URology

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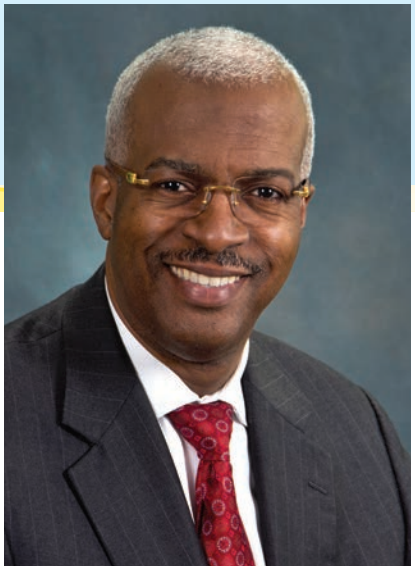
Building a Research and Discovery Powerhouse PAGE 3

UR MEDICINE



Letter from the Chair
Advancing Kidney Cancer Care

Jean Joseph, MD, MBA, FACS
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Department of Urology
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Welcome to the newest edition of URology. I am pleased to share highlights from an ambitious expansion of our Department's research enterprise and regional clinical footprint—efforts designed to accelerate discovery and translate new science into better care for every patient with urologic disease.

We are investing intentionally in people, infrastructure, and partnerships to broaden our focus beyond clinical excellence into robust basic and translational science. Recent recruits—including David J. McConkey, PhD; Colin P.N. Dinney, MD; and rising investigator Zijing Cheng, PhD—will add to our ongoing efforts to build a state-of-the-art scientific enterprise. Supported by NIH and other external funding, these additions position URMC to lead multi-institutional programs and mechanistic investigations, particularly in bladder, prostate, and kidney cancer. Our clinical trials portfolio is growing with pivotal studies in kidney, prostate, and bladder cancer, alongside investigator-initiated work that addresses survivorship and functional recovery.

Equally important is our commitment to expanding clinical access across the Finger Lakes. Please join me in welcoming our two newest team members, who are already strengthening care delivery: Herik Rodrigo Acosta, MD, EdS, PhD, and Alexis Steinmetz, MD. Their clinical expertise will expand availability for cancer care, minimally invasive procedures, and participation in clinical trials in Canandaigua, Geneva, and Geneseo—bringing advanced care closer to home.

We are also leading the adoption of next-generation robotic technology. Our team is integrating the da Vinci 5 platform to improve precision in confined spaces, refine nerve-sparing techniques, and potentially enhance functional and oncologic outcomes. This upgrade will expand operative capabilities, training opportunities, and throughput across our sites.

I invite you to explore this edition's stories and join us as we translate discovery into better outcomes for our patients.

On the cover:
Zijing Cheng, David McConkey, and Jathin Bandari

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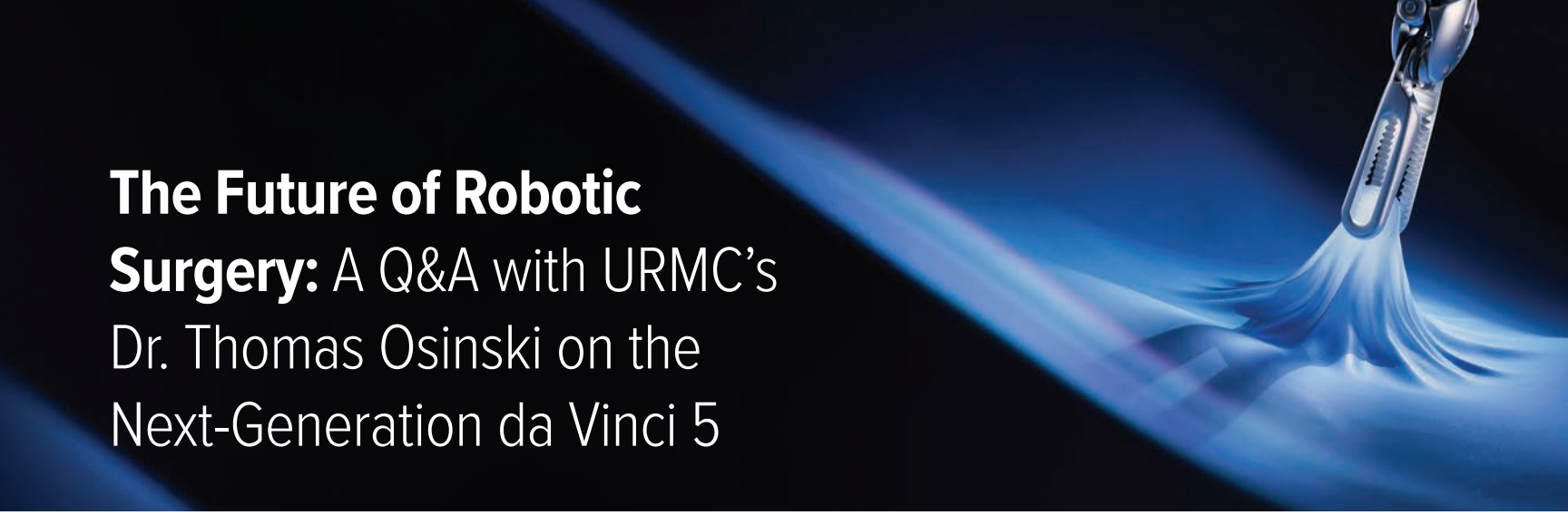

The Future of Robotic Surgery: A Q&A with URMC's Dr. Thomas Osinski on the Next-Generation da Vinci 5

URMC has a long tradition of leadership in robotic surgery. In 2003, Jean Joseph, MD —now chair of the Department of Urology— was among the first in the U.S. to perform a robotic-assisted laparoscopic prostatectomy. Today, URMC remains one of the nation's highest-volume robotic surgery centers and is among the first in New York to introduce the next-generation da Vinci 5 (dV5).

The dV5 platform offers enhanced precision, control, and visualization, along with force feedback technology that allows surgeons to "feel" tissue resistance. Thomas Osinski, MD, a urologic surgeon and director of URMC's Surgical Research and Genitourinary Engineering (SURGE) Lab, discusses what this means for surgeons and patients.

How does the dV5 differ from previous generations or urologic surgery?

Osinski: The most significant advances are force feedback, enhanced 3D visualization, and improved ergonomics. For urologic surgeons, these translate into greater control in confined spaces like the pelvis. Being able to "feel" resistance is especially valuable during nerve-sparing prostatectomy, where preserving tissue impacts erectile and urinary function.

How does force (haptic) feedback change your technique?

Osinski: In earlier systems, we relied only on visual cues to judge traction. With haptic feedback, we can sense resistance in real time. That reduces the risk of applying too much force, which I believe will improve both oncologic precision and functional outcomes.

Which features most directly benefit patients?

Osinski: High-definition 3D vision sharpens depth perception, while updated Firefly imaging—originally co-developed at the University of Rochester—improves tissue differentiation and vascular mapping. In procedures like partial nephrectomy or cystectomy, this helps us operate more precisely, aiming for better cancer control and fewer complications.

What impact do you anticipate for prostate and kidney surgery?

Osinski: It's early, but I expect greater precision in nerve-sparing techniques, which could translate into improved continence and erectile function. The system's efficiencies may also shorten procedures and improve access by increasing throughput.

How is URMC managing the transition?

Osinski: All four robots at Strong Memorial will be upgraded. One current unit will move to our outpatient surgical center to expand access for less complex cases. Another will go to the SURGE Lab for dedicated training—a rare opportunity that prepares trainees on an actual surgical robot.

Where do you see future applications?

Osinski: Applying the dV5 to more complex oncologic procedures—like cystectomies and partial nephrectomies—where its precision and imaging tools can really make a difference. And continuing to expand minimally invasive approaches so that more patients can benefit from smaller incisions, less blood loss, and faster recovery.

Thomas Osinski, MD

CAPTION

Building a Research Powerhouse

The University of Rochester Medical Center's (URMC) Department of Urology is greatly expanding its research enterprise, with a continual focus on finding the best treatment for every patient suffering from cancer.

The Department is investing in personnel and resources, and growing its research capabilities to expand into other urologic disciplines and subspecialties. Efforts focus on the common cancers: prostate, testicular, kidney, and bladder cancer, as well as research in benign conditions such as kidney stones, reconstruction, and BPH.

"Research is at the core of everything we do, and we are committed to building a research and discovery powerhouse, in line with our core mission as a research-focused academic department," said URMC Department of Urology Chair Jean Joseph, MD. "We are investing heavily in all aspects of our mission—clinical care, research, and education—looking at every patient to see if there is a question we can answer through further investigation.."

These efforts will include making the Department's experts even more visible at national and world conferences and events, expanding basic and translational science, and building on existing clinical trials. Funding for this expansion has been secured through the National Institutes of Health and other external sources.

A team of experts and rising stars

According to Jathin Bandari, MD, Director of Clinical Trials, the Department's recruitment of researchers is two-pronged: to attract a combination of senior-level thought leaders as well as rising stars.

The first wave of key additions includes leading scientists David J. McConkey, PhD, and Colin P.N. Dinney, MD, and rising star Zijing Cheng, PhD.

The dedication to research was key in recruiting McConkey, who previously served for eight years as director of the Johns Hopkins Greenberg Bladder Cancer Institute.

A researcher for more than 30 years, McConkey also served as Director of Urological Research in the Department of Urology at The University of Texas MD Anderson Cancer Center before his role at Johns Hopkins Greenberg Bladder Cancer Institute. Dinney and McConkey worked with other faculty members at MD Anderson to secure the first-in-the-nation Specialized Programs of Research Excellence (SPORE) grant for bladder cancer.

Internationally recognized for bladder cancer research, McConkey is a member of the American Urological Association, the Society for Basic Urological Research, the American Society of Clinical Oncology, and the American Association for Cancer Research.

Once Joseph shared his vision and the opportunity to grow laboratory science, it did not take long for McConkey to accept his new role as Vice Chair for Research.

"I decided to take on this position because of the incredible opportunities ahead of us," McConkey said. "We will renovate our space to build a state-of-the-art laboratory, recruit new faculty and expand our research capabilities, with an emphasis on laboratory science and on growing foundational and translational research."

McConkey is also reuniting with a SPORE study collaborator, Colin P.N. Dinney, MD. The past Chairman of the Department of Urology at The University of Texas MD Anderson Cancer Center joined the URMC team in the fall. Dinney is a world-renowned contributor who developed the drug, Nadofaragene firadenovec, for non-muscle invasive bladder cancer.

"It is exciting to have our research team back together," McConkey added. "Colin and I will continue collaborating to develop new therapies for bladder cancer."

That collaboration will include targeting new gene therapy drugs and performing mechanistic research on Nadofaragene firadenovec and another new gene therapy, cretostimogene grenadenorepvec. While effective, these drugs can lead to upregulation of PD-

Jathin Bandari, MD

David J. McConkey, PhD

Colin P.N. Dinney, MD

L1, which inhibits the immune system's recognition of tumors. Further research will target this and other resistance mechanisms.

Other research will look to understand how basic mechanisms of tumors work, using both human models and tissues, and on local therapies targeting the bladder itself.

One newly funded multi-institutional Program Project Grant is a collaboration among URMC, MD Anderson, and Columbia University researchers who are looking at the molecular mechanisms that mediate the initiation and progression of human bladder cancer. Project 3 of this grant, based at the University of Rochester and led by Dinney and McConkey, proposes to define the role of type-1 interferon signaling in luminal-basal plasticity to identify molecular vulnerabilities to improve interferon gene therapy in bladder cancer.

Aligning with Wilmot Cancer Institute

Future urologic cancer research will build on current expertise in clinical trials and align with the University of Rochester's Wilmot Cancer Institute. Wilmot recently earned the prestigious National Cancer Institute (NCI) designation, a recognition of its leading role in advancing cancer care and research. The distinction places Wilmot in the top four percent of all cancer centers in the U.S.

Wilmot, which has a catchment area of 3 million people, will receive $10 million in funding over five years to expand patient access to clinical trials and develop new research initiatives.

Under Bandari, our department's director of clinical trials, the research team will focus on therapeutic clinical trials. Research will be built out so there is more clinical and translational work, emphasizing such areas as extracellular vesicles, carcinogenesis, and microbiome research, leveraging existing expertise in bladder cancer, kidney cancer, and prostate cancer.

Current trials the Department is leading or collaborating on include:

- A pivotal trial in kidney cancer utilizing the HistoSonics Edison system, to be presented at the World Congress of Endourology and Northeast Sectional AUA.
- A pivotal trial in prostate cancer exploring Aquablation versus Radical Prostatectomy.
- Multiple non-muscle invasive bladder cancer trials, including the PIVOT-008 and the CORE-008 trials, evaluating cretostimogene grenadenorepvec.
- Multiple investigator-initiated studies, conceived and written by URMC faculty.

A recently launched investigator-initiated study will involve patients who have had stress urinary incontinence after prostatectomy or the Holmium Laser Enucleation of the Prostate (HoLEP) procedure. While pelvic-floor physical therapy is an integral part of recovery following surgery, it can be time-consuming and difficult to sustain. This study of 132 subjects (66 per cohort) will look at whether sending text messages to patients, reminding them to do their Kegel exercises, will improve outcomes through increased adherence to the intervention. This study was conceived and designed by URMC resident Laena Hines, MD, and her mentor, Scott Quarrier, MD, MPH.

A prime location for cancer research

The Western, Finger Lakes, and Central New York region is a prime location for advancing urologic cancer research, given Wilmot Cancer Institute's large catchment area, higher-than-average cancer rates, the prevalence of co-morbidities, and its aging population.

The Department of Urology is building its research enterprise to help meet the needs of the region.

"By further advancing research, we aim to give patients access to advanced, nonsurgical treatments that aren't available anywhere else in the region and to find the best treatment for every one of our patients," Joseph concluded.

Zijing Cheng, PhD

Laena Hines, MD

Scott Quarrier, MD

URMC Urology Expands Clinics Across the Finger Lakes to Improve Access

URMC's Department of Urology is expanding its reach to provide its exceptional care to more patients in the Finger Lakes and upstate New York region. The goal is to provide urologic care for patients conveniently and efficiently.

This effort involves expanding clinics in Canandaigua, Geneva, Geneseo, and Hornell, with the addition of clinicians and staff, subspecialty services, and minimally invasive outpatient surgeries.

Patients in the area can benefit from a full range of treatments for urologic cancers – such as kidney, bladder, prostate, and testicular cancers – urinary incontinence, kidney stones, UTIs, low testosterone, infertility, and erectile dysfunction.

"We are improving access to care across the region, so our patients can get care as quickly as possible," said URMC Department of Urology Chair Jean Joseph, MD. "From bolstering our team of clinicians to embracing technologies and providing outpatient surgeries, patients can get the care they need closer to home."

TOP IMAGE: Herik Rodrigo Acosta Gonzalez, MD, EdS, PhD
BOTTOM IMAGE: Alexis Steinmetz, MD

Meeting the need for more providers

- Herik Rodrigo Acosta Gonzalez, MD, EdS, PhD, completed training in Advanced Minimally Invasive Surgery at the Icahn School of Medicine at Mount Sinai and at HCA Kendall Regional Hospital/Larkin Community Hospital. He will see patients in Canandaigua, Geneva, and Geneseo.
- Alexis Steinmetz, MD, completed her fellowship in Urologic Oncology at MD Anderson Cancer Center and her residency at URMC. She will practice in the Finger Lakes, primarily based in Canandaigua

"With more clinicians, we can treat patients near where they live, which is critical during urologic emergencies," said Thomas Osinski, MD. "Dr. Gonzalez and Dr. Steinmetz will not only help us provide care to more people in the region, but they will also allow us to expand access to clinical trials. Our patients and communities will really benefit from their expertise."

The only place in the region for the HoLEP procedure

URMC is the only site in the region–and one of the few centers in the nation–offering the Holmium Laser Enucleation of Prostate (HoLEP) procedure. The Department has expanded access to this procedure by making it available to patients at a clinic in Hornell, in addition to serving patients at Strong Memorial Hospital in Rochester.

Nitin Sharma, MD, said, "We have seen tremendous results from the HoLEP procedure, and we are pleased to make this treatment available to more patients. In the year since we started offering it in Hornell, our team has completed more than 100 cases, and patients have come from the Southern Tier and Pennsylvania."

EDUCATION

Applicants Prefer In-Person Urology Interviews, but Equity Concerns Remain

TOP IMAGE: Hani Rashid, MD
BOTTOM IMAGE: Trevor Hunt, MD

A new study in the journal Urology led by Hani Rashid, MD, URMC Urology residency director, and Trevor Hunt, MD, PGY-5 resident, surveyed applicants from the 2024–2025 AUA match—the first cycle to permit in-person interviews since the pandemic. Seventy-five of 166 applicants (45%) responded, reporting a mean of 13 interviews (seven in-person, six virtual).

Respondents strongly favored in-person evaluation: 49.3% preferred purely in-person interviews, 40.0% preferred hybrid, and 10.7% preferred fully virtual. For assessing program "fit," 76.0% favored in-person versus 4.0% for virtual; applicants cited on-site observation of culture, workflow, and interpersonal dynamics as decisive.

The financial burden was substantial. Mean total spending was $4,994 per applicant (applications $1,913; interviews $3,081), with an average of $410 per in-person interview. Although 91% felt the costs were worthwhile and 95% felt travel time was justified, 19% declined one or more interviews due to cost, and 47% declined for travel/logistical reasons. Few programs offered hybrid choices or financial assistance.

"Experiencing a program in person offered many applicants decisive insights into culture and fit, but the financial and logistical burdens were real and led some students to forgo opportunities they otherwise would have pursued in the incredibly competitive urology match," said Hunt.

These results suggest programs should consider hybrid interview models and equity safeguards — including scheduling flexibility and targeted financial support — to preserve access while enabling robust in-person assessment.

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