



Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

operative times, complications and worsen patient outcomes^{3,4}. 3D image visualization including patient-specific 3D printing, augmented reality (AR), and virtual reality (VR) are much more powerful methods of image data visualization. Being able to touch and hold a physical 3D printed model and/or to visualize a model in true 3D with AR/VR technologies provides an understanding that is not achievable with 2D imaging methods.

In order to demonstrate how well urological surgeons can mentally reconstruct 2D images into 3D representations, we previously enrolled surgeons to review and interpret 2D images of patients with renal masses and then digitally place the tumor onto a patient-specific 3D kidney model with the actual tumor removed³. The overlap between the true tumor location and the surgeon located tumor were compared, and the Dice Similarity Coefficient (DSC) was calculated as a surrogate of how well the surgeon translated 2D images into a 3D model. We found the average DSC was 0.24 ± 0.23 , demonstrating a poor correlation between the actual kidney tumor location and the surgeon perceived location. For a subset of patients, this correlation improved to 0.80 ± 0.09 after the surgeon had reviewed a 3D printed model of the kidney with the tumor showing how a 3D model has the potential to help surgeons understand the imaging data in 3D. In another retrospective study evaluating surgical approach with 2D images and 3D printed models, we also demonstrated differences in planned surgical approach and higher concordance between the actual surgical approach with the use of the 3D model, helping to exhibit the added value of 3D printed models⁵. Future studies will continue to assess the benefits of each of 3D printing, AR, and VR as compared to 2D imaging, and we expect that these methods of advanced 3D image visualization will become more widely utilized in the future.

**Nicole Wake and
Marc A. Bjurlin**

*Department of Radiology, Montefiore Medical Center,
Albert Einstein College of Medicine, Bronx, NY,
United States of America*

*Center for Advanced Imaging Innovation and
Research (CAI²R) and Bernard and Irene Schwartz Center
for Biomedical Imaging, Department of Radiology,
NYU Langone Health, NYU Grossman School of Medicine,
New York, NY, United States of America*

*Department of Urology, Lineberger Comprehensive Cancer
Center, University of North Carolina at Chapel Hill,
United States of America*

E-mail: nwake@montefiore.org (N. Wake).

References

1. Sakata S, Grove PM, Hill A, Watson MO, Stevenson ARL. Impact of simulated three-dimensional perception on precision of depth judgements, technical performance and perceived workload in laparoscopy. *Br J Surg*. 2017;104(8):1097–1106.
2. Itri JN, Tappouni RR, McEachern RO, Pesch AJ, Patel SH. Fundamentals of Diagnostic Error in Imaging. *Radiographics*. 2018;38(6):1845–1865.

3. Wake N, Wysock JS, Bjurlin MA, Chandarana H, Huang WC. "Pin the Tumor on the Kidney:" An Evaluation of How Surgeons Translate CT and MRI Data to 3D Models. *Urology*. 2019;131:255–261.
4. Parag P, Hardcastle TC. Interpretation of emergency CT scans in polytrauma: trauma surgeon vs radiologist. *Afr J Emerg Med*. 2020;10(2):90–94.
5. Wake N, Rude T, Kang SK, et al. 3D printed renal cancer models derived from MRI data: application in pre-surgical planning. *Abdom Radiol (NY)*. 2017;42(5):1501–1509.

<https://doi.org/10.1016/j.urology.2020.08.022>

UROLOGY 145: 301–302, 2020. © 2020 Elsevier Inc.



Urologists for Equity: Letter to the Urologic Community

To Our Urology Community,

The recent murders of Breonna Taylor, George Floyd, Tony McDade, and countless others, and the disproportionate toll of COVID-19 on communities of color, have exposed deep wounds in our country. As our nation confronts systemic racism, we must all reflect upon our own contributions to the current crisis and on actions we must take to create sustainable change.

Many organizations, including the American Urological Association and Urology Care Foundation, have made statements condemning racism. As the AUA looks ahead for ways to promote equity in our society, encouraging members to speak out against racism, and committing to engage in advocacy against racial discrimination, it is imperative that members of our profession look within. While pledging to fight for healthcare equity for our patients, we must consider: what does it mean to truly support diversity in our field?

Urology has a diversity problem. We remain one of the fields with the fewest underrepresented minorities and women in our ranks. As a urologic community, we need to critically evaluate the scope of the problem, identify barriers to diversity and inclusion (including those that we tacitly uphold), create a blueprint for impacting change, and engage in continuous self-assessment. While some individual institutions have made efforts to address these workforce issues, broader initiatives have yet to be enacted.

In response, we are assembling Urologists for Equity, a community of urologists who will work together towards achieving equity in our profession through:

- 1) **Advocacy:** We will establish specific initiatives and actions that all urologists can pursue, and we will partner with organizations that seek to fight systemic injustices in urology. Advocacy can be on local, regional, national, and individual levels. We will develop metrics for self-evaluation and monitoring, as well as landmarks for success.
- 2) **Sponsorship:** We will develop and publish a list of mentors, coaches, and sponsors for underrepresented minority faculty and trainees in urology.

- 3) **Scholarship:** We will promote research that exposes structural barriers and highlights DEI needs in urology. We will develop a list of studies and resources for self-education.
- 4) **Engagement:** We will harness the creativity and energy of a diverse community of urologists, including medical students, department chairs, community urologists, researchers, and all of those committed seeing Urology make meaningful change. We want to hear your ideas!

In the coming months, we will solicit input on additional steps we can take to fight systemic racism in urology, and will elevate the voices of individuals who are under-represented in our field and current leadership. We will strive to create an inclusive environment within urology, regardless of race, ethnicity, gender identity, and sexual orientation. The urgency and scale of these issues require immediate action.

Our urologic community can and will do better.

Sincerely,

Urologists for Equity

Shannon Cannon, MD

Fellow, Division of Pediatric Urology, Seattle Children's Hospital and University of Washington

Geolani W. Dy, MD

Assistant Professor, Department of Urology, Transgender Health Program, Oregon Health & Science University

Casey Seideman, MD

Assistant Professor, Department of Urology, Oregon Health & Science University

With the support of:

Aditya Bagrodia, MD

Assistant Professor, Dedman Family Scholar in Clinical Care, Department of Urology, University of Texas Southwestern

Jessica Delgado, BS

Co-founder of LatinX in Urology

MD Candidate, Class of 2021, Indiana University School of Medicine

Tracy M. Downs, MD FACS

Professor, Department of Urology

Associate Dean of Diversity and Multicultural Affairs

Interim Co-Chief Diversity and Inclusion Officer

University of Wisconsin School of Medicine and Public Health

Stanley K. Frencher, Jr., MD, MPH

Assistant Professor, Department of Urology, David Geffen School of Medicine, UCLA

Patricio Gargollo, MD

Associate Professor of Pediatric Urology, Mayo Clinic
John L. Gore, MD

Professor, Department of Urology, University of Washington School of Medicine

Kirsten Greene, MD, MAS, FACS

Professor and Chair, Department of Urology, University of Virginia

Emilie K. Johnson, MD, MPH

Assistant Professor of Urology, Lurie Children's and Northwestern University Feinberg School of Medicine

Byron D. Joyner, MD, MPA

Professor, Department of Urology

Vice Dean, Graduate Medical Education & Designated Institutional Official

University of Washington School of Medicine

Kathleen Kieran, MD, MSc, MME

Associate Professor, Seattle Children's Hospital and University of Washington

Kathleen C. Kobashi, MD, FACS

Section Head, Section of Urology and Renal Transplantation, Virginia Mason Medical Center

Cheryl T. Lee, MD

Dorothy M. Davis Endowed Chair in Cancer Research Professor and Chair, Department of Urology

Vice President of OSU Physicians and the Faculty Group Practice

The Ohio State University Wexner Medical Center

Gary E. Lemack, MD

Rose Mary Haggar Professor, Residency Program Director, Department of Urology, University of Texas Southwestern Medical Center

Mark S. Litwin, MD, MPH, FACS

Professor and Chair, Department of Urology, David Geffen School of Medicine at UCLA

Elizabeth Malm-Buatsi, MD

Assistant Professor and Chief, Section of Pediatric Urology

Medical Director, Urology Clinics

University of Missouri Hospitals and Clinics

Kelvin A. Moses, MD, PhD, FACS

Associate Professor, Department of Urology, Vanderbilt University Medical Center

Manoj Monga, MD, FACS

Professor & Chair, Department of Urology, University of California San Diego

Stephen Nakada, MD, FACS

Professor and Chair, Department of Urology, University of Wisconsin-Madison School of Medicine and Public Health

Yaw A. Nyame, MD, MS, MBA

Assistant Professor, Department of Urology, University of Washington School of Medicine

Fred Hutchinson Cancer Research Center

David F. Penson, MD, MPH

Professor and Chair, Department of Urology, Vanderbilt University Medical Center

Ganesh S. Palapattu, MD, FACS

The George F. and Sandy G. Valassis Professor and Chair, Department of Urology, The University of Michigan Medical School

Raj Pruthi, MD, MHA, FACS

Professor and Chair, Department of Urology, University of California, San Francisco

Polina Reyblat, MD

Chief, Department of Urology, Los Angeles Medical Center Kaiser Permanente

Jennifer Robles, MD, MPH

Assistant Professor, Department of Urology, Vanderbilt University Medical Center

Yahir Santiago-Lastra, MD

Associate Clinical Professor of Urology, UC San Diego Health

Martha K. Terris, MD

Witherington Distinguished Professor and Chair, Division of Urology at Medical College of Georgia/Augusta University

Simone Thavaseelan, MD

Associate Professor Surgery and Program Director, Department of Urology, Warren Alpert School of Medicine at Brown University

Randy Vince, Jr., MD

Society of Urologic Oncology Fellow, Department of Urology, University of Michigan

Christopher Warlick, MD, PhD

Associate Professor and Chairman, Department of Urology, University of Minnesota Medical School

Hunter Wessells, MD, FACS

Professor and Chair, Department of Urology, University of Washington School of Medicine

Kassandra E. Zaila, BA

Co-Founder of LatinX in Urology

MD Candidate, Class of 2021, David Geffen School of Medicine at UCLA

**Shannon Cannon,
Geolani W. Dy, and
Casey Seideman**

*Division of Pediatric Urology, Seattle Children's Hospital and
University of Washington, Seattle, WA
Department of Urology, Oregon Health & Science University,
Portland, OR
E-mail: dy@ohsu.edu (G.W. Dy).*

<https://doi.org/10.1016/j.urology.2020.08.001>
UROLOGY 145: 302–304, 2020. © 2020 Elsevier Inc.



**RE: A New Simplified Biplanar
(0-90°) Fluoroscopic Puncture
Technique for Percutaneous
Nephrolithotomy: Reducing
Fluoroscopy Without
Ultrasound—Initial
Experience and Outcomes**

Dear Sir:

Percutaneous renal access is the most crucial step in having a complication free percutaneous nephrolithotomy (PCNL). Despite the advances in technology, access still generates interest amongst endourologists. The 3 most important steps in a good percutaneous renal access are to determine the skin site from where the puncture should be made, what should be the trajectory of the puncture and at what depth a successful puncture will be achieved.

We read with interest the article by Braulio et al,¹ which deals with these aspects and we appreciate their efforts in bringing forth a new technique of percutaneous