



The Milton and Carroll Petrie
**Department of
Urology**

- Kidney Cancer Center
- Reconstructive Surgery Program

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- Kidney Cancer Center
- Reconstructive Surgery Program

- Robot-Assisted Kidney Surgery
- Robot-Assisted Partial Nephrectomy
- Minimally Invasive Reconstructive Surgery
- Active Surveillance and Monitoring
- Advanced Kidney Imaging and Genomic Profiling



Ketan K. Badani, MD

Vice Chairman of Urology and Robotic Operations for the Mount Sinai Health System

Director, Comprehensive Kidney Cancer Center

Director, Reconstructive Surgery Program

Professor of Urology, Icahn School of Medicine at Mount Sinai

*“Surgery was the most difficult thing I could imagine.
And so I became a surgeon.”*
– **Abraham Verghese**, *Cutting for Stone*

Overview

Our Comprehensive Kidney Cancer Center and Robotic Kidney Surgery Program is led by Ketan Badani, MD, Vice Chairman of Urology and Robotic Operations for the Mount Sinai Health System and Director of Robotic Surgery for Mount Sinai.

Dr. Badani is recognized as a world leader in the research and treatment of prostate, kidney and bladder cancer.

Dr. Badani performs the most robot-assisted kidney cancer procedures in the United States.

He offers first-class individualized treatments to all of his patients. This includes utilizing the most advanced and sophisticated surgical approaches such as robotic surgery and minimally invasive techniques, offering the advantages of performing major operations through small incisions rather than big ones, leading to faster recovery time and fewer complications. Dr. Badani is also one of the preeminent practitioners in the world for robotic partial nephrectomy for complex kidney tumors – expertise that is especially important if you are considering robotic kidney cancer surgery, where success depends more on the skill and experience of the surgeon than on the technology. Dr. Badani performs all aspects of the surgery himself to ensure that every patient receives the best possible care, and he has the most experience worldwide performing this operation

The Comprehensive Kidney Cancer Center at Mount Sinai spans service areas such as nephrology, medical oncology, radiology, interventional radiology, genomics and complementary medicine. We offer all treatment modalities for kidney cancer including radical and partial nephrectomy, ablation, and active surveillance.

Dr. Badani and his team collaborate very closely with radiation therapy and medical oncology experts to provide every currently available treatment. The program offers individualized care to each patient with kidney cancer based on tumor stage, grade, and overall patient health.

In collaboration with the Tisch Cancer Institute at Mount Sinai, a National Cancer Institute (NCI)-designated center, we lead clinical trials and coordinate advanced cancer treatment, providing access to the latest innovations in cancer care.



About Dr. Badani

Ketan Badani, MD, is a pioneer in robot-assisted kidney cancer surgery. He has led teams that first developed and published techniques for minimally invasive robotic kidney surgery. His technique of robotic partial nephrectomy, the F.A.S.T. (First Assistant Sparing Technique) procedure, has been published and taught around the world to treat patients with renal tumors. Dr. Badani leads a team that seeks to improve treatment of these cancers by finding effective and less invasive therapies while maintaining an excellent quality of life after surgery.

Dr. Badani has the largest combined experience in robotic kidney and prostate cancer surgery in the New York area. He also performs the most robotic partial nephrectomy procedures in the world.

As a professor, Dr. Badani has given lectures and demonstrated surgeries to teach his technique at prominent institutions in the United States, Canada, Brazil, Japan, India, Malaysia, Taiwan, Azerbaijan, Venezuela, China, Spain, Korea, Hong Kong, UAE, and Turkey. He is the author of more than 200 peer-reviewed publications and has presented more than 500 abstracts at national and international meetings. Dr. Badani is also involved in numerous clinical trials, feasibility and safety studies of new technologies, and health-related quality of life outcomes research. He serves as an editor and/or reviewer for numerous publications including Cancer, Journal of Urology, Urologic Oncology, and Journal of Endourology, among others.

Dr. Badani graduated in the top of his class from Case Western Reserve University School of Medicine in Cleveland. He went on to complete his urology residency at the world-renowned Vattikuti Urology Institute at Henry Ford Hospital in Detroit (his hometown). He also completed a fellowship in minimally invasive urologic oncology at the Vattikuti Urology Institute, where robotic urologic surgery was first performed in the United States. Upon completion of his training, Dr. Badani joined the faculty of New York Presbyterian Columbia University Medical Center as Director of Robotic Surgery. He has led the Comprehensive Kidney Cancer Center and Reconstructive Surgery Program at Mount Sinai since 2014.

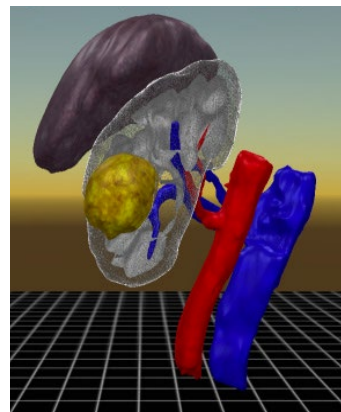
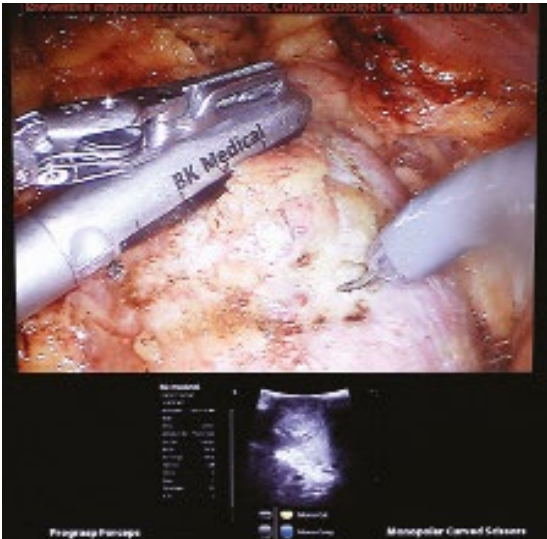
First Assistant Sparing Technique

F.A.S.T. Robotic Partial Nephrectomy

Dr. Badani developed F.A.S.T. (First Assistant Sparing Technique) as a means to shorten partial nephrectomy surgery time, a critical factor in the success and outcome of this surgery. Historically, robotic surgeries involved the surgeon plus any number of assistants who were called on to carry out parts of the operation. In a F.A.S.T. robotic partial nephrectomy, the surgeon never leaves the controls. Dr. Badani's technique takes certain steps out of the hands of the assistant, and puts them back into the hands of the surgeon. This process saves precious minutes and reduces the total amount of time in which blood flow to the kidney is stopped (ischemia time). If you have kidney cancer, this is a better option for your kidney, and ultimately, better for you.

The robotic partial nephrectomy is already quite an advancement from the days when the entire kidney was removed to treat a tumor. A F.A.S.T. robotic partial nephrectomy is yet another milestone in curing cancer while preserving as much of the healthy, functioning kidney as possible.

The F.A.S.T. technique allows Dr. Badani's team at Mount Sinai to perform robotic partial nephrectomy surgery rather than having to remove the entire kidney (which would have been the only option previously).



Next generation 3-D imaging gives unprecedented views of the kidney and a tumor.

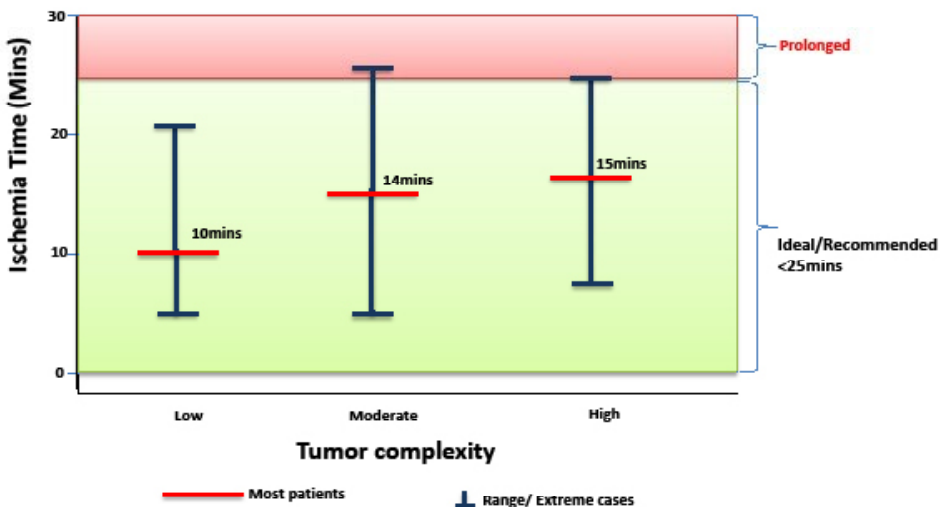
F.A.S.T. developed by Dr. Badani

- Lower complication rates
- Shorter ischemia time
- Faster recovery
- Hospital stay less than 1 day
- Preserved long term kidney function
- Consistent optimal results

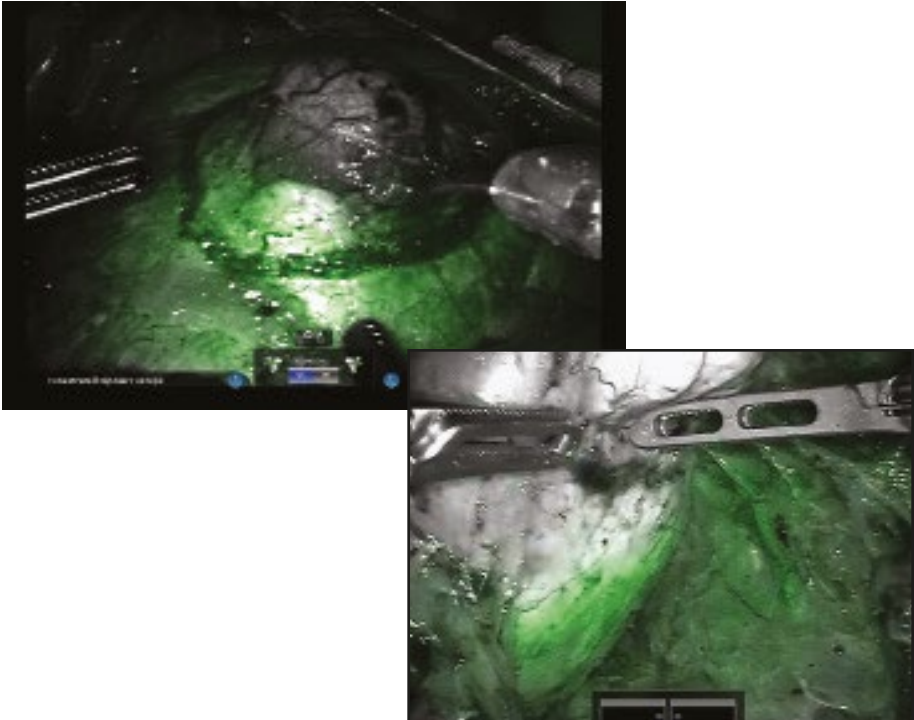
The benefits of F.A.S.T. are many:

- Surgery is performed through small “keyhole” incisions instead of a major incision, resulting in less blood loss and a faster recovery.
- Warm ischemia time and operative time during robot-assisted partial nephrectomy can adversely affect kidney function and clinical outcomes. With F.A.S.T., ischemia time can be minimized to an average of 11 minutes, and as short as 4 minutes.
- F.A.S.T. data has also shown that regardless of how complex or difficult a tumor is, the ischemia time and several other beneficial outcomes associated with the surgery did not show any significant difference (See graph below.)

Predictive Model of Ischemia Time by Tumor Complexity using F.A.S.T.

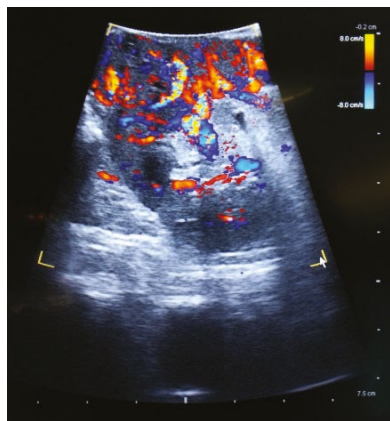


- Immunofluorescence imaging allows the team to perform F.A.S.T. and selective arterial clamping. Instead of clamping the main artery, cutting the entire kidney off from blood flow, immunofluorescence imaging helps the surgeon find the specific branch that feeds the tumor. This artery can then be clamped and blood flow maintained to the rest of the kidney, eliminating ischemia time in most cases, depending upon tumor size and location.



Green area shows good blood flow. Gray area is ischemic where the tumor is located.

- Robotic controlled ultrasound in real time provides the surgeon with enhanced visualization and tumor identification; the surgeon can see both the operative field and ultrasound images simultaneously.



Outcomes

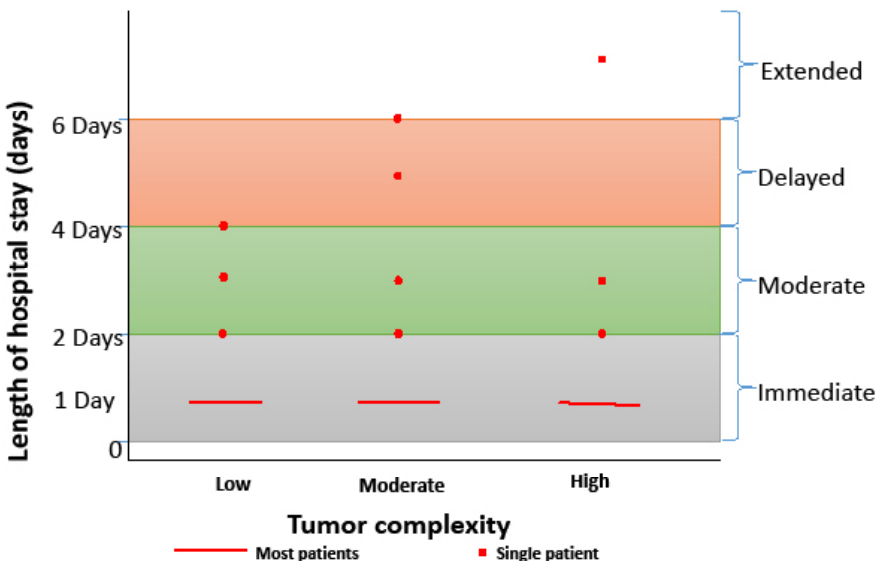
There are three primary goals when performing a partial nephrectomy. First, to treat the cancer by removing the tumor completely, referred to as a negative surgical margin. Second, the warm ischemia time (time the kidney is without blood flow) should be less than 25 minutes to prevent any long-term kidney function damage. Third, no surgical complications during or after the procedure. These three factors are referred to as the “trifecta.” The F.A.S.T. technique, developed by Dr. Badani, has an overall trifecta success rate of 97 percent. In addition, 93 percent of patients are able to go home the next day after surgery, and 99 percent return home on day two.

Outcomes Summary Analysis
F.A.S.T. Robotic Partial Nephrectomy

- Average Warm Ischemia Time (WIT): 11.2 minutes est.
- Blood Loss: 50cc (range 30–226)
- Hospital Stay: 93 percent home post-op day one; 99 percent home post-op day two
- Overall Complication Rate: 1.4%

OVERALL TRIFECTA SUCCESS RATE (Negative surgical margins, average WIT <25 mins., no complications): 98 percent

Length of hospital stay based on kidney cancer complexity among 404 patients who were managed with the F.A.S.T. Technique



Treatment Approaches to Kidney Cancer

Active Surveillance

There are some cases where the appropriate course of action is no action. For select patients with small, early cancers, the Comprehensive Kidney Cancer Center team may recommend active surveillance because if a tumor is indolent (or slow-growing), it might not require treatment. Active surveillance is an especially good option when the patient is older or has other health problems that indicate he or she is not a good candidate for surgery. Active surveillance is different from “watchful waiting.” Patients are seen on a regular schedule to monitor their condition.



Small left renal mass suitable for surveillance

Partial Nephrectomy

Partial nephrectomy refers to the surgical removal of cancerous kidney tissue while leaving the healthy kidney intact. A partial nephrectomy can be performed robotically or laparoscopically, but the robotic procedure takes less time, helping to ensure the ischemia time (time kidney is without blood flow) is short enough to prevent damage to the kidney. Additionally, the robotic procedure results in less blood loss and a faster recovery in most cases. Dr. Badani’s F.A.S.T partial nephrectomy has been shown to minimize complication rates and maximize kidney function preventing renal failure and dialysis.

Radical Nephrectomy

If a kidney tumor is large or invading outside the kidney itself, a partial nephrectomy to remove the tumor may not be feasible. In these cases, the surgeon will perform a radical nephrectomy for the complete removal of the cancerous kidney. Fortunately, if the patient’s other kidney is healthy, there is minimal impact on his or her quality of life or lifestyle. A radical nephrectomy can be performed via open surgery, robotically, or traditional laparoscopic technique.



Alternative Minimally-Invasive Treatment Options – Ablation

For patients who are not surgical candidates (too ill for surgery, older, or whose tumor is very small), tumors can sometimes be destroyed using cold or heat. These procedures are relatively quick, preserve healthy tissue, and do not involve a large incision (if done percutaneously – through the skin – no incision is needed). As the data is limited on long-term results for cancer control, long-term imaging surveillance and/or biopsies are required subsequent to this procedure

Cryoablation involves freezing the tumor using needles inserted through small incisions. Dr. Badani's research has found that cryoablation is equally effective as partial nephrectomy for treatment of small renal cortical tumors when followed up in the short term. Dr. Badani and colleagues also found that use of a standard needle core biopsy technique before laparoscopic cryoablation for small renal cortical tumors resulted in the most accurate tumor diagnosis.

Increased biopsy accuracy was also found when the patients were younger and had larger tumors.

Radiofrequency Ablation is the method of destroying a tumor with heat. It is similar to cryoablation in that several needles are inserted through small incisions under guidance of imaging.

Treatment of Kidney Cancer at Mount Sinai

- All options available
- Personalized treatment, patient-specific
- Minimally invasive options offered when appropriate

Imaging Techniques and Expertise

At the Comprehensive Kidney Cancer Center, Dr. Badani and team work very closely with key members in the Department of Radiology who specialize in imaging of the kidney and abdomen. The program utilizes high-resolution CT scan and MRI technology to provide highly detailed images of the kidney. This level of detail will allow the team to determine the selective arterial branches of the kidney that feed the tumor, and suitability for partial nephrectomy. Additionally, Dr. Badani is involved with innovative research on 3-D modeling of kidney tumors, where images can be rendered in 3-D to allow Dr. Badani to have an accurate “map” of the kidney anatomy at the time of surgery.



Dr. Badani using real-time intraoperative ultrasound during robotic partial nephrectomy.

Close collaboration is required to maximize clinical outcomes when offering percutaneous ablation (cryoablation or “freezing”) of the tumor. At other centers, interventional radiologists perform this treatment, but we recommend involving both our cancer specialists and the radiologist.



Bachir Taouli, MD
Director, Cancer Imaging
The Mount Sinai
Hospital



Sara C. Lewis, MD
Assistant Professor,
Diagnostic, Molecular and
Interventional Radiology



Octavia Bane, PhD
Instructor of Radiology,
Icahn School of Medicine
at Mount Sinai

Robotic Surgery

The da Vinci Surgical System is a sophisticated robotic platform designed to expand the surgeon's capabilities and offer a state-of-the-art minimally invasive option for prostate and kidney cancer surgery. With robotic surgery, small incisions are used to insert miniaturized instruments and a high-definition 3-D camera. Seated comfortably at the robotic console, Dr. Badani is able to view a magnified, high-resolution 3-D image of the surgical site inside your body.

At the same time, the latest robotic and computer technologies scale, filter and seamlessly translate Dr. Badani's hand movements into precise micro-movements of the robotic instruments. Although it is often called a "robot", the da Vinci System cannot move or operate on its own; Dr. Badani is 100 percent in control.

Robotic experience is the key to a successful outcome and Dr. Badani is one of the most experienced robotic surgeons in the world; he has been performing robotic surgery since its inception in 2001.

The Comprehensive Kidney Cancer Center utilizes the latest robotic technology including the newest Single Port Robotic system.



da Vinci **Robot Xi**



da Vinci **Robot SP**

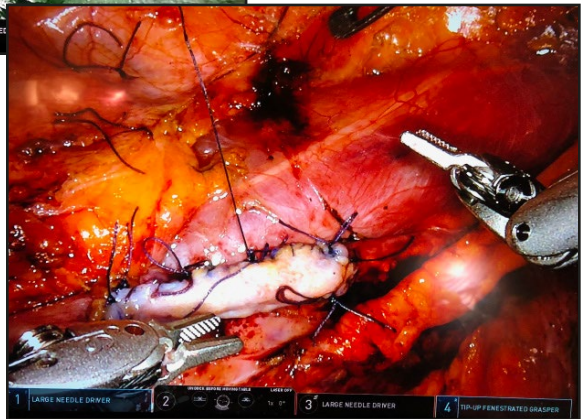
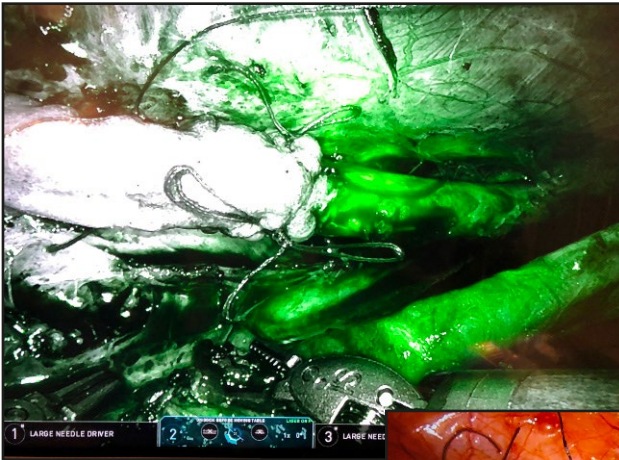
Kidney Reconstructive Surgery

There are conditions of the kidney which require surgery that are not related to cancer. In these situations, the kidney is either obstructed or not functioning properly. The surgeries that treat those conditions are called reconstructive surgeries. Reconstruction of the urinary tract includes a wide variety of procedures. The robot-assisted approach has been shown to be highly effective and to provide many technical advantages compared to conventional approaches. Robotic technology provides better visualization, suturing techniques, and gentle tissue handling with minimum manipulation. Using advanced robotic imaging, the “health” of tissue can be evaluated using immunofluorescence. Also, compared to open surgery, a robotic-assisted approach showed better early post-operative outcomes, shorter hospital stays, and less need for analgesics. Dr. Badani has extensive experience in treating these reconstructive conditions:

Robotic Pyeloplasty – Ureteropelvic Junction Obstruction (UPJ) is a condition in which the connection between the kidney and ureter (the tube that drains urine down to the bladder) is narrowed or blocked. Robotic pyeloplasty involves a repair to remove the narrow segment and reconnect the healthy ends together. This procedure restores normal drainage of urine flow, and more important, prevents further decline in kidney function.

“Re-do” Pyeloplasty and Ureteral Surgery – Dr. Badani sees numerous patients from outside physicians, and from outside the New York region and outside the United States, who have had prior pyeloplasties as children that failed. These are more challenging scenarios, but with the use of novel imaging technology, and utilizing the body’s own tissues as a graft, these patient are successfully treated using robotic reconstruction. One example is utilizing buccal mucosa graft (the lining inside your cheek) to bridge a long gap of the ureter to the kidney.





Robotic reconstruction using buccal mucosa graft (the lining inside your cheek)

Robotic Renal Cyst Decortication Surgery for Removal of Benign Kidney Cysts –

Cysts can be found in the kidney for many reasons. Most are benign (non-cancerous). In some situations, a cyst may enlarge and cause pain or obstruct the kidney. Cysts may also become infected or bleed. In addition, a cyst that at one time appeared benign may change its shape or features to the extent that a malignancy is suspected. For any of these reasons, a robotic kidney surgery known as a renal cyst decortication is required. Robotic surgery is ideal for this procedure as there is no need for large incisions. The robotic approach also provides direct visualization of the cyst, kidney and tissue which the pathologist can easily obtain for a more detailed evaluation. In addition, an ultrasound probe can be introduced through one of the ports for a high-resolution examination of the remaining part of the kidney.

Robotic Simple Nephrectomy for Non-Functional Kidney –

In some instances, a kidney no longer works due to long-standing obstruction, kidney stones, or infection. Many times, these diseased kidneys need to be removed. Dr. Badani normally performs these surgeries using minimally invasive techniques.

Robotic Ureteroplasty for Ureteral Strictures – The ureter (the tube that drains urine down to the bladder) can become narrow or blocked, so the urine flow from the kidney is impaired, which may result in pain, infection or development of kidney stones. If the ureteral strictures are neglected, the kidney may gradually lose its function. Robotic ureteroplasty involves a repair to remove the narrow segment and reconnect the healthy ends of the ureter together. This procedure restores normal drainage of urine flow and prevents future decline in kidney function.

Stepwise approach to robotic ureteral repair based on location:

- Step 1: Primary re-implantation (re-connection of ureter directly to bladder) can be performed if the repair is very low in the pelvis. This is the least complicated form of repair.
- Step 2: Psoas Hitch: If primary repair is not feasible, the bladder can be mobilized (moved a little) to the side and brought higher up to reach the ureter and perform the connection.
- Step 3: Boari Flap Reconstruction: If more distance is required to connect the bladder to the ureter, a flap from the bladder can be made into a “chimney” that will reach the ureter and bridge the gap.
- Step 4: Boari Flap/Psoas Hitch: Many times, both of these advanced techniques are required to reconstruct at the level of the middle to upper ureter.



Advanced Kidney Cancer

Most patients diagnosed with kidney cancer are found early, and the cancer is confined to the kidney. Some patients are diagnosed with either locally advanced kidney cancer (where the cancer has spread beyond the confines of the kidney) or metastatic disease (where cancer has traveled to other areas of the body). There are several types of treatment available for these situations, and Dr. Badani develops individualized treatment programs based on several personalized factors.

The Comprehensive Kidney Cancer Center has highly specialized medical oncologists, trained specifically to treat advanced cancer, who work closely with Dr. Badani to develop individualized treatment plans. Some of these treatments include:

Immunotherapy: While renal cell carcinoma is not typically responsive to traditional chemotherapy, several well-established studies have shown good response to immunotherapy. In this treatment, the body's own immune system is stimulated to fight cancer cells. The treatment has been shown to be highly effective in many patients. In the past, Interleukin-2 (IL-2) was used for this purpose. Now there are new drugs called Immuno-oncology agents (I/O) that are rapidly being developed and available for patients. Renal cell carcinoma drugs are being researched, and new drug development is advancing quickly. This is good for patients with advanced kidney cancer, and the Comprehensive Kidney Cancer Center is leading the way in these research efforts.

Targeted therapy: Recent scientific breakthroughs have occurred utilizing a family of drugs that specifically target the pathway a kidney cancer cell uses to grow. These drugs are taken in pill form, and therefore do not require hospitalization or IV infusions. They are very well tolerated, and have become the most commonly prescribed treatment for advanced kidney cancer.

Surgery: In many instances, surgery is used as part of the treatment program in advanced kidney cancer. This procedure, called a cytoreductive nephrectomy, can also be performed robotically, and offers improved survival for selective patients with metastatic kidney cancer who are on either immunotherapy or targeted medications.



Matt Galsky, MD
Director of
Genitourinary
Medical Oncology



Bobby Liaw, MD
Assistant Professor,
Medicine, Hematology
and Medical Oncology



William K. Oh, MD
Clinical Professor,
Medicine, Hematology
and Medical Oncology



Che-Kai Tsao, MD
Associate Professor,
Medicine, Hematology
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Dr. Vaibhav Patel
Assistant Professor,
Medicine, Hematology
and Medical Oncology

Other Program Centers in Urology Department at Mount Sinai

The Department of Urology's surgeons and scientists have pioneered the adoption of novel diagnostic techniques and minimally invasive treatments for a wide range of other urologic disorders. The program centers and procedures include:

Prostate Cancer Program:

Dr. Ashutosh (Ash) K. Tewari, MBBS, MCh, FRCS (Hon.), System Chair of the Department of Urology leads our prostate cancer program. Dr. Tewari has performed more than 7,000 robotic prostatectomies (surgery to remove the entire prostate). He is also highly skilled in procedures such as active surveillance, genomic marker analysis, immunotherapy, and MRI fusion targeted biopsy.

Bladder Cancer Program:

Dr. Peter Wiklund MD, PhD, a world renowned physician-scientist, is the director of our bladder cancer program. His innovations include the entirely robotic removal of a bladder and creation of a new bladder and he has performed the highest number of these surgeries worldwide. Along with Dr. Mehrazin and Dr. Sfakianos, he has expanded the scope of robotic surgery, immunotherapy and research to provide a patient centered, personalized treatment approach to bladder cancer.

Minimally Invasive Surgery and Advanced Procedures:

Dr. Michael A. Palese, Chair of Mount Sinai Downtown and Beth Israel Hospital leads the Minimally Invasive Surgery team for the Mount Sinai System. Dr. Palese and his group develop and perform the newest cutting edge minimally invasive techniques for robotic, laparoscopic and endoscopic procedures. The MIS team specializes in performing advanced procedures for complex conditions involving the kidney, prostate, bladder, ureter and adrenal gland.

Kidney Stone Center:

The Kidney Stone Center at Mount Sinai, led by Mantu Gupta, MD, FRCS (Glasg.), provides a comprehensive approach to the treatment of kidney stones. He has brought to the Mount Sinai Department of Urology the latest technological advances for the treatment of kidney stones, including state-of-the-art lasers, best-in-class shock wave lithotripsy machines, and flexible miniature endoscopes that improve patient comfort and outcomes.

Outpatient visits



Kevin Vassar, MS., PA-C

Kevin Vassar graduated as valedictorian from Touro College-Manhattan School of Health Sciences physician assistant program, and also received the Maimonides award for clinical achievement. He has practiced urology for over a decade, and has worked with Dr. Badani for over 6 years. He is a member of the American Urological Association, American Society of Clinical Oncology, and New York State Society of Physician Assistants, and is a member of the American Urological Association Speaker's Bureau.

Kevin Vassar works in conjunction with Dr. Badani, and sees new and returning patients in the office, during evaluation of their urologic conditions both pre- and post-operatively, including assessing incontinence and sexual function and providing education and therapies to boost recovery, and managing non-surgical conditions.

Recovery and Post-Operative Surveillance

Post-Surgical Recovery

Most patients need only one night in the hospital following surgery. Mount Sinai Health System offers optional private rooms with concierge service at The Mount Sinai Hospital and Mount Sinai West. Dr. Badani sees all patients personally in the hospital and one week after surgery to discuss pathology results.

Physical Recovery

The typical recovery from robotic kidney surgery is about twice as fast as the open procedure. Time to return to work depends on the amount of physical activity required by the job, but ranges from one week to four weeks. On average, patients return to work and resume normal activities around two to three weeks following surgery. Patients are served a light dinner the night of surgery and should be eating normally within a day or two after surgery. Moderate exercise is encouraged and non-resistance exercises such as walking, jogging, and swimming can start after two weeks. We do not want patients lifting weights until three to four weeks following surgery.

Post-Operative Surveillance

Four or five months following surgery, patients are seen by Dr. Badani for imaging testing. This includes either a CT scan or MRI to assess the kidneys and surrounding areas. A chest X-ray is also taken. The frequency of visits and surveillance tests depends upon tumor pathology (that is, whether the tumor was benign or malignant, and how aggressive it was). Generally, patients visit twice yearly for blood tests and once per year for imaging. Many patients travel to Mount Sinai for their surgery; these patients can have follow up tests performed near their homes. Dr. Badani stays in close touch with his patients' personal physicians to ensure that follow-up is seamless and up-to-date.



Holistic Medicine/Diet and Nutrition

A key member of the Comprehensive Kidney Cancer Program is Jillian Capodice, LAC, Assistant Professor and Director of the Integrative Urology and Wellness Program at Mount Sinai. She develops customized nutrition, exercise and stress management programs for patients to facilitate post-surgery recovery, promote future kidney health, and to help them maintain the highest degree of wellness. Obesity and high blood pressure are risk factors for kidney cancer, so she also consults with individuals who are interested in working on lifestyle changes.

Program highlights include:

- Nutritional strategies and weight loss for patient health optimization prior to kidney surgery
- Lifestyle recommendations for patients to facilitate post-surgery recovery, optimize healing and keep patients at low risk for potential recurrence
- Mind body strategies and/or acupuncture to help patients deal with stress or anxiety pre-surgery
- Active Surveillance program: full individualized assessment and health optimization for patients on active surveillance to assist in risk reduction
- Acupuncture for symptom management and side effects
- Other holistic approaches for overall health and wellness
- Patient-centered care and on-time appointments



Research

“Somewhere, something incredible is waiting to be known.”

– Dr. Carl Sagan

The Comprehensive Kidney Cancer Center at Mount Sinai has one of the most robust research and clinical trials programs in the country. Dr. Badani has published extensively on surgical technique, and outcomes of treatment for kidney and prostate cancer. His philosophy is that new discoveries and innovation are the cornerstones of medical advancement and improved survival and quality of life for the patient.

We host a multicenter clinical database which includes thousands of patients with kidney cancer from eight of the leading centers in the United States. We are performing high-level research to determine novel treatment approaches which are not limited to surgical treatment alone for managing kidney cancer and evaluating outcomes in patients after robotic surgery.



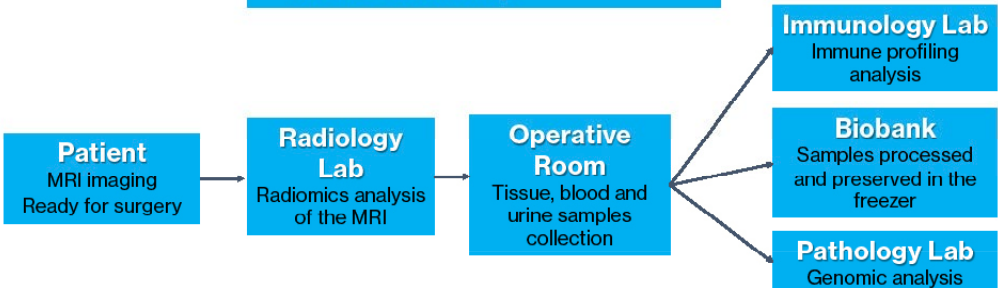
Kennedy Okhawere, MD, MPH
Associate Researcher II
Urology



Navneet Dogra, PhD
ASSISTANT PROFESSOR
Genetics and Genomic Sciences and Pathology, Molecular and Cell Based Medicine

Personalized Tumor Profiling

- Tumor Heterogeneity Study
- Immunoprofiling/Radiomics study
- Tissue Biobanking



We have a multidisciplinary collaborative team that includes medical oncologists, clinical radiologists, immunologists, and laboratory scientists. With these teams, we have been able to establish multiple simultaneous trials involving immunoprofiling and genomic sequencing of kidney cancer. We are also evaluating the radiomic features of kidney cancers using MRIs to better optimize patient care and determine treatment strategies to individualize treatment specific to a patient's particular cancer biology. We partner with our colleagues in medical oncology on clinical trials testing new drug regimens against the current standards. We also offer trials to some patients who otherwise would not have any other options.

Dr. Badani's state-of-the-art laboratory also works on testing the latest technology to determine its value in real practice. This includes testing new surgical tools as well as innovative genomic sequencing. Our blood, tissue, and urine banking unit provides us with the opportunity to better understand the behavior of kidney cancers and genomic features in future research studies.

The Comprehensive Kidney Cancer Center, led by Dr. Badani, has one of the largest tumor banks of renal cell carcinoma in the world, which is used to research genomics and immune cells that are paramount in the development and progression of cancer.



Amir Horowitz, PhD
Assistant Professor of
Oncological Sciences



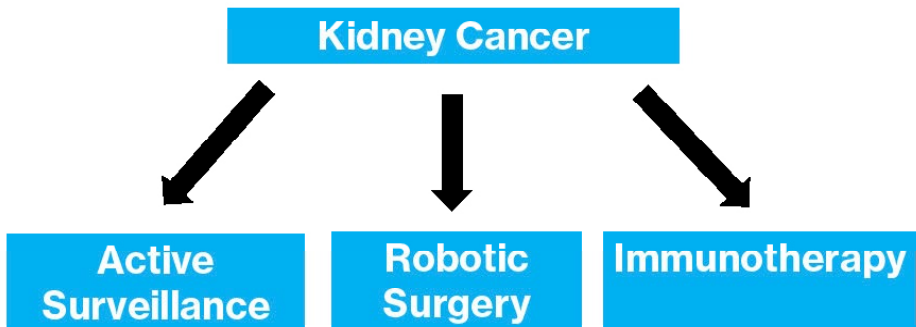
Natasha Kyprianou, PhD, Professor and
Vice-Chair, Basic
Science Research



Nihal Mohamed, PhD
Associate Professor,
Urology



Benjamin Hopkins, PhD
ASSISTANT PROFESSOR
Genetics and Genomic Sciences
and Oncological Sciences



Select Publications

1. Martini A, Falagarlo UG, Cumarasamy S, Badani KK. et al. Defining Risk Categories for a Significant Decline in Estimated Glomerular Filtration Rate After Robotic Partial Nephrectomy: Implications for Patient Follow-up. *Eur Urol Oncol*. July 2019. doi: 10.1016/j.euo.2019.07.001
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3. Beksac AT, Shah QN, Paulucci DJ, Badani KK. et al. Trends and outcomes in contemporary management renal cell carcinoma and vena cava thrombus. *Urol Oncol*. June 2019. doi: 10.1016/j.urolonc.2019.05.010
4. Martini A, Cumarasamy S, Hemal AK, Badani KK. Renal cell carcinoma: the oncological outcome is not the only endpoint. *Transl Androl Urol*. 2019;8(Suppl 1):S93-S95. doi:10.21037/tau.2019.01.01
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**Dr. Badani has taught his robot-assisted techniques
all over the world:**

United States (22 states)	Italy
Argentina	Japan
Azerbaijan	Malaysia
Belgium	Netherlands
Brazil	Qatar
Canada (5 provinces)	S. Korea
China	Spain
Egypt	Taiwan
France	Turkey
Gemany	United Arab Emirates
India	Venezuela

Our Offices

“The 59th Street location is one of the nicest urology offices in New York. I had a great experience there, and Dr. Badani’s staff was pleasant and made my visit very comforting.” – Patient M.A.

Our offices are dedicated to serving men and women with kidney cancer. Our highly specialized and experienced urologic cancer team includes physicians and medical assistants, registered nurses, nurse practitioners, and clinical fellows. Our practice manager and surgical scheduler are dedicated to making your office visit with us as easy and stress-free as possible.

Patients are seen at our spacious and modern offices at 425 West 59th Street between 9th and 10th Avenues (on the campus of Mount Sinai West) and 5 East 98th Street (on the campus of The Mount Sinai Hospital). These offices are convenient to subways, buses, and parking garages.

We value your input and are here to help you. Please feel free to ask us questions at any time. We can be contacted at 212-241-3919. For more information about Dr. Badani and the Comprehensive Kidney Cancer Center at Mount Sinai, visit us on the web at:

<https://www.mountsinai.org/care/urology/services/urologic-cancers/kidney-cancer>



Our Team



Dr. Badani's robotic surgical team is one of the most experienced in the country.

Types of Robotic Surgery Routinely Performed

