urinary problems interfere with their lives, many do not seek urologic care—and little analysis has been done to date to learn why. A new study led by NYU Langone Health urologists sheds light on one critical barrier to urology referral: a lack of communication between patients and physicians.

In the investigation, patients at the MS Comprehensive Care Center at NYU Langone completed a validated screening questionnaire developed to identify MS patients in need of a referral

for bladder symptoms. Of 100 patients surveyed, 27 (5 men and 22 women) scored above the threshold for referral. However, a follow-up survey conducted a year later indicated that only 11 of the 27 sought urological care. At the time of enrollment in the investigation, 36 patients had expressed an interest in urological evaluation and received a referral, but only 16 followed through with seeing the urologist. The study, published in *Neurology and Urodynamics* in April 2017, revealed no demographic or mobility-assistance barriers to care. Led by Benjamin M. Brucker, MD, assistant professor of urology and obstetrics and gynecology and a specialist in female pelvic medicine, and Victor W. Nitti, MD, professor of urology and obstetrics and

gynecology, director of the Female Pelvic Medicine and Reconstructive Surgery Program, and vice chair of the Department of Urology, this study makes clear the need to facilitate access to care and to emphasize to patients that treatments are available.

REDUCING RADIATION EXPOSURE DURING VIDEOURODYNAMIC DIAGNOSTIC PROCEDURES

In response to FDA concerns over radiation exposure—which nearly doubled among U.S. adults between 1985 and 2010 as a result of increased medical imaging—NYU Langone urologists recently analyzed radiation exposure data during videourodynamic study (VUDS).

↓ Benjamin M. Brucker, MD



>75%
OF MS PATIENTS
experience lower urinary tract symptoms that limit daily activities



↑ Nirit Rosenblum, MD, and Herbert Lepor, MD

Among the 203 patients studied at NYU Langone, investigators found that increased radiation exposure during VUDS was significantly associated with higher body mass index (BMI), female gender, larger bladder capacity, and a complex imaging protocol such as for vesicoureteral reflux. These differences in radiation exposure were attributed to necessary differences in positioning of the patient; since fluoroscopic image clarity can be compromised when the patient is in a sitting position, repeat images or longer fluoroscopic time may be needed. The risk associated specifically with higher BMI is explained by the difficulty of image acquisition because of tissue penetration and scatter, the researchers stated. The study appeared in *LUTS: Lower Urinary Tract Symptoms* in December 2016. As a follow-up, NYU Langone investigators

developed a protocol to limit radiation exposure without compromising the quality of the study. The result was a significant reduction of 51.2 percent in radiation exposure, without significantly affecting diagnostic validity.

DIMINISHED USE OF URETHRAL SLING IN PROLAPSE SURGERY DOES NOT APPEAR TO ADVERSELY AFFECT INCONTINENCE RATES

Performance of incontinence prevention procedures during pelvic organ prolapse (POP) surgery has been controversial, with an increased focus on patient preferences and outcomes triggered by the widely publicized July 2011 FDA Public Health Notification on transvaginal mesh. NYU Langone female pelvic medicine and reconstructive surgery providers

“70 percent of MS patients consider urinary incontinence one of the most difficult aspects of the disease.”

—Benjamin M. Brucker, MD

retrospectively reviewed the records of 775 patients who had undergone POP surgery from January 2009 through December 2015. Prior to surgery, patients were informed of the likely risk of postoperative stress incontinence and of the risks and benefits of concomitant anti-incontinence surgery. Overall, 322 (42%) underwent midurethral sling placement at the time of POP repair. However, the researchers found that the number of patients choosing both procedures fell from 55 percent just before the 2011 FDA notification to 38 percent immediately after it and then remained steady at 39 percent up to four years later. Despite this decrease in concomitant stress incontinence procedures, the postoperative incidence of urethral bulking or sling placement remained relatively constant and infrequent (approximately 4 percent), suggesting that more judicious use of anti-incontinence procedures does not compromise outcomes and emphasizing the importance of shared decision making between patient and surgeon. The study, led by NYU Langone urology resident Alice Drain, MD, and Dr. Nitti, appeared in *The Journal of Urology* in April 2017.

National

LEADER IN EDUCATION

Victor W. Nitti, MD, serves as chair, American Urological Association Office of Education

Antenatal Hydronephrosis: Benign Finding or Congenital Anomaly of the Kidney and Urinary Tract?

Antenatal hydronephrosis, a finding observed in 1 percent to 2 percent of pregnancies on routine ultrasound during the second trimester,¹ is often transient and clinically insignificant, but it also may represent a congenital anomaly of the kidney or the urinary tract that can result in impaired renal development or injury to the nephron.

The congenital anomalies of the kidney or urinary tract most commonly implicated in fetal hydronephrosis are ureteropelvic junction obstruction and vesicoureteral reflux (VUR), with other causes including urethral atresia, posterior urethral valves, megaureter, ureterocele, ectopic ureter, and multicystic dysplastic kidney.²

Two patients with fetal hydronephrosis were recently referred to Ellen Shapiro, MD, professor of urology and director of pediatric urology, for evaluation and management. Collaborating with radiologists skilled in urological diagnostic imaging, the pediatric urology team at Hassenfeld Children's Hospital at NYU Langone worked with the parents to provide them with individualized options and the best possible outcomes.

RENAL PELVIS DILATION AND OTHER INDICATORS PREDICTIVE OF CONGENITAL ANOMALIES

The timing of prenatal ultrasonography is critical to detection of congenital anomalies of the kidney and the urinary tract. The fetal kidney can be visualized on ultrasound at 12 to 15 weeks' gestation, but significant disease may be difficult to detect before differentiation of the renal cortex and the medulla, which occurs at 20 to 25 weeks' gestation. Ultrasound allows measurement of the anterior-posterior renal pelvis diameter (RPD) and evaluation of calyceal dilation, renal parenchymal thickness and appearance, and abnormalities of the bladder or ureters. Although nephrogenesis is complete by 36 weeks' gestation, the impact of continuing compression of the

renal parenchyma on the ultimate endowment of healthy nephrons is unknown.

Anterior-posterior RPD measured in the transverse plane provides an index of hydronephrosis severity. An abnormal RPD has been defined in the National Institute of Child Health and Human Development's 2014 Executive Summary on Fetal Imaging as 4 mm or greater in the second trimester and 7 mm or greater at 32 weeks or more, with postnatal radiographic evaluation recommended.³ Mild hydronephrosis is commonly found in association with Down syndrome and should prompt evaluation of fetal anatomy to identify other congenital anomalies.⁴ RPD greater than 10 mm in the second trimester and/or greater than 15 mm in the third trimester are associated with increased risk of congenital anomalies of the kidney and urinary tract. Progressive antenatal dilation of the renal pelvis increases the likelihood of the need for postnatal surgical intervention.³ The urinary tract dilation (UTD) classification system for antenatal and postnatal hydronephrosis is based on ultrasound parameters associated with increased risk, including parenchymal changes, ureteral dilation, bilateral involvement, bladder abnormalities, and oligohydramnios.²

CASE 1: PROGRESSIVE POSTNATAL DILATION LEADS TO SURGICAL INTERVENTION AND SIGNIFICANT IMPROVEMENT

At 20 weeks' gestation, a 35-year-old female had a routine ultrasound that identified a left anterior-posterior RPD of 8 mm with a normal right kidney and ureters. At

38 weeks' gestation, ultrasound revealed a normal bladder and ureters and a left RPD of 2.2 cm, with peripheral calyceal dilation. Amniotic fluid volume was normal. The neonate had an Apgar score of 9¹/9⁵ upon delivery at 40 weeks.

The initial postnatal ultrasound (Figure 1A) revealed a right kidney with UTD P3. There was no reflux on voiding cystourethrography (VCUG). At 6 weeks, MAG3 scan showed the right kidney contributed 60 percent of total renal function and the left kidney contributed 40 percent. Following Lasix, there was delayed drainage on the left. A second ultrasound (Figure 1B) showed no change, but the family decided to delay recommended surgery. At three months, there was a slight increase in hydronephrosis on the left (Figure 1C), and a dismembered left pyeloplasty was performed. At three months postop, ultrasound showed improvement of hydronephrosis and interval growth of the kidneys (Figure 1D).

Postnatal Management Challenges: Limit Testing and Intervention in Low-Risk Cases

Predictive factors can differentiate significant disease from mild or transient hydronephrosis and thus limit unnecessary testing. The first postnatal ultrasound is performed after 48 hours, when the neonate is volume-repleted.²

Limit Intervention While Providing Close Follow-Up in High-Risk Cases

An approach based on risk stratification and monitoring reduces unnecessary testing and treatment but allows timely intervention

when necessary to limit renal damage. In patients with unilateral congenital anomaly of the kidney or the urinary tract, serial ultrasound is indicated to monitor mild or moderate obstructive uropathy and to assess compensatory growth in the unaffected kidney.

Evaluation of fetal hydronephrosis includes a dynamic renal scan (MAG3), to differentiate obstructive from nonobstructive causes of hydronephrosis. VCUG is the definitive study to identify VUR and to assess the lower urinary tract. If the results of VCUG will affect case management, it may be indicated for all infants with significant hydronephrosis, ureteral dilation, thick-walled bladder, or urethral pathology and for male infants who are likely to have urethral pathology. Infants at high risk for VUR should also be treated with prophylactic antibiotics.

CASE 2: SURGERY DELAYED AFTER IMPROVEMENT, WITH SUBSEQUENT RESOLUTION OF HYDRONEPHROSIS

A 31-year-old female had a normal 20-week structural ultrasound. At 32 weeks, ultrasound showed a right RPD of 1.5 cm with peripheral calyceal dilation

(UTD A2–3). The left kidney, ureters, and bladder appeared normal. At 37 weeks, the anterior-posterior RPD was 2.0 cm (UTD A2–3). The amniotic fluid volume was normal. Vaginal delivery at 40 weeks was uneventful, with the neonate having an Apgar score of 9¹/9⁵.

The first postnatal sonogram (Figure 2A) at 1 week of age showed the right kidney with UTD P3. A VCUG showed no reflux. The MAG3 scan at 6 weeks of age demonstrated contribution to total renal function of 35 percent from the right kidney and 65 percent from the left. Following Lasix, poor drainage on the right was noted. A second renal sonogram (Figure 2B) showed a slight improvement of hydronephrosis, so surgery was not recommended. Renal sonogram at 3 months (Figure 2C) showed definite improvement in the degree of right hydronephrosis. At 1 year, renal ultrasound showed almost complete resolution of hydronephrosis, with decompression of the collecting system (Figure 2D).

Timing of Intervention: A Delicate Balance

It is unclear whether renal compression of the renal pyramids and renal parenchyma affects ultimate healthy nephron

endowment or whether function in an obstructed kidney can be completely recovered, but early intervention by a skilled pediatric urologist has been demonstrated to be effective in restoring compromised renal function.² When managing fetal hydronephrosis, any delay in intervention should be accompanied by close follow-up, with timely surgical correction before irreparable damage occurs.

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Figure 1. Case 1 postnatal sonograms

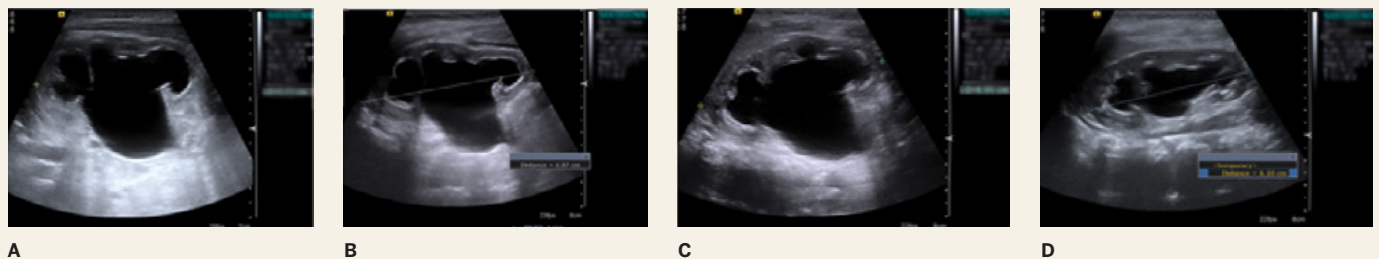
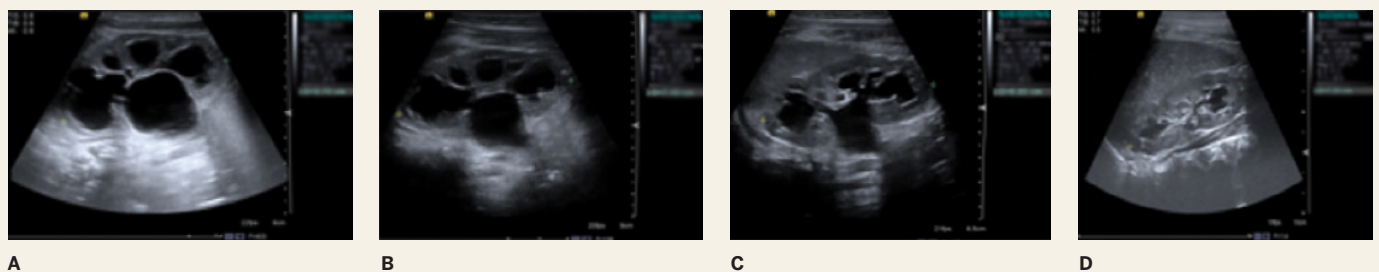


Figure 2. Case 2 postnatal sonograms



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AWARDS AND HONORS

David S. Goldfarb, MD, holds several leadership positions in the field of nephrology. He is associate editor of the *Clinical Journal of the American Society of Nephrology* and president of the Research on Calculus Kinetics (R.O.C.K.) Society.

William C. Huang, MD, has been named co-director of the NYU Langone Robotic Surgery Center. Dr. Huang uses robotic surgical techniques in minimally invasive surgeries to remove kidney, bladder, prostate, and testicular cancers with minimal side effects and improved quality of life for patients. Dr. Huang also serves on national and international committees that publish guidelines for the management of cancers of the urinary tract.

Herbert Lepor, MD, is a co-founder and the current editor of *Reviews in Urology*. Dr. Lepor has served on the editorial boards of four major urology journals.

Stacy Loeb, MD, MSc, is on the editorial boards of *BJU International*, *European Urology*, *Urology Practice*, and *Reviews in Urology*. Dr. Loeb also hosts the *Men's Health Show* on SiriusXM 81 satellite radio, and she chairs the Urology Care Foundation's Technology & Publications Committee.

Danil V. Makarov, MD, MHS, is a member of the Society for Medical Decision Making, a diplomate of the American Board of Urology, and chair of the White Paper Committee on Implementation of Shared Decision Making into Urological Practice of the American Urological Association. He is also a consultant for the FDA's Center for Devices and Radiological Health.

Victor W. Nitti, MD, is chair of the American Urological Association Office of Education.

Samir S. Taneja, MD, is a consulting editor for the *Urologic Clinics of North America* and is on the editorial board of *European Urology*.

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NYU LANGONE BY THE NUMBERS*

1,519 Beds	98 Operating Rooms	172,072 Emergency Room Visits	68,884 Patient Discharges	4,500,000 Outpatient Faculty Practice Visits	9,654 Births	
3,633 Physicians	5,104 Nurses	516 MD Candidates	85 MD/PhD Candidates	263 PhD Candidates	418 Postdoctoral Fellows	1,327 Residents and Fellows
5,087 Original Research Papers	549,707 Square Feet of Research Space	\$359M NIH Funding	\$364M Total Grant Revenue			

*Numbers represent FY17 (Sept 2016–Aug 2017) and include NYU Langone Hospital—Brooklyn

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