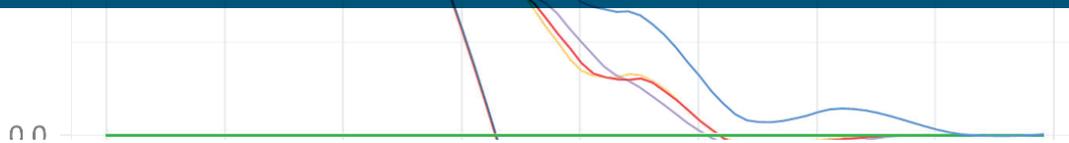




THE OFFICIAL NEWSMAGAZINE OF THE AMERICAN UROLOGICAL ASSOCIATION

The Added Value of Baseline Health-related Quality of Life in Predicting Survival in High-risk Prostate Cancer Patients Following Radical Prostatectomy

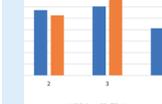
Thilo Westhofen, MD
Alexander Buchner, MD
Veeru Kasivisvanathan, MBBS, BSc, FRCS, MSc, PGCert, PhD, et al.



INSIDE THIS ISSUE

Adoption of Single-use Clean Intermittent Catheterization Policies Does Not Appear to Affect Genitourinary Outcomes in a Large Spinal Cord Injury Cohort

Is a "Urology Intern Boot Camp" Needed?



Sequential Intravesical Valrubicin and Docetaxel for the Salvage Treatment of Nonmuscle-invasive Bladder Cancer

Months Since Initiation of Valrubicin Induction

CLINICAL NEWS

Prostate-specific Antigen and Biopsy Contamination in the Göteborg-1 Randomized, Population-based, Prostate Cancer Screening Trial

Unplanned Conversion From Partial to Radical Nephrectomy: An Analysis of Incidence, Etiology, and Risk Factors

Impact of Prostate Health Index Results for Prediction of Biopsy Grade Reclassification During Active Surveillance

Not All Adverse Pathology Features Are Equal: Identifying Optimal Candidates for Adjuvant Radiotherapy Among Patients With Adverse Pathology at Radical Prostatectomy

Out-of-pocket Cost Burden Associated With Contemporary Management of Advanced Prostate Cancer Among Commercially Insured Patients

Impact of Left-digit Age Bias in the Treatment of Localized Prostate Cancer

Satisfaction With Clinician-led Germline Genetic Counseling in Patients With Prostate Cancer

First Series Using Ultrasonic Propulsion and Burst Wave Lithotripsy to Treat Ureteral Stones

Addressing the Relationship Between Testosterone Levels and Urethral Stricture: A Case-control Study

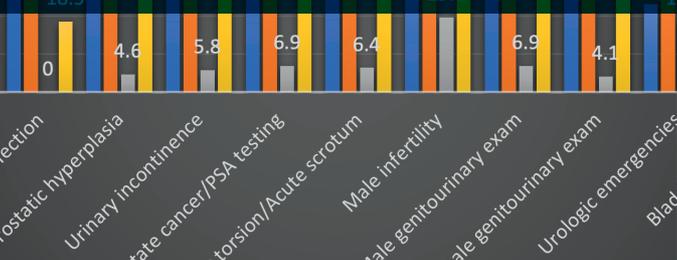
NEWS FROM AUA

Celebrating AUA's 2022 Quality Improvement Summit on Primary Palliative Care in Urology

Advancing Urology in the Caribbean: The Caribbean Urological Association, the AUA, and Global Urology

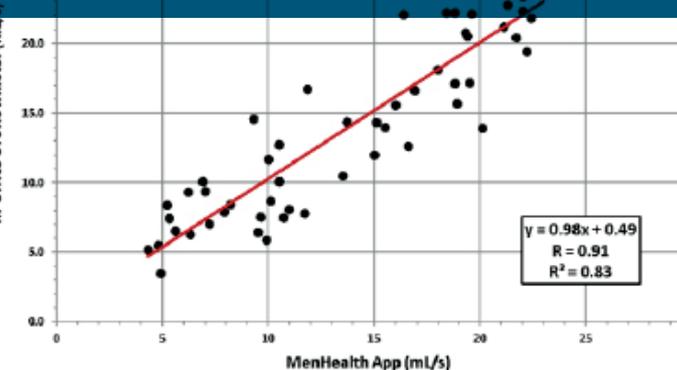
Urological Education in United States Medical Schools: Where Are We Now and How Can We Do Better?

Jessica E. Kreshover, MD, MS
Alex J. Vanni, MD
Kevan M. Sternberg, MD
Naeem Bhojani, MD
Kathleen C. Kobashi, MD, FACS



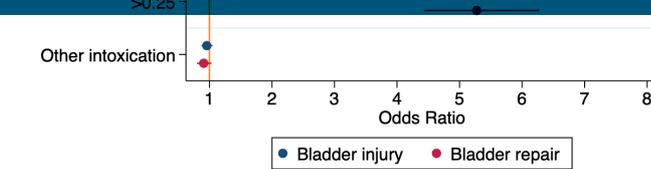
Smartphone App for In-home Uroflowmetry

Roger E. Schultz, MD, FACS



Alcohol Intoxication Is Associated With Bladder Injury and Bladder Surgical Repair in Patients Sustaining Motor Vehicle Collisions

Jason L. Lui, BS
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A Cost, Time, and Demographic Analysis of Participant Recruitment and Urine Sample Collection Through Social Media Optimization

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Kenneth M. Peters, MD
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JU INSIGHT

The Added Value of Baseline Health-related Quality of Life in Predicting Survival in High-risk Prostate Cancer Patients Following Radical Prostatectomy

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Westhofen T, Buchner A, Kasivisvanathan V, et al. The added value of baseline health-related quality of life in predicting survival in high-risk prostate cancer patients following radical prostatectomy. *J Urol.* 2022;208(5):1056-1064.

Study Need and Importance

The prognostic value of preoperative health-related quality of life (HRQOL) in predicting survival outcomes following radical prostatectomy remains unclear.

What We Found

We analyzed a contemporary cohort of 1,029 patients with high-risk or highest-risk localized prostate cancer and prospectively assessed preoperative baseline HRQOL.

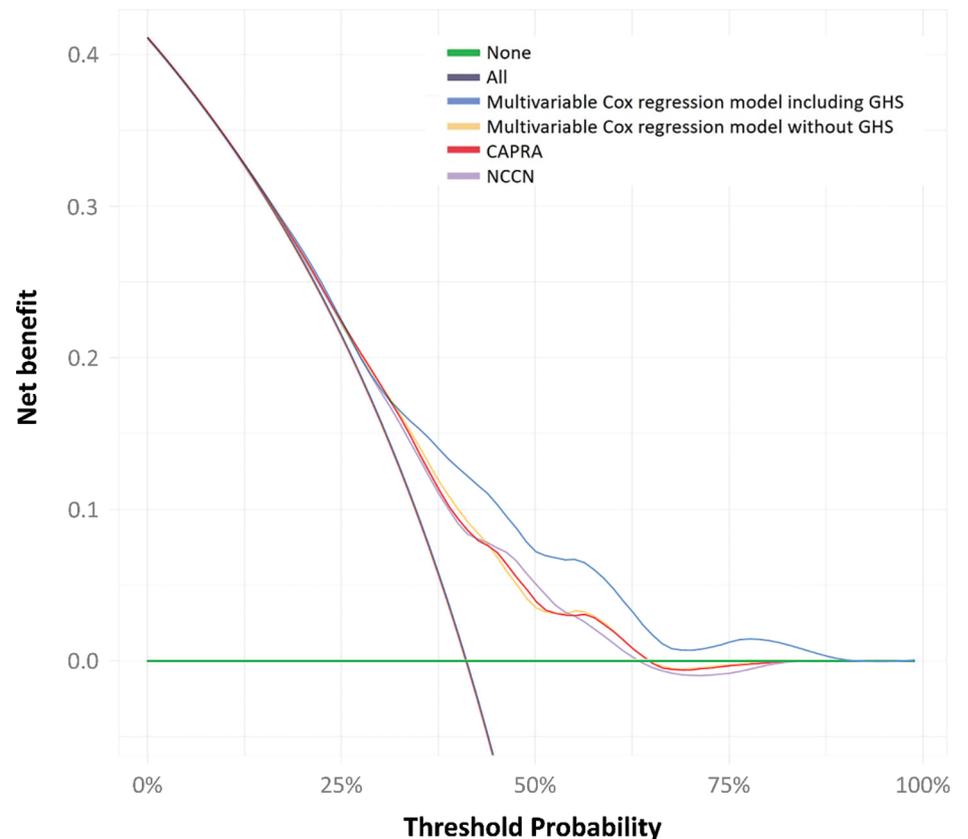


Figure. Decision curve analysis testing the clinical net benefit of adding global health status (GHS) to our multivariable model in comparison with the multivariable model without global health status, Cancer of the Prostate Risk Assessment (CAPRA), and National Comprehensive Cancer Network (NCCN) risk classification systems in predicting the risk of biochemical recurrence at 43 months.

“We analyzed a contemporary cohort of 1,029 patients with high-risk or highest-risk localized prostate cancer and prospectively assessed preoperative baseline HRQOL.”

Patients were stratified by global health status (GHS) domain of the QLQ-C30 questionnaire. Baseline GHS was confirmed as an independent predictor for increased biochemical recurrence-free survival (BRFS; HR 0.97 per 1-point increase of baseline GHS, 95%CI 0.96-0.99; $P < .01$) and metastasis-free survival (MFS; HR 0.96, 95%CI 0.93-0.99; $P = .01$) in multivariate analysis. Discrimination in predicting BRFS and MFS, assessed by Harrell's discrimination

→ Continued on page 3

THE ADDED VALUE OF BASELINE HEALTH-RELATED

→ Continued from page 2

C-index, was improved when adding baseline HRQOL to our multivariate model, as well as when adding to established Cancer of the Prostate Risk Assessment (CAPRA) and National Comprehensive Cancer Network (NCCN) models. The clinical net benefit associated with adding GHS to

our multivariable model was confirmed by decision curve analysis (see Figure).

Limitations

The limitations are mainly due to the retrospective nature of the study. Therefore, the study might

not be adjusted for some known and other unknown confounders. Furthermore, the study lacks overall survival data.

Interpretation for Patient Care

In the current study, we found

baseline HRQOL to independently predict BRFS and MFS for patients, who underwent radical prostatectomy for high-risk localized prostate cancer. We found the addition of baseline HRQOL scores to improve stratification by established multivariable risk models, namely CAPRA and NCCN. ■

UPJ INSIGHT

Urological Education in United States Medical Schools: Where Are We Now and How Can We Do Better?

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Houston Methodist Hospital, Texas

Kreshover JE, Vanni AJ, Sternberg KM, Bhojani N, Kobashi KC. Urological education in United States medical schools: where are we now and how can we do better?. *Urol Pract.* 2022;9(6):581-586.

Study Need and Importance

It is well documented that urological education in United States medical schools is decreasing over time despite the growing burden of urological conditions in an aging population. With this, there will be inevitable gaps in urological education for the commonest urological conditions. Additionally, more care will fall to non-urologists, increasing the need for this knowledge. We sought to determine if,

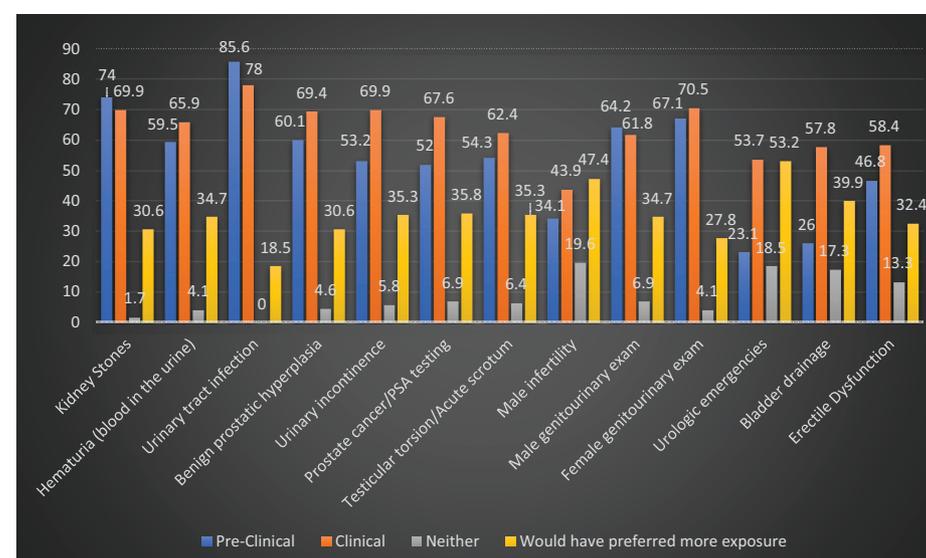


Figure. Exposure based on topic.

where, and how the content for common urological conditions is being taught.

What We Found

We conducted a survey of medical students to elucidate the current status of urological education. Of 879 invitations sent, 173 responded (20%) representing 92 (54%) of the 171 Association of American Medical Colleges accredited medical schools. Only 4 students (2%) reported that their school had a required clinical urology rotation. Kidney stones (98%) and urinary tract infections (100%) were the

most frequent topics taught. Students reported the lowest exposure to infertility (20%), urological emergencies (19%), bladder drainage (17%), and erectile dysfunction (13%; see Figure). Videos and case vignettes were the preferred learning modalities and the majority (84%) of respondents were familiar with the AUA's medical student curriculum material.

Limitations

Our study population was primarily comprised of students with an interest in urology. This creates 2 potential limitations. The first is

“We conducted a survey of medical students to elucidate the current status of urological education.”

that it may not represent true curricula as medical educators were not surveyed. The second is that this cohort presumably had more exposure to urology than the “typical” medical student. This could conflate the amount of exposure, which arguably strengthens the conclusions of our study.

Interpretations for Patient Care

With the aforementioned changing medical landscape, this study demonstrates the need for urologists and the AUA to continue to advocate for urological education in medical schools. This is particularly true for urological emergencies, bladder drainage, and erectile dysfunction—topics that will commonly be encountered regardless of chosen medical discipline. ■

JU INSIGHT

Alcohol Intoxication Is Associated With Bladder Injury and Bladder Surgical Repair in Patients Sustaining Motor Vehicle Collisions

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Lui JL, Hakam N, Shaw NM, Cuschieri J, Abbasi B, Breyer BN. Alcohol intoxication is associated with bladder injury and bladder surgical re-

pair in patients sustaining motor vehicle collisions. *J Urol.* 2022;208(5):1090-1097.

Study Need and Importance

Alcohol intoxication is a known risk factor for motor vehicle collisions (MVCs). With the combination of diuresis and risk of pelvic trauma, the risk of bladder dome injury is thought to be elevated in this population. We hypothesize ethanol intoxication increases the risk of bladder injury and surgical repair, especially at higher blood alcohol content levels.

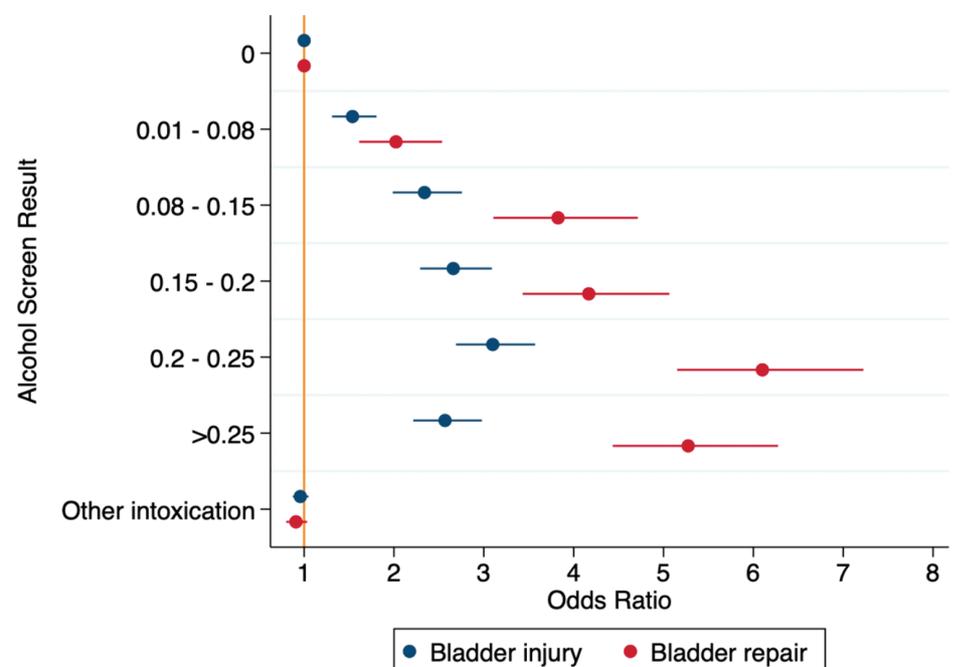


Figure. Odds ratio comparison across blood alcohol concentration categories for outcomes of bladder injury and bladder repair.

ERRATUM

Specialized Pro-Resolution Mediators Promote Recovery of Bladder Function from Cystitis

*AUANEWS*Extra, September 2002, Vol. 1, Issue 1, Page 17.

Figure 1 has been revised to correct a production error in the layout of the image. The figure has been corrected in the online and PDF versions of the article.

Urologic Conditions with an Inflammatory Component (UCIC)

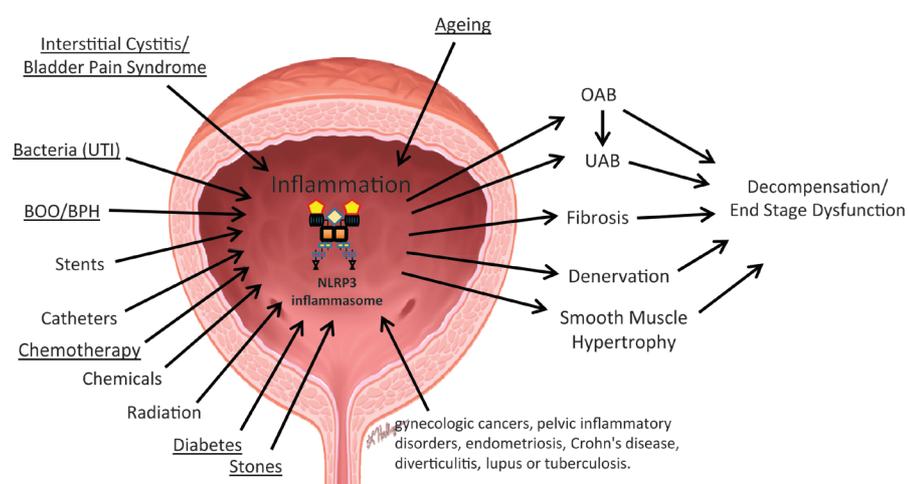


Figure 1. Inflammation is a causative or exacerbating factor in virtually all UCICs. Listed with inward pointing arrows are conditions known to have an inflammatory component. For those underlined, the NLRP3 inflammasome has been shown to play a major role in triggering this inflammation. Inflammation leads to bladder dysfunction (overactive or underactive bladder) and 3 major physiological changes, fibrosis, denervation and smooth muscle hypertrophy (although not all changes are found in all conditions, eg diabetes). Ultimately such changes can lead to decompensation and end-stage bladder dysfunction.

What We Found

We identified 594,484 patients with MVCs in the National Trauma Data Bank®, 97,831 (16.5%) of whom had a positive alcohol screen. Patients intoxicated with alcohol were more likely to have a bladder injury (1% vs 0.4%, $P < .001$) and receive bladder surgical repair (0.7% vs 0.15%, $P < .001$) compared to nonintoxicated patients. This risk increased with rising blood alcohol concentration (see Figure). Remarkably, alcohol intoxication above the legal limit (blood alcohol content ≥ 0.08) was more predictive of bladder surgical repair than pelvic fracture. Additionally, seat belt use in combination with alcohol intoxication further increased the risk of bladder repair.

Limitations

As alcohol screening was not done in a systematic manner in the study population, there were

239,739 patients with no data for alcohol screening. The choice was made to incorporate these patients (who had all other variables intact) in the unexposed groups rather than exclude them from analysis. Any bias would diminish the study effect and trend toward the null hypothesis (alcohol is not related to bladder injury or repair), therefore this risk was felt to be minimal.

Interpretation for Patient Care

Alcohol increases the risk of operative bladder injuries for patients injured in MVCs. Intoxication, particularly above the legal limit, is more predictive of bladder injury requiring surgical repair than pelvic fracture. Trauma providers should have a high index of suspicion for intraperitoneal bladder injuries in alcohol intoxicated patients, particularly those with seat belt restraints. ■

UPJ INSIGHT

Smartphone App for In-home Uroflowmetry

Roger E. Schultz, MD, FACS
Urology of Virginia, Virginia Beach

Schultz RE. Smartphone app for in-home uroflowmetry. *Urol Pract.* 2022;9(6):523-530.

Study Need and Importance

Standard office uroflowmetry creates several clinical and practical headaches for the practicing urologist. The patients may not be well prepared and/or may feel stressed and unable to provide reliable results. The equipment for uroflowmetry adds cost and takes up staff time to execute. Repeat testing means more visits to the office. A new smartphone uroflowmetry app processes the sound of urine flow entering a water-filled standard toilet. A proprietary algorithm creates uroflowmetry results that can be digitally sent directly to the electronic medical record. This app could be an attractive alternative to standard in-office testing.

What We Found

To test a wide range of possible uroflow results, we recruited young men with no voiding complaints and a cohort of mostly older men with obstructive or irritative voiding symptoms. Each participant had a smartphone and was provided with the MenHealth® Smartphone uroflowmetry app and instructions on its use. We compared the results of standard uroflowmetry in the office to those using the smartphone app (see Figure). Using Bland-Altman analysis and a Passing-Bablok non-parametric regression analysis, we conclude that the smartphone app is equivalent to the standard office uroflowmeter.

Limitations

The biggest limitation of this smartphone app is that it requires a water-filled commode to permit an acoustical recording (urinals won't work). Also, this study did not examine results in women.

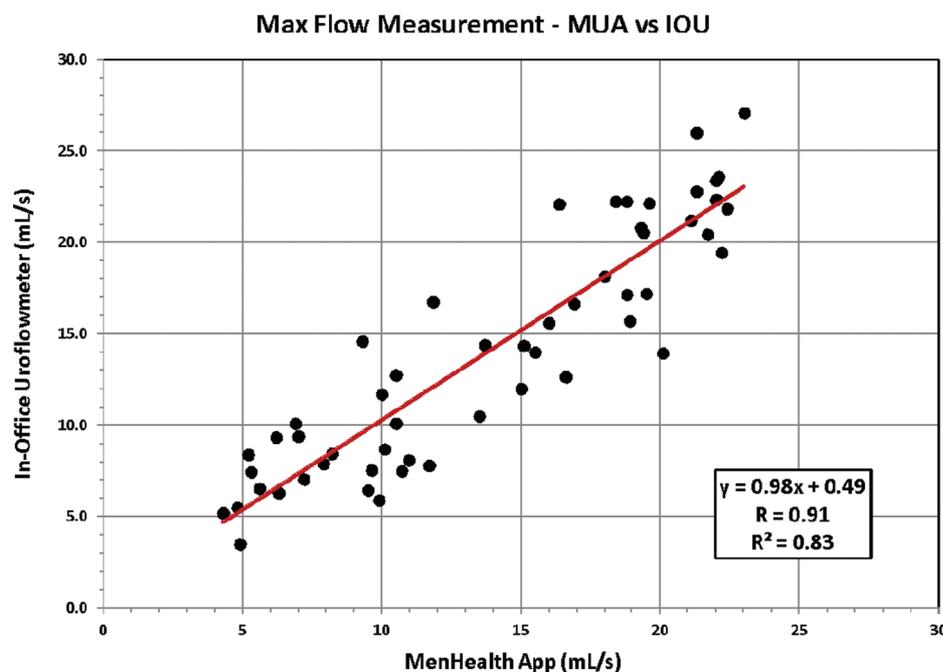


Figure. Maximum flow measurement: MenHealth Uroflowmetry app MAU versus standard in-office uroflowmeter (IOU).

Interpretations for Patient Care

We think this novel smartphone app should make uroflowmetry testing much easier, less expensive,

and more efficient. If needed, patients can easily repeat the flow test. Use of an at-home smartphone app frees up time and staff in the office for other purposes. The data are collected digitally and integrated into the medical record. ■

JU INSIGHT

Prostate-specific Antigen and Biopsy Contamination in the Göteborg-1 Randomized, Population-based, Prostate Cancer Screening Trial

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Stinesen Kollberg K, Holmberg E, Josefsson A, Hugosson J, Arnsrud Godtman R. Prostate-specific antigen and biopsy contamination in the Göteborg-1 randomized, population-based, prostate

cancer screening trial. *J Urol.* 2022;208(5):1018-1027.

Study Need and Importance

The Göteborg randomized, population-based prostate cancer (PC) screening trial is one of few studies that has demonstrated that organized prostate-specific antigen (PSA) screening significantly reduces PC mortality. Even when a screening study has demonstrated

a mortality reduction, the degree of pre-testing and contamination is of importance as it can dilute the “true” effect of screening. In light of the problem with overdiagnosis and overtreatment, summarized evidence suggests that the benefits of organized PSA screening do not clearly outweigh the harm on a population. This article describes the level of pre-testing and contamination in the Göteborg-1 PC

→ Continued on page 6

PROSTATE-SPECIFIC ANTIGEN AND BIOPSY CONTAMINATION

→ Continued from page 5

“In light of the problem with overdiagnosis and overtreatment, summarized evidence suggests that the benefits of organized PSA screening do not clearly outweigh the harm on a population.”

screening trial. A total of 20,000 men, 50-64 years old, were invited in 1994 and randomized to either a screening group (SG; offered PSA testing every 2 years) or to a control group (CG). Follow-up was through December 31, 2014.

What We Found

There was an extensive degree of contamination with similar proportions of men being PSA-tested in both groups (see Figure). During follow-up, 72% in the CG took at

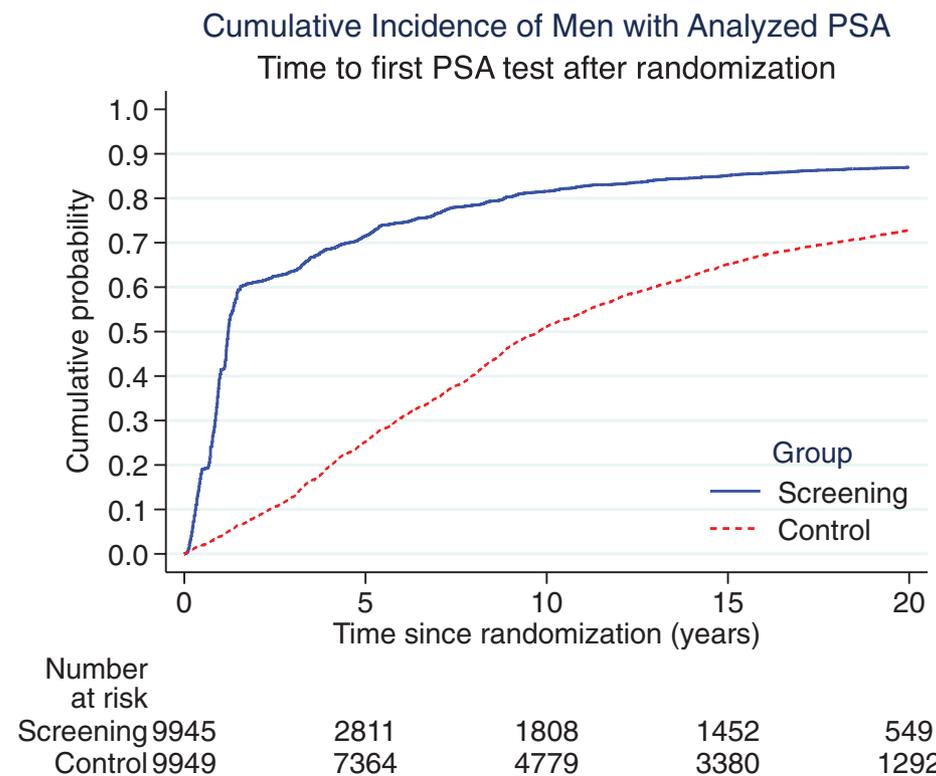


Figure. Cumulative incidence of men with analyzed prostate-specific antigen (PSA). Time to first PSA test after randomization in the screening group and control group.

least 1 PSA test (contamination) compared to 87% of men in the SG. Of all PSAs, 24% in the SG and 39% in the CG were above PSA threshold (≥ 3 ng/ml). In the SG, 93% of the men underwent prostate biopsy within 12 months from

a raised screening PSA whereas a mere 28% moved on to biopsy in the CG.

Limitations

We were unable to distinguish

PSA screening in the asymptomatic setting from tests taken as part of diagnostic workup. Since mild lower urinary tract symptoms are fairly common in this age group, it is likely that a proportion of the contamination is generated as a result of symptoms. We do not have information from all private laboratories (1 laboratory missing) and PSA and pathology data were not available for the entire follow-up period for all laboratories and pathology clinics.

Interpretation for Patient Care

Similar proportions of men were PSA-tested in both the SG and CG, yet only a minority of contamination PSAs led to biopsy. Also, men in the SG started screening at a younger age. These could both be explanations for our result that organized screening is more effective in reducing prostate cancer mortality than non-organized testing. When carried out properly and compared to an unscreened population, the effects of organized screening are likely even greater than previously shown in the Göteborg-1 PC screening trial. ■

UPJ INSIGHT

A Cost, Time, and Demographic Analysis of Participant Recruitment and Urine Sample Collection Through Social Media Optimization

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Sharma P, Lamb LE, Bartolone SN, et al. A cost, time, and demographic analysis of participant recruitment and urine sample collection through social media optimization. *Urol Pract.* 2022; 9(6):560-566.

Study Need and Importance

Conducting a urine sample collection through a traditional in-person clinic can be expensive and time-consuming. Online participant recruitment has the potential to spread quickly and grow exponentially through social media sharing making it more cost- and time-effective. Crowdsourcing at-home urine sample collection has

→ Continued on page 7

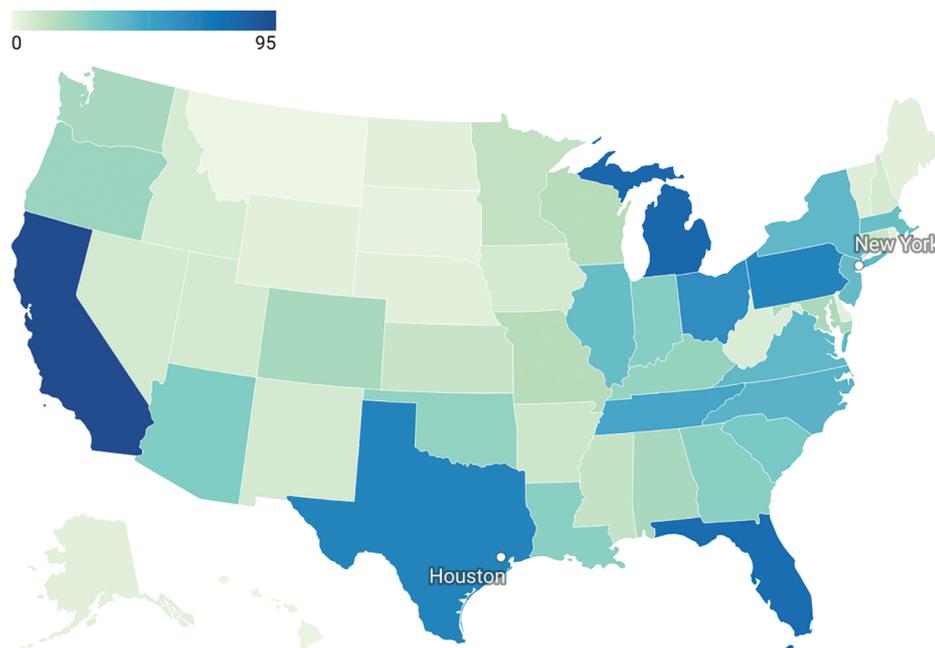
A COST, TIME, AND DEMOGRAPHIC ANALYSIS

→ Continued from page 6

the potential to reach more participants outside a clinic’s typical geographic area at lower cost and minimize contact, which is especially important during the COVID-19 pandemic.

What We Found

We collected 1,254 unique urine samples from all 50 U.S. states through the online recruitment method in 3 months and 2 weeks (see Figure). On the other hand, the traditional in-person clinics located in New York and Houston combined collected 305 samples in 12 months. Online sample collection had a cost of \$81.45 per sample while the clinic per sample cost was \$398.14. The results of this study showed that contactless online recruitment of participants is 80% cheaper and 70% faster than a



Map: Prasun Sharma • Source: Beaumont Research Institute • Created with Datawrapper

Figure. Geographical distribution of urine samples received from online recruitment. Locations of the 2 clinical sample collection sites are also noted.

traditional method of recruiting participants in person at a clinic.

Limitations

One important limitation of the study is that the interstitial cystitis diagnosis for online recruited participants is patient-reported and not validated in the clinic. In addition, only patients with access to the Internet and social media would have access to crowdsourcing research.

Interpretation for Patient Care

Online recruitment of participants provides the best opportunity to rapidly and cost-effectively target a hard-to-reach population and get a national representation of the disease spectrum. Our study can be used as a guideline to establish a new methodology for urine sample collection, which may help reduce the cost of research and development, ultimately lowering the therapy costs for patients. ■

JU INSIGHT

Adoption of Single-use Clean Intermittent Catheterization Policies Does Not Appear to Affect Genitourinary Outcomes in a Large Spinal Cord Injury Cohort

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Kazuko Shem, MD
Santa Clara Valley Medical Center, San Jose, California

James Crew, MD
Santa Clara Valley Medical Center, San Jose, California

Elliott CS, Dallas K, Shem K, Crew J. Adoption of single-use clean intermittent catheterization policies does not appear to affect genitourinary outcomes in a large spinal cord injury cohort. *J Urol.* 2022;208(5):1065-1074.

Study Need and Importance

The idea for this study was generated during a presentation given at Stanford Urology Grand Rounds in 2020 (Single-Use vs Multi-Use Catheters for Clean Intermittent Catheterization [CIC]). After highlighting the existing randomized trials and a subsequent meta-analysis (all of which fail to show differences in urinary tract infection [UTI] rates, see Table), an audience member asked why someone did not do a larger study to evaluate the 2008 Medicare Policy change. Over time, we realized that the possibility did exist in the Model Systems Spinal

Table. Overall UTI Rate (Single-use 27.7% vs Multiuse 29.3%, P = .218)

Study	Single Use UTI rate	Multi-Use UTI rate	p-value
King (1992)	3/23 = 13.0%	5/23 = 21.7%	.437
Duffy (1995)	22/42 = 52.4%	20/38 = 52.6%	.982
Sutherland (1996)	1/16 = 6.3%	1/14 = 7.1%	.922
Pachler (1999)	1/32 = 3.2%	1/32 = 3.2%	1.00
Prieto-Fingerhut (1999)	8/14 = 57.1%	9/15 = 60%	.876
Schlager (2001)	2/10 = 20%	2/10 = 20%	1.00
Leek (2013)	3/21 = 14.3%	4/21 = 16.7%	.679
Madero-Morales (2019)	13/37 = 35.2%	14/38 = 36.7%	.877

Cord Injury Database, if one were willing to examine hospitalizations for genitourinary reasons (of which greater than 90% are due to UTI in the spinal cord injury population).

What We Found

When comparing hospitalizations for genitourinary reasons, both

→ Continued on page 8

ADOPTION OF SINGLE-USE CLEAN INTERMITTENT

→ Continued from page 7

before and after the 2008 Medicare Policy change permitting coverage for single-use CIC, we found no difference. This finding persisted on multivariate logistic regression analysis. We further found that adoption of CIC was not affected.

Limitations

Beyond being retrospective and only examining hospitalizations for genitourinary reasons (which are not always due to UTIs), our study is unable to evaluate how single-use CIC might make life easier for the end user, specifically eliminating the need to carry around used catheters or the need to clean them

“When comparing hospitalizations for genitourinary reasons, both before and after the 2008 Medicare Policy change permitting coverage for single-use CIC, we found no difference.”

between uses. Thus, we would

be remiss to think that our study alone indicates that single-use CIC should be discouraged.

Interpretation for Patient Care

What our study highlights most is that a seemingly good plan, ie, using a clean catheter for each CIC episode to decrease bacterial introduction into the bladder, may not bring about its intended effect. In addition, the dogma that reusing a urinary catheter leads to worsened health outcomes might need to be reconsidered, though this should be carefully balanced with quality-of-life data if further

“What our study highlights most is that a seemingly good plan, ie, using a clean catheter for each CIC episode to decrease bacterial introduction into the bladder, may not bring about its intended effect.”

policy changes are considered. ■

UPJ INSIGHT

Is a “Urology Intern Boot Camp” Needed?

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Khavari R, Donalisio da Silva R, Peters CA, Stratton K. Is a “urology intern boot camp” needed?. *Urol Pract.* 2022; 9(6): 605-613.

Study Need and Importance

Each year, urology residency programs around the country work hard to onboard a new group of interns in preparation for July 1. A recent shift of responsibility for internship from general surgery to urology has created a new opportunity for programs to better prepare their residents. The variable experience of incoming interns along with a need to demonstrate clinical proficiency prior to allowing them autonomy has highlighted an opportunity for internship “boot

camp” experiences. Other specialties have seen the benefit of trainee boot camps. This study set out to explore the need for a boot camp to prepare interns starting their urology residency.

What We Found

This study found that only 30% of respondents (postgraduate year 1 and postgraduate year 2 urology residents) participated in an internship boot camp with the majority administered by their general surgery program. The majority of junior residents felt unprepared for internship with 16% feeling not prepared at all (see Figure). Nearly all residents (92%) showed an inter-

“Preparation is one potential factor related to quality care and is closely associated with trainee readiness for autonomy during patient care.”

Perceived Preparedness for Intern Year in July

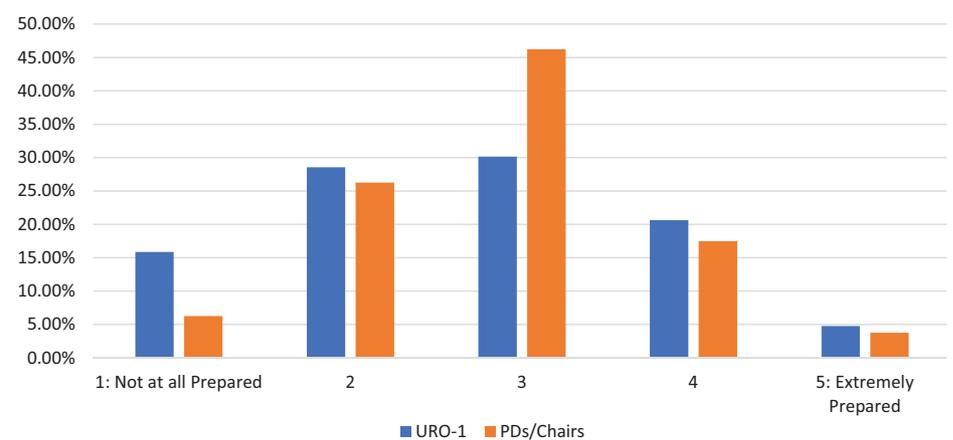


Figure. Junior resident (Uro-1) and program director (PD)/chair response to perceived preparedness for Uro-1s to function as an intern on July 1.

est in participating in a boot camp. Similar to junior residents, the majority of program directors/chairs felt that residents were not prepared for internship with 6% not at all prepared. Most program directors/chairs (51%) were willing to financially support intern participation in a boot camp experience.

Limitations

The primary limitation of this study was the response rate to the survey. A total of 730 surveys were sent, with an overall response rate of 20%.

Interpretation for Patient Care

Urology training programs share the core responsibility of preparing residents for patient care. Preparation is one potential factor related to quality care and is closely associated with trainee readiness for autonomy during patient care. This study shows a strong desire among trainees and residency program directors for standardization in preparation for urology internship. The findings support development of a national urology internship boot camp experience. ■

JU INSIGHT

Unplanned Conversion From Partial to Radical Nephrectomy: An Analysis of Incidence, Etiology, and Risk Factors

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Tsivian M, Joyce DD, Packiam TT, et al. Unplanned conversion from partial to radical nephrectomy: an analysis of incidence, etiology, and risk factors. *J Urol.* 2022;208(5):960-968.

Study Need and Importance

Current data on the incidence of, reasons for, and characteristics associated with increased risk of conversion from partial to radical nephrectomy are sparse and often conflicting. Identifying which patients are at increased risk of conversion is important for shared decision making, operative planning, and patient counseling. We comprehensively described the incidence and etiology of conversions from partial

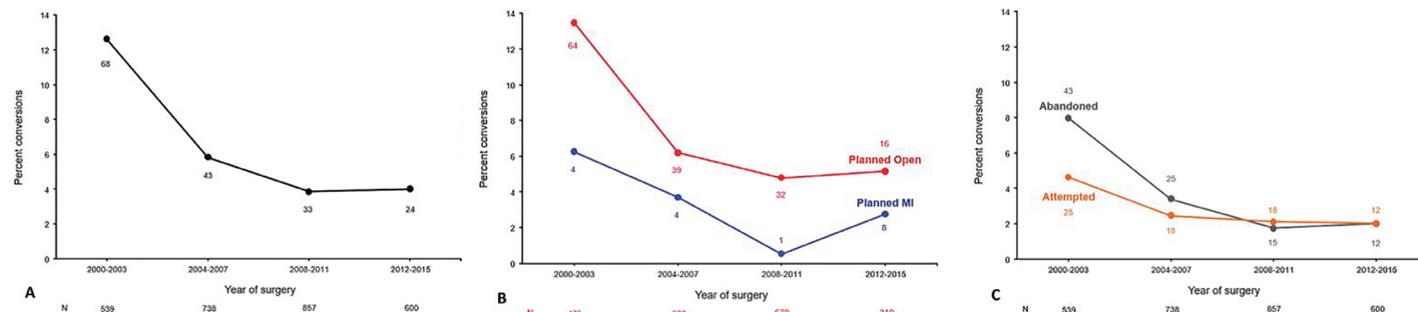


Figure. Rates and types of conversions from partial nephrectomy to radical nephrectomy between 2000 and 2015. A, Rates of conversion from partial nephrectomy to radical nephrectomy. B, Rate of conversion for planned open and minimally invasive (MI) radical nephrectomy. C, Attempted vs abandoned partial nephrectomy over time.

“Current data on the incidence of, reasons for, and characteristics associated with increased risk of conversion from partial to radical nephrectomy are sparse and often conflicting.”

to radical nephrectomy over a 15-year period at our quaternary care referral center, and identified preoperative patient and tumor characteristics associated with conversion.

What We Found

In this case-control study, conversion from planned partial nephrectomy for localized solid renal masses to radical nephrectomy was rare at our institution with decreasing incidence over time (see Figure). Most conversions were due to concerns regarding tumor upstaging (44%), insufficient re-

maining viable renal parenchyma (27%), and positive surgical margins (11%). Furthermore, male sex (OR 2.34, 95%CI 1.07-5.13), greater comorbidity burden (OR 1.28, 95%CI 1.02-1.59), and 2 components of the RENAL (for radius, exophytic/endophytic, nearness of tumor to collecting system, anterior/posterior, location relative to polar line) Nephrometry Score, hilar (OR 5.61 95%CI 2.63-11.97) and nonanterior tumor location (OR 6.38 for middle location, 95%CI 2.39-17.03; OR 2.83 for posterior location, 95%CI 1.15-6.94), were identified as predictors of conversion.

Limitations

Missing imaging data for cases and controls may have resulted in selection bias. RENAL Nephrometry Score measurement bias may have been introduced by unblinded imaging review. Results are from a single-institutional experience, which may limit generalizability.

Interpretation for Patient Care

RENAL Nephrometry Score components that do not contribute

“RENAL Nephrometry Score components that do not contribute to the overall score, such as hilar and nonanterior tumor location, should be preferentially considered when evaluating the risk of conversion from partial to radical nephrectomy.”

to the overall score, such as hilar and nonanterior tumor location, should be preferentially considered when evaluating the risk of conversion from partial to radical nephrectomy. In addition, male sex may be associated with factors that increase surgical dissection difficulty resulting in a higher likelihood of conversion to radical nephrectomy. ■

JU INSIGHT

Sequential Intravesical Valrubicin and Docetaxel for the Salvage Treatment of Nonmuscle-invasive Bladder Cancer

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McElree IM, Packiam VT, Steinberg RL, et al. Sequential intravesical valrubicin and docetaxel for the salvage treatment of non-muscle-invasive bladder cancer. *J Urol.* 2022; 208(5):969-977.

Study Need and Importance

Intravesical bacillus Calmette-Guérin is recommended as adjuvant therapy following complete transurethral resection of bladder tumor for high-risk nonmuscle-invasive bladder cancer (NMIBC). Sequential intravesical gemcitabine and docetaxel has recently demonstrated efficacy as a salvage regimen as well as an alternative first-line therapy in this setting. Unfortunately, effective salvage therapies to treat subsequent recurrences are lacking. While radical cystectomy can be offered to some with recurrent NMIBC, this operation

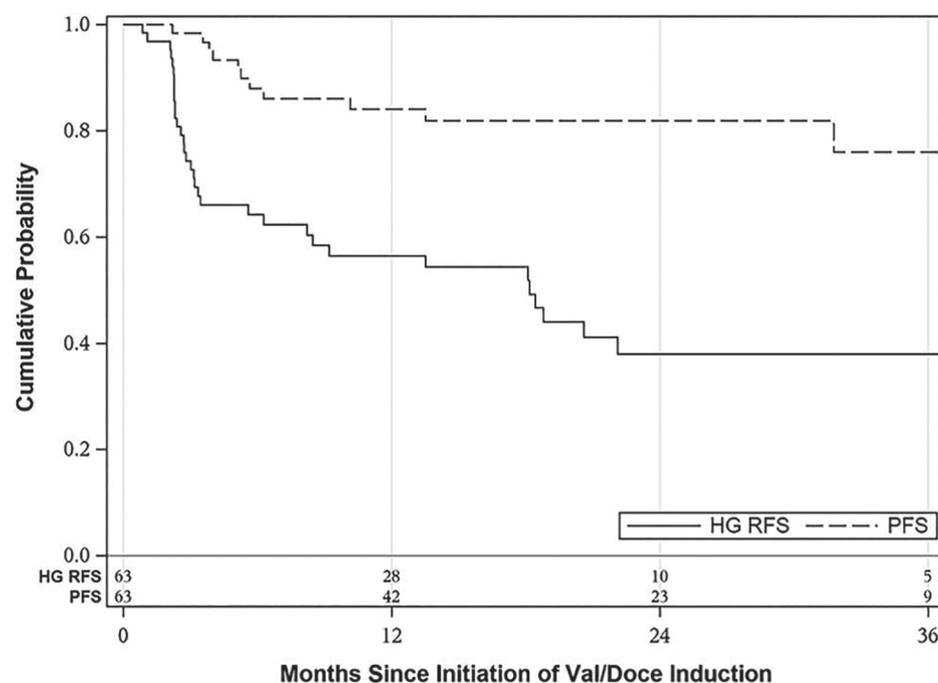


Figure. High-grade (HG) recurrence-free survival (RFS) and progression-free survival (PFS) following valrubicin and docetaxel (Val/Doce) induction among patients presenting with high-grade disease.

“The retrospective nature of this study allows for selection bias and confounding. The modest sample size of 75 patients limits statistical power.”

is associated with significant morbidity. We evaluated sequential intravesical valrubicin and docetaxel (Val/ Doce) as a salvage treatment.

What We Found

We reviewed 75 patients with

a median follow-up of 21 months. The cohort was pretreated with a median of 2 prior inductions. In 63 patients presenting with high-grade (HG) disease, the 2-year HG recurrence-free survival (RFS) was 38% (see Figure), and recurrence rates were unaffected by presence of carcinoma in situ ($P = .63$). There were 11 progression events in the HG group, yielding a 2-year progression-free survival (PFS) of 82% (see Figure). Of these, 9 underwent cystectomy; 1 was node positive. Two patients later developed metastatic disease and died. Of the 12 patients presenting with low-grade disease, 2-year RFS was 73%. Overall survival among the low-grade and HG groups was 90% and 87% at 2 years, respectively.

“Our results demonstrate that Val/Doce is a safe and effective salvage treatment for patients with recurrent NMIBC.”

The most commonly reported side effect was bladder spasms occurring during induction.

Limitations

The retrospective nature of this study allows for selection bias and confounding. The modest sample size of 75 patients limits statistical power. Furthermore, these results are from an institution with rigorous NMIBC protocols that may limit generalizability.

Interpretations for Patient Care

While radical cystectomy is curative, it is an overtreatment for a significant minority of patients without effective U.S. Food and Drug Administration–approved alternatives. Our results demonstrate that Val/Doce is a safe and effective salvage treatment for patients with recurrent NMIBC. In light of these promising results, further prospective investigation of Val/Doce is warranted. ■

JU INSIGHT

Impact of Prostate Health Index Results for Prediction of Biopsy Grade Reclassification During Active Surveillance

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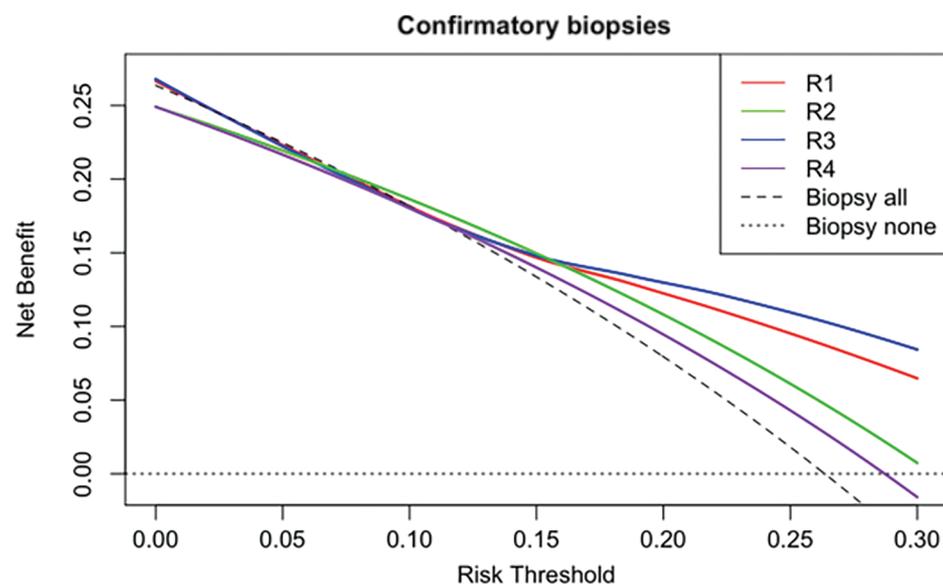


Figure. Decision curve analysis results.

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Filson CP, Zhu K, Huang Y, et al. Impact of Prostate Health Index results for prediction of biopsy grade reclassification during active surveillance. *J Urol.* 2022;208(5):1037-1045.

Study Need and Importance

Active surveillance has emerged as a guideline-recommended strategy to avoid detrimental side effects associated with aggressive treatment of low-risk prostate cancer. There is a renewed focus on how to safely decrease the intensity of surveillance biopsies when discovery of higher-grade disease is less likely. Risk calculators using clinical information (eg, prostate-specific antigen level, prior biopsy findings) can help predict clinically significant prostate cancer detection on a surveillance biopsy. We assessed whether results of serum-based biomarker, Prostate Health Index (PHI), can improve predictive capability of existing risk calculators for men pursuing active surveil-

“Risk calculators using clinical information (eg, prostate-specific antigen level, prior biopsy findings) can help predict clinically significant prostate cancer detection on a surveillance biopsy.”

lance and considering a repeat biopsy.

What We Found

Using data from the large Canary Prostate Active Surveillance Study (PASS), we developed different decision rules that incorporated clinical and PHI results and evaluated their ability to predict detection of grade reclassification from Grade Group 1 to Grade Group 2 or higher cancer on a surveillance biopsy. A decision rule combining PHI results with clinical data in a single model

“Incorporating results of the PHI biomarker may modestly improve the ability to assess risk of grade reclassification for active surveillance patients considering an initial confirmatory biopsy after their diagnosis.”

(R3) had significantly better discrimination than a rule using clinical data alone (R₁; Δ AUC [0.021, 95%CI 0.002–0.041], but only for confirmatory biopsies. A decision curve analysis showed greater net benefit with R₃ versus R₁ but only at risk thresholds over 15% (see Figure).

Limitations

It is important to note that many of these biopsies were not performed via MRI-guidance, perhaps limiting generalizing findings to contemporary practice. Furthermore, grade reclassification as an outcome may not adequately reflect tumor aggressiveness in its own right.

Interpretation for Patient Care

Incorporating results of the PHI biomarker may modestly improve the ability to assess risk of grade reclassification for active surveillance patients considering an initial confirmatory biopsy after their diagnosis. However, its role is less clear for men farther along in surveillance considering subsequent biopsies. ■

JU INSIGHT

Not All Adverse Pathology Features Are Equal: Identifying Optimal Candidates for Adjuvant Radiotherapy Among Patients With Adverse Pathology at Radical Prostatectomy

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Mazzone E, Gandaglia G, Stabile A, et al. Not all adverse pathology features are equal: identifying optimal candidates for adjuvant radiotherapy among patients with adverse pathology at radical prostatectomy. *J Urol.* 2022;208(5):1046-1055.

Study Need and Importance

Early salvage radiotherapy (eSRT) represents a potential curative treatment option for patients affected by PSA rise after radical prostatectomy. In this context, 3 recent randomized clinical trials and a meta-analysis showed comparable outcomes between eSRT and adjuvant radiotherapy (aRT). However, a recent large

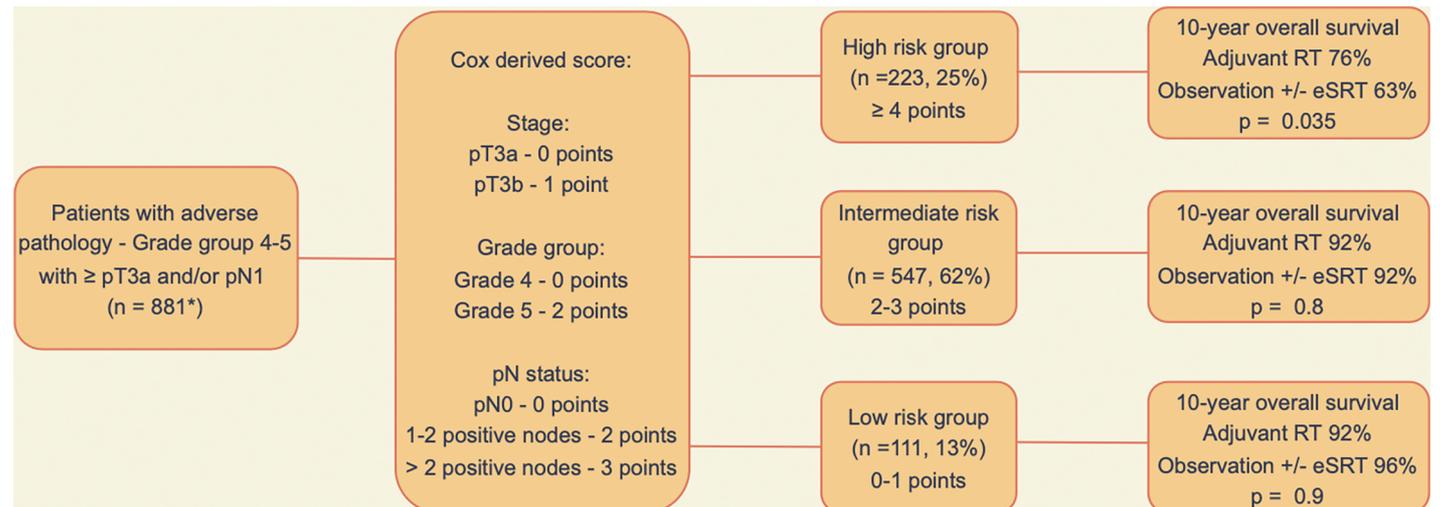


Figure. Novel overall survival risk stratification based on data for patients with adverse pathology features after radical prostatectomy, and treated with adjuvant radiotherapy (RT) or observation with or without early salvage radiotherapy (eSRT).

retrospective analysis reported a potential benefit associated with aRT for patients with adverse pathology features at pathology. We hypothesized that not all the patients with adverse features may benefit from aRT, and therefore observation ± eSRT may still be considered in a subgroup of these patients.

What We Found

A total of 538 (58%) versus 89 (10%) versus 299 (32%) patients received aRT versus eSRT versus observation. Patients were stratified in 3 risk groups based on pathological T stage, International Society of Urological Pathology grade, and number of positive nodes. After risk stratification and propensity score weighting, survival analyses depicted comparable 10-year overall survival rates in low- and intermediate-risk patients treated with aRT or observation ± eSRT. Conversely, in high-risk patients, aRT was associated with significant improvement in 10-year overall survival compared to observation ± eSRT (76 vs 63%, $P = .038$; see Figure).

“After risk stratification and propensity score weighting, survival analyses depicted comparable 10-year overall survival rates in low- and intermediate-risk patients treated with aRT or observation ± eSRT. Conversely, in high-risk patients, aRT was associated with significant improvement in 10-year overall survival compared to observation ± eSRT.”

Limitations

We relied on a large retrospective institutional series of patients treated over a wide time span. As such, specific considerations related with radiotherapy technique variation and related toxicity should be considered when interpreting these results. Moreover, the impact of the progressive introduction of new imaging modalities such as prostate-specific membrane antigen-based positron emission tomography/CT scan for detection of recurrence, as well as the use of ultrasensitive methods for post-prostatectomy PSA dosage, was not accounted for in the current analysis.

Interpretation for Patient Care

Our risk stratification defined the exact characteristics of patients with adverse pathology who may really benefit from aRT. The application of this model in clinical practice could optimize the use of aRT by improving survival in selected individuals and avoiding the unnecessary adverse effects of aRT in others. ■

JU INSIGHT

Out-of-pocket Cost Burden Associated With Contemporary Management of Advanced Prostate Cancer Among Commercially Insured Patients

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Joyce DD, Sharma V, Jiang DH, et al. Out-of-pocket cost burden associated with contemporary management of advanced pros-

tate cancer among commercially insured patients. *J Urol.* 2022;208(5):987-996.

Study Need and Importance

The treatment landscape for advanced prostate cancer has evolved considerably over the past 20 years. During this time, costs of novel cancer therapies have continued to rise. Furthermore, responsibility for these costs is increasingly shifted to patients in the form of higher premiums, deductibles, and cost-sharing. These out-of-pocket costs (OOPC) represent an important component of financial toxicity and may impact patients' receipt of care.

What We Found

In commercially insured men with advanced prostate cancer, we found that treatment-related OOPC from novel hormonal therapies averaged \$4,236 annually and were over 18 times higher (\$2,581 more) than androgen deprivation monotherapy after adjusting for relevant baseline patient characteristics. Similarly, annual

total health care spending for novel hormonal therapies was \$254,677, compared to \$52,825 for nonandrogen systemic agents (see Table). Patient characteristics associated with high OOPC included older age, Black race, lower comorbidity scores, and lower median household income.

Limitations

Patient-reported financial toxicity was not assessed, thereby limiting knowledge of the impact that our observed findings had on patients' lives. Additionally, potentially relevant patient demographic and clinicopathological characteristics that could influence access to care and financial toxicity, such as employment status, marital status, pretreatment assets and savings, and disease stage/severity, were unable to be assessed. We did not have the statistical power to compare the individual drug regimens within each treatment group.

Interpretation for Patient Care

Understanding the burden of

“Understanding the burden of OOPC is particularly important in disease states where multiple treatment options exist with similar oncologic benefits but varying costs.”

OOPC is particularly important in disease states where multiple treatment options exist with similar oncologic benefits but varying costs. Knowledge of the magnitude of OOPC differences between treatments may facilitate obtaining care in subsidized or lower cost settings when available and provide emphasis to studies evaluating non-inferiority of reduced dose scheduling. Additionally, our findings highlight important disparities in prostate cancer treatment and may help identify patients in most need of interventions to ameliorate financial toxicity. ■

Table. Comparative Out-of-pocket Costs and Total Health Care Spending Between Advanced Prostate Cancer Treatment Groups

Claims	ADT, Mean (SD), \$ (n = 10,926)		NHT, Mean (SD), \$ (n = 832)		NAS, Mean (SD), \$ (n = 1,651)	
	OOPC	THS	OOPC	THS	OOPC	THS
Medical	2,131 (2,453)	16,761 (36,042)	3,610 (2,982)	81,118 (96,384)	1,231 (3,923)	153,836 (153,154)
Pharmacy	693 (895)	4,811 (26,036)	4,254 (17,753)	251,226 (154,204)	955 (1,982)	33,910 (71,186)
Total	2,824 (2,699)	21,571 (46,697)	7,864 (17,955)	332,344 (174,890)	1,186 (4,376)	187,746 (176,893)
Total prostate cancer treatment ^a	165 (584)	778 (2,865)	4,236 (17,704)	254,677 (163,002)	994 (2,344)	52,825 (98,316)

Abbreviations: ADT, androgen deprivation monotherapy; NAS, nonandrogen systemic agents; NHT, novel hormonal therapy; OOPC, out-of-pocket costs; THS, total health care spending.

^aIncludes outpatient pharmacy claims and outpatient-administered medication costs for prostate cancer-related treatments.

JU INSIGHT

Impact of Left-digit Age Bias in the Treatment of Localized Prostate Cancer

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Brant A, Lewicki P, Wu X, et al. Impact of left-digit age bias in the treatment of localized prostate cancer. *J Urol.* 2022; 208(5):997-1006.

Study Need and Importance

Left-digit bias is a phenomenon in which the leftmost digit of a number disproportionately influences decision making. Left-digit bias towards patient age has been shown to influence treatment decisions in health care. We explored treatment recommendations made for patients with localized prostate cancer in 2 large national databases to determine if left-digit bias towards patient age affected treatment recommendations in this subset of patients.

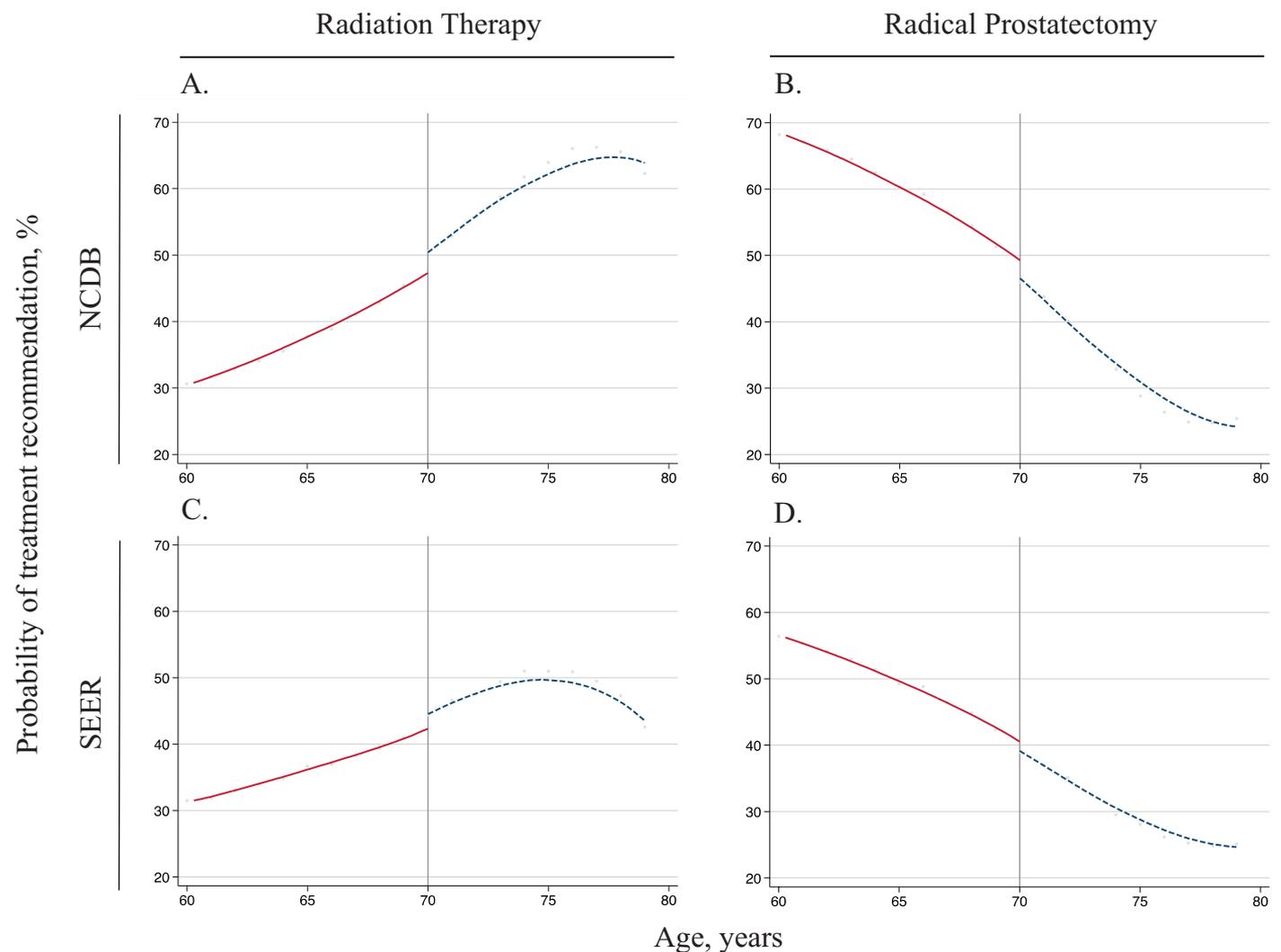


Figure. Regression discontinuity plots assessing impact of left-digit bias on the probability of radiation therapy and radical prostatectomy recommendations in all patients with clinically localized prostate cancer. Significant discontinuity at age 70 was found in National Cancer Database (NCDB) and Surveillance, Epidemiology, and End Results (SEER) patients recommended for radiation therapy (A and C) and radical prostatectomy (B and D).

What We Found

For patients with localized prostate cancer in both the National Cancer Database (NCDB) and Surveillance, Epidemiology, and End Results (SEER), discontinuities from age 69 to 70 were found in the proportion of patients recommended for radiation therapy and radical prostatectomy, with increased recommendations for radiation therapy (NCDB effect size: 3.1%, $P < .01$; SEER effect size: 2.2%, $P < .01$) and decreased recommendations for radical prostatectomy (NCDB effect size: -2.7%, $P < .01$; SEER effect size: -1.4%, $P < .01$; see Figure). Significant discontinuity in recommendations for radiation therapy and prostatectomy from age 69 to 70 was observed in both White and non-White patients,

“Left-digit bias is a phenomenon in which the leftmost digit of a number disproportionately influences decision making.”

and in patients with Charlson Comorbidity index of 0.

Limitations

Prostate-specific antigen was not available in all patients and thus was not used in risk stratification. We could not adjust for patient frailty, which is likely to influence treatment recommendations. Due to the

retrospective nature of the study, there may be biases in patient selection and errors in charting that influence results.

Conclusions

In this study of SEER and NCDB patients with clinically localized prostate cancer, left-digit age change from 69 to 70 was associated with disproportionately increased recommendations for radiation therapy and disproportionately decreased recommendations for radical prostatectomy, affecting 5.8% of cases at age 70 in the NCDB cohort and 3.6% of cases at age 70 in the SEER cohort. Physicians should be aware of this cognitive bias potential when treating patients with prostate cancer. ■

JU INSIGHT

Satisfaction With Clinician-led Germline Genetic Counseling in Patients With Prostate Cancer

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Abusamra SM, Solorzano MA, Luke M, et al. Satisfaction with clinician-led germline genetic counseling in patients with prostate cancer. *J Urol.* 2022; 208(5):1007-1017.

Study Need and Importance

Indications for germline genetic testing for patients with prostate

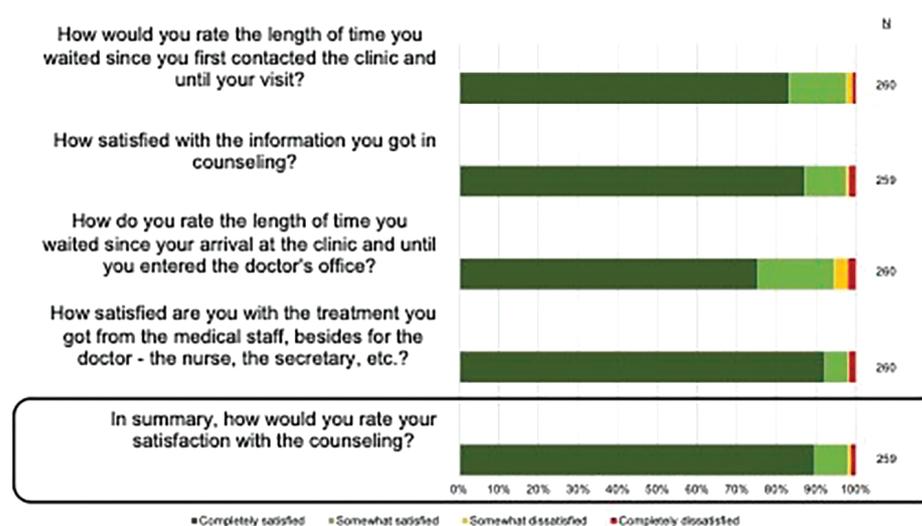


Figure. Satisfaction with Genetic Counseling Scale questionnaire taken by 265 patients before genetic testing.

cancer have expanded substantially over the past decade. With a near-universal shortage of clinical genetic counselors and growing demand, increased access to genetic counseling is crucial. Thus, we sought to prospectively implement and assess a clinician-led approach to genetic counseling and testing in patients with prostate cancer.

What We Found

We found that patient satisfaction with this clinician-led approach to genetic counseling and testing was high, with 98% of patients reporting being satisfied with the overall quality of pre-test counseling (see Figure), and 74% of patients electing to undergo genetic testing. These results support the viability and effectiveness of a clinician-led approach to genetic counseling for patients with prostate cancer.

Limitations

Some limitations of the study include the enrollment of predominantly White individuals and

“These results support the viability and effectiveness of a clinician-led approach to genetic counseling for patients with prostate cancer.”

netic test survey completion.

Interpretation for Patient Care

Genetic education and testing for prostate cancer patients can be effectively led by clinicians, allowing for a high proportion of patients to proceed with testing and resulting in an efficient process for patients. With clinician training, this approach can be utilized to expand access to appropriate germline genetic testing for patients with prostate cancer.

Acknowledgments

We thank the collaborators who have made significant contributions to this work, including Samuel Kaffenberger, MD; Simpa S. Salami, MD, MPH; Randy Vince Jr, MD; Nancy Rodriguez-Galano, NP; LaShon Day, PA-C; Gena Grube, NP; Brent K. Hollenbeck, MD; and Ganesh S. Palapatu, MD, Department of Urology, University of Michigan, Ann Arbor, Michigan; and Phillip Palmbo, MD, PhD, Department of Internal Medicine, Hematology/Oncology Division, University of Michigan Medical School, Ann Arbor, Michigan. ■

“Some limitations of the study include the enrollment of predominantly White individuals and participants receiving counseling from the clinicians who were also managing their prostate cancer, which could bias responses.”

participants receiving counseling from the clinicians who were also managing their prostate cancer, which could bias responses. Additionally, the COVID-19 pandemic required a shift to mailing surveys to many patients, resulting in decreased response rates for post-ge-

JU INSIGHT

First Series Using Ultrasonic Propulsion and Burst Wave Lithotripsy to Treat Ureteral Stones

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Kennedy Hall M, Thiel J, Dunmire B, et al. First series using ultrasonic propulsion and burst wave lithotripsy to treat ureteral stones. *J Urol.* 2022;208(5):1075-1082.

Study Need and Importance

Our goal was to test transcutaneous focused ultrasound in the form of ultrasonic propulsion and burst wave lithotripsy (BWL) to reposition ureteral stones and facilitate passage in awake subjects.

What We Found

Adult subjects with a diagnosed proximal or distal ureteral stone were prospectively recruited. Ultrasonic propulsion alone or with BWL was administered by a handheld transducer to awake, unanesthetized subjects. Twenty-nine subjects received either ultrasonic propulsion alone (n = 16) or with BWL bursts (n = 13), and stone motion was observed in 19 (66%), including 2 where the stone was repositioned into the bladder. The stone passed in 18 (86%) of the 21 distal ureteral stone cases with at least 2 weeks follow-up in an average of 3.9±4.9 days post-procedure (see Table). Fragmentation was observed in 7 of the BWL cases. All subjects tolerated the procedure with average pain scores (0-10) dropping from 2.1±2.3 to 1.6±2.0 (P = .03). Anticipated events were limited to hematuria on initial urination post-procedure and mild pain. In total, 7 subjects had associated discomfort in only 18 of 820 propulsion bursts.

Table. Efficacy Outcomes

	Propulsion Only	Propulsion+BWL	Total
<i>Analysis</i>			
No. pts	16	13	29
Stone motion, No. (%)	11 (69)	8 (62)	19 (66)
Peristaltic motion	6 (38)	8 (62)	14 (48)
Ureteric jets	5 (31)	4 (31)	9 (31)
Echogenicity change/potential cavitation	8 (50)	9 (69)	17 (59)
<i>Subgroup Analysis</i>			
No. pts	11	10	21
Subjects passing stone, No. (%)	11 (100)	7 (70)	18 (86)
Days to passage, mean±SD	2.6±4.0	5.9±5.9	3.9±4.9

Abbreviation: BWL, burst wave lithotripsy.

Limitations

There was no control group for passage rate, although our subjects passed stones at a higher rate than might be expected. The AUA guidelines quote a stone passage rate of 54% for distal ureteral stones smaller than 10 mm based on meta-analyses of 1,205 subjects in 27 studies mostly following for 2 weeks after presentation.

“Twenty-nine subjects received either ultrasonic propulsion alone (n = 16) or with BWL bursts (n = 13), and stone motion was observed in 19 (66%), including 2 where the stone was repositioned into the bladder.”

“This study supports the efficacy and safety of using ultrasonic propulsion and BWL to reposition and break ureteral stones, potentially relieving pain and facilitating passage in awake patients.”

Interpretation for Patient Care

This study supports the efficacy and safety of using ultrasonic propulsion and BWL to reposition and break ureteral stones, potentially relieving pain and facilitating passage in awake patients. This technology has the potential to provide an advantageous and patient-centered solution for the gap between expectant management and urological intervention for ureteral stones. ■

JU INSIGHT

Addressing the Relationship Between Testosterone Levels and Urethral Stricture: A Case-control Study

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Puche-Sanz I, Sabio-Bonilla A, Vila-Braña P, et al. Addressing the relationship between testosterone levels and urethral stricture: a case-control study. J Urol. 2022;208(5):1098-1105.

Study Need and Importance

The biological mechanisms

underlying the development of urethral stricture (US) are still unknown. Recent studies have shown that low testosterone levels are associated with decreased peri-urethral vascularization and that hypoandrogenism is a frequent condition in men with anterior US that also seems to correlate with the severity of the stricture. However, the role of testosterone in the etio-pathogenesis of US is uncertain. We designed this study with the objective of identifying and, where appropriate, quantifying the magnitude of the association between testosterone levels and US.

What We Found

Our multivariate analysis demonstrated that low testosterone levels are associated with US, independent of other potential confounding factors such as age, body mass index, hypertension, diabetes, or smoking (Table 1). Each 100-unit increase in total testosterone (ng/dL) was related to a 34% decrease in the odds of US (adjusted OR 0.66, 95% CI: 0.51-0.86). A strong direct relationship was observed between hypoandrogenism and US (adjusted OR 4.01, 95% CI: 1.37-11.7; Table 2).

Table 1. Comparative Analysis

	Controls (n = 67)	Cases (n = 149)	P value
HA rate, Total-T <300 ng/dL, %	7.5	26	.002
HA rate, Free-T <6 ng/dL, %	22	33	.15
Total-T, mean±SD, ng/dL	488±188	394±141	< .001
Free-T, mean±SD, ng/dL	8.3±3	7.4±3.1	.08
Bio-T, mean±SD, ng/dL	196±74	172±76	.046

Abbreviations: Bio-T, bioavailable testosterone; Free-T, free testosterone; HA, hypoandrogenism; Total-T, total testosterone.

Table 2. Multivariate Analysis Estimates^a

	aOR	CI 95%	P value
HA, Total-T <300 ng/dL	4.01	1.37-11.7	.011
HA, Free-T <6 ng/dL	2.11	0.94-5.19	.07
Total-T (× 100) ^b	0.66	0.51-0.86	.002
Free-T	0.82	0.70-0.94	.006
Bio-T (× 10) ^c	0.90	0.85-0.96	.002

Abbreviations: aOR, adjusted odds ratio; Bio-T, bioavailable testosterone; Free-T, free testosterone; HA, hypoandrogenism; Total-T, total testosterone.

^aThe following variables were also included in each model: age, body mass index, diabetes, smoking status, hypertension, and thyroxine levels.

^bOR of urethral stricture for each 100 units of increase in total testosterone values.

^cOR of urethral stricture for each 10 units of increase in bioavailable testosterone values.

Limitations

The main limitation of our study is its cross-sectional nature. Although it was designed as a case-control study, the measurement of the exposure variable was performed after the diagnosis of US. Another limitation is the known variability (both circadian and throughout life) in testosterone levels. Nevertheless, our results are consistent with previously reported evidence and are biologically plausible. Taken together, all suggest that testosterone plays an important role in the pathophysiological process of US.

“We designed this study with the objective of identifying and, where appropriate, quantifying the magnitude of the association between testosterone levels and US.”

Interpretation for Patient Care

Our results encourage continuing research on the role of testosterone as a prognostic and/or predictive biomarker in US. The integration of this information together with other clinical variables may allow the development of predictive models with the ultimate goal of individualizing the different therapeutic options that currently exist for these patients. ■

JU INSIGHT

Evaluating Tools for Characterizing Anterior Urethral Stricture Disease: A Comparison of the LSE System and the Urethral Stricture Score

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Kurtzman JT, Kosber R, Kerr P, Brandes SB. Evaluating tools for characterizing anterior urethral stricture disease: a comparison of the LSE System and the Urethral Stricture Score. *J Urol.* 2022; 208(5):1083-1089.

Study Need and Importance

Reconstructive urologists are in need of an ordinal scoring system that can describe anterior urethral stricture disease (USD), as well as predict stricture recurrence risk after urethroplasty. Such a system would help in surgical planning, clinical decision making, referral patterns, and patient counseling. Our study objective was to evaluate if scores generated by 2 tools for characterizing anterior USD, the modified LSE classification system score (LSE) and the Urethral Stricture Score (U-Score), correlated with surgical complexity, operative time, and stricture recurrence risk.

What We Found

Our analysis of 187 male patients demonstrated that both increasing U-Score and LSE linearly correlated with increasing surgical complexity (both $P < .0001$).

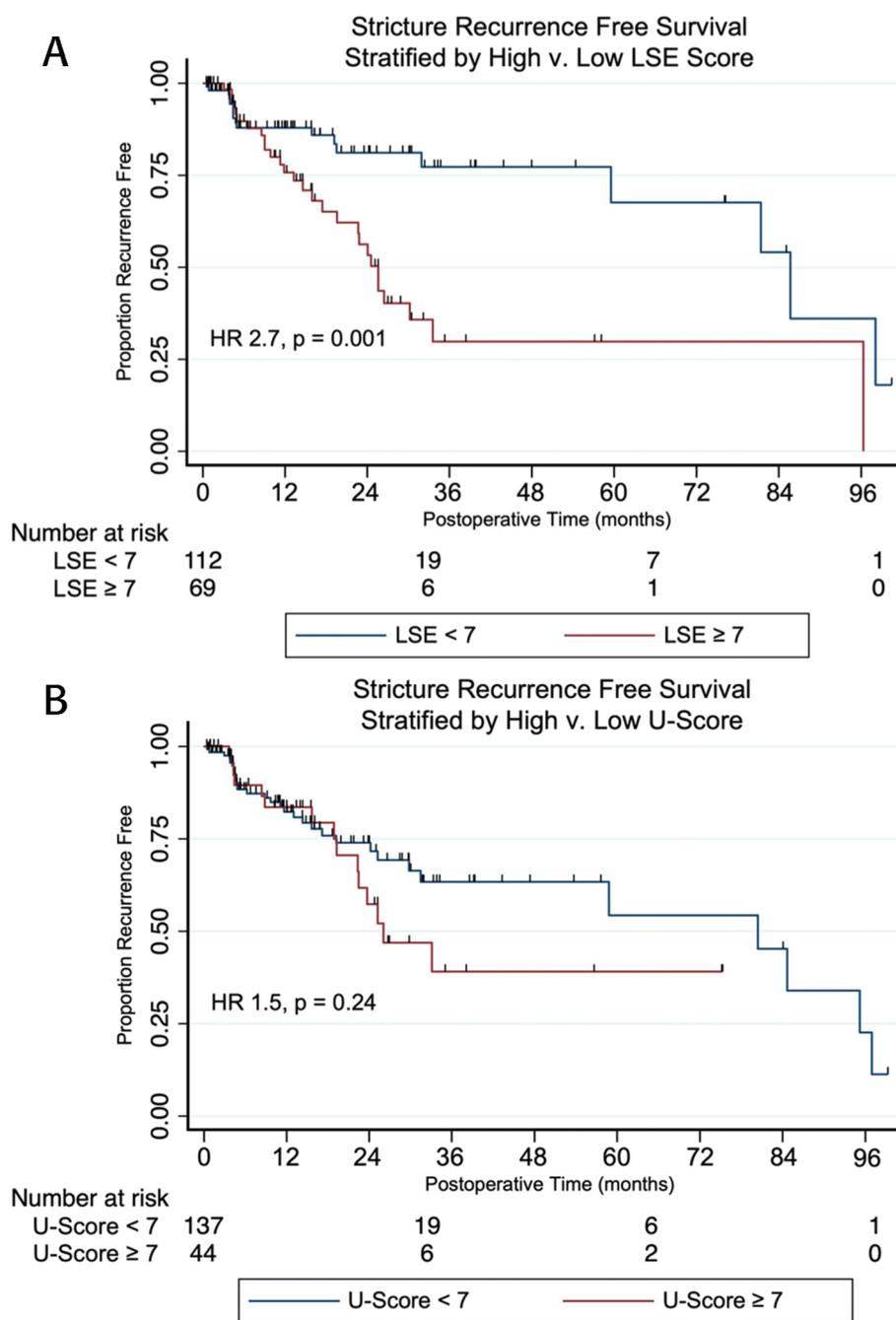


Figure. Kaplan-Meier curves displaying the relationship between LSE score (LSE) (A) and Urethral Stricture Score (U-Score) (B) stratified as high versus low scores and stricture recurrence risk.

Only increasing LSE correlated with increasing operative time ($P = .04$) and was associated with an increased risk of stricture recurrence (univariable: HR 1.2,

$P = .02$; multivariable: HR 1.2, $P = .056$). Patients with a high LSE (≥ 7) were nearly 3 times as likely to recur versus patients with a low LSE (univariable: HR 2.7,

“Our study demonstrates that both U-Score and LSE can help anticipate intraoperative surgical complexity.”

$P = .001$; multivariable: HR 2.8, $P = .002$, see Figure).

Limitations

This was a single-surgeon study conducted in a tertiary care setting; therefore, results may not be generalizable. LSE is previously undescribed and therefore not validated. Follow-up time was relatively short. Both scoring systems lack variables that could impact recurrence risk, including postoperative infection, patient comorbidities, and prior endoscopic surgery. Cutoff values and point allocation in both systems were based on expert opinion rather than statistical modeling.

Interpretation for Patient Care

Our study demonstrates that both U-Score and LSE can help anticipate intraoperative surgical complexity. For community urologists, high scores could help determine which cases should be referred to high-volume urethral surgery centers. LSE may also help urologists anticipate the length of surgery and aid with patient counseling regarding the risk of postoperative stricture recurrence. ■

JU INSIGHT

Final Analysis of the Magnetic Resonance Imaging in Active Surveillance Trial

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Doan P, Scheltema MJ, Amin A, et al. Final analysis of the Magnetic Resonance Imaging in Active Surveillance trial. *J Urol*. 2022;208(5):1028-1036.

Study Need and Importance

Current active surveillance (AS) protocols involve the use of regular PSA tests, digital rectal examinations, and repeat biopsy to detect progression in prostate cancer (PCa) requiring definitive management. Repeat biopsy exposes patients to psychological distress and morbidity. There is limited prospective evidence regarding the diagnostic utility of multiparametric (mp) MRI in AS cohorts. mpMRI may improve detection of cancer progression and allow decreased frequency of biopsy in AS patients.

What We Found

The sensitivity, specificity, positive predictive value, and negative predictive value of mpMRI to detect progression to clinically significant PCa were 57% (95% CI 39%-74%), 82% (95% CI 74%-89%),

“Repeat biopsy exposes patients to psychological distress and morbidity.”

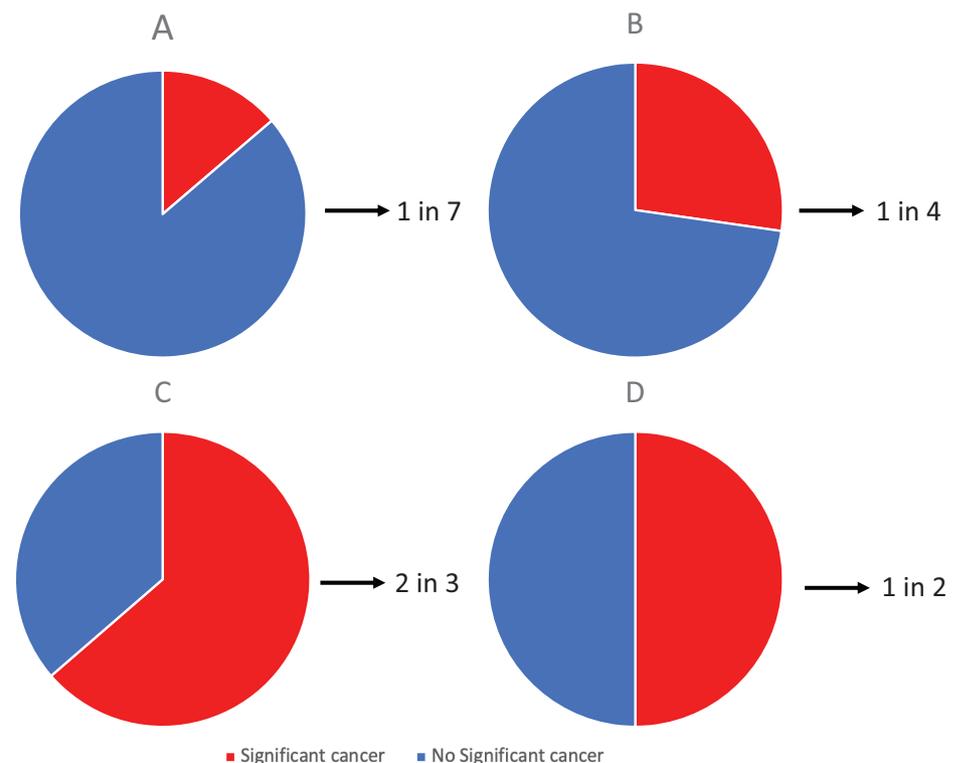


Figure. A, Risk of significant cancer at 3 years for Prostate Imaging-Reporting and Data System® (PI-RADS®) 2/stable PI-RADS 3 lesion. B, Risk of significant cancer at 3 years for new PI-RADS 3 lesion. C, Risk of significant cancer at 3 years for persistent PI-RADS 4/5 lesion. D, Risk of significant cancer at 3 years for new PI-RADS 4/5 lesion.

50% (95% CI 38%-62%), and 86% (95% CI 81%-90%), respectively. Both mpMRI and PSA density were significant predictors for progression. The Figure illustrates risk of clinically significant cancer at 3 years separated by mpMRI result. Only 2.3% (4/172) of patients had false-negative mpMRIs and high-risk pathological features (pT3 or high-volume International Society of Urological Pathology grade group >2). After a median of 69 months of follow-up, freedom from biochemical recurrence, metastasis, and PCa-related death were 99.3%, 100%, and 100%, respectively.

Limitations

The study is limited by design as it is a single-arm study. At time of study design PRECISE criteria had not been published and MRI progression was defined via expert consensus. The study employed

the use of saturation template biopsy, which may reduce relevance to centers which employ limited 10- to 12-core transrectal ultrasound-guided biopsy.

Interpretation for Patient Care

Final analysis of the Magnetic Resonance Imaging in Active Surveillance trial indicates that 1-year confirmatory biopsy may be omitted with minimal risk to AS patients where magnetic resonance-targeted + saturation template biopsy was performed at baseline. mpMRI and PSA density were strong predictors of progression and can reduce frequency of biopsy in AS patients without significant impact on oncologic outcomes. However, standardized 3-year systematic biopsy should be performed regardless of mpMRI and PSA due to occasional MRI-invisible tumors. ■

JU INSIGHT

Financial Toxicity After Robot-assisted Radical Prostatectomy and Its Relation With Oncologic, Functional Outcomes

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Özman O, Tillier CN, van Muilekom E, van de Poll-Franse LV, van der Poel HG. Financial toxicity after robot-assisted radical prostatectomy and its relation with oncologic, functional outcomes. *J Urol.* 2022;208(5):978-986.

Study Need and Importance

Robotic systems articulating our daily surgical practice is one of the groundbreaking developments. Technological developments implemented in medical care bring along financial burden on governments, health systems and, after all, patients suffering from diseases, especially cancer. Financial toxicity (FT) faced by cancer survivors is a common but underspoken consequence of technology-dependent, high cost, and long-lasting management modalities of cancer often related to disabilities and changes in quality of life.

“Financial toxicity (FT) faced by cancer survivors is a common but underspoken consequence of technology-dependent, high cost, and long-lasting management modalities of cancer often related to disabilities and changes in quality of life.”

What We Found

FT frequency was 8.3% (95% CI 7.0-9.8) among patients who underwent robot-assisted radical prostatectomy. In The Netherlands, radical prostatectomy is mostly performed robot-assisted without out-of-pocket payments by patients. Nevertheless, still nonnegligible numbers of patients had FT, defined as any financial difficulty caused by prostate cancer-related physical condition or treatments as measured with the financial impact scale of the European Organisation for Research and Treatment of Cancer quality of life questionnaire (question 28). Men with FT were

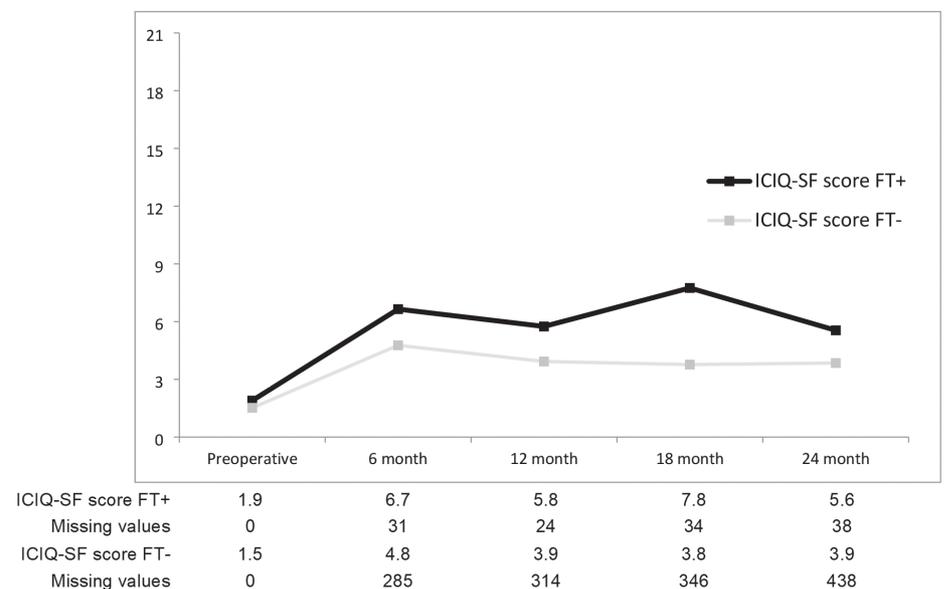


Figure. Patient-reported incontinence measure changes during follow-up for the groups. FT indicates financial toxicity; ICIQ-SF, International Consultation on Incontinence Questionnaire—Short Form.

younger, not retired, and more frequently bothered by postoperative symptom burden. Voiding symptoms such as urinary incontinence rather than erectile dysfunction were especially associated with FT (see Figure).

Limitations

The subjective nature of outcome measurement method and response rate to questionnaires were limitations. In addition, our retrospective analysis lacks data on education level and earning levels of patients.

Interpretations for Patient Care

We depict that if robot-assisted radical prostatectomy is covered by health insurance and is performed in high-volume referral can-

“Medical caregivers should be aware of the risk factors that increase financial disturbances for patients during the management of prostate cancer.”

cer centers by experienced robotic surgeons, FT incidence is relatively low among cancer survivors. In particular, younger men with urinary incontinence experienced FT. Medical caregivers should be aware of the risk factors that increase financial disturbances for patients during the management of prostate cancer. ■

JU INSIGHT

The Safety and Efficacy of Fluoxetine for the Treatment of Refractory Primary Monosymptomatic Nocturnal Enuresis in Children: A Randomized Placebo-controlled Trial

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Hussiny M, Hashem A, Soltan MA, Helmy TE, El-Kenawy MR, Abdelhalim A. The safety and efficacy of fluoxetine for the treatment of refractory primary monosymptomatic nocturnal enuresis in children: a randomized placebo-controlled trial. *J Urol.* 2022;208(5):1126-1134.

Study Need and Importance

Therapeutic options for treatment-refractory nocturnal enuresis (NE) are limited. A handful of studies suggested a possible role for selective serotonin reuptake inhibitors. In this randomized controlled trial, we examined fluoxetine (a selective serotonin reuptake inhibitor) as a treatment option for refractory NE.

What We Found

A total of 150 children aged 8-18 years with NE unresponsive to traditional therapies were

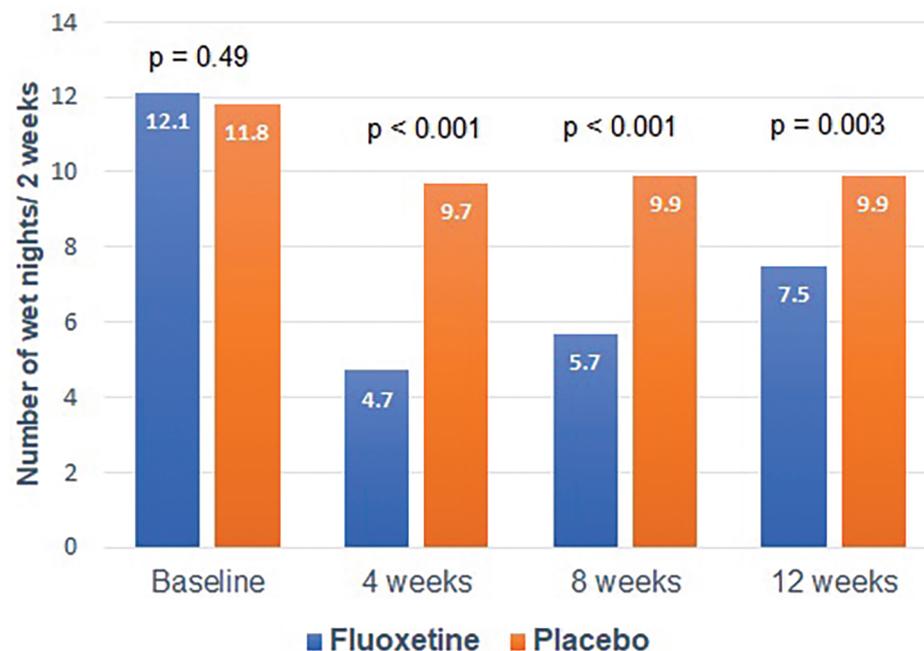


Figure. Mean number of wet nights/2 weeks in fluoxetine- (blue bars) and placebo-treated (orange bars) groups at baseline and at 4, 8, and 12 weeks of therapy.

“In this randomized controlled trial, we examined fluoxetine (a selective serotonin reuptake inhibitor) as a treatment option for refractory NE.”

enrolled after excluding patients with daytime symptoms, untreated constipation, or underlying developmental, neuropsychiatric, endocrinological, or urological comorbidities. Patients were randomly assigned to 10 mg fluoxetine once daily or placebo for 12 weeks. Fluoxetine-treated patients had a significantly lower number of wet

nights at 4, 8, and 12 weeks relative to placebo (see Figure). According to the International Children’s Continence Society terminology, 7.1% and 66.1% of fluoxetine-treated patients achieved complete response and partial response (defined as 50%-99% reduction in the number of wet nights), respectively, at 4 weeks, versus 0% and 16.7% for placebo. Treatment response declined at 12 weeks, with complete and partial responses achieved in 10.7% and 21.4% of the fluoxetine group, respectively, versus 0% and 14.8% of the placebo group. Minor and rapidly reversible adverse effects were reported in 8.9% of fluoxetine-treated children.

Limitations

The study is limited by short follow-up. Some patients were lost to follow-up after the study

“Further studies should examine fluoxetine efficacy and safety in other patient populations including those with polysymptomatic enuresis and attention-deficit/hyperactivity disorder.”

conclusion, and therefore relapse rates after treatment discontinuation were not reported. The study included only patients with monosymptomatic NE without other comorbidities. Further studies should examine fluoxetine efficacy and safety in other patient populations including those with polysymptomatic enuresis and attention-deficit/hyperactivity disorder. It remains unknown if patients unresponsive or partially responsive to fluoxetine would benefit from higher doses of fluoxetine or combination with other anti-enuresis medications.

Interpretation for Patient Care

Fluoxetine could be considered a salvage treatment in children with treatment-refractory NE with good initial response and minimal adverse effects, but the response rate declines gradually over time. ■

FROM THE SCIENCE & QUALITY COUNCIL

Celebrating AUA's 2022 Quality Improvement Summit on Primary Palliative Care in Urology

Matthew Nielsen, MD, MS, FACS
 AUA Science and Quality Council Chair
 University of North Carolina, Chapel Hill

After years of planning and 2 postponed dates due to COVID-19, the AUA convened the in-person portion of the 2022 Quality Improvement Summit, "Laying the Foundation for Primary Palliative Care in Urology" (available at <https://www.auanet.org/guidelines-and-quality/quality-and-measurement/patient-safety-and-quality-of-care/quality-improvement-summit>), at AUA2022. Urologists have played a major role in the development of the field, with Balfour Mount, a urologic oncologist, credited as the father of modern palliative care in North America. Palliative care improves the quality of life of patients and families who are facing challenges associated with serious illness, whether physical, psychological, social, or spiritual. However, there are not enough palliative care specialists to fulfill the palliative care needs of these patients. A solution to this shortage is primary palliative care: palliative care that is delivered by non-palliative care specialists, like urologists, often but not always in

"Urologists have played a major role in the development of the field, with Balfour Mount, a urologic oncologist, credited as the father of modern palliative care in North America."

"A solution to this shortage is primary palliative care: palliative care that is delivered by non-palliative care specialists, like urologists, often but not always in collaboration with specialty palliative care providers."

collaboration with specialty palliative care providers.

The Quality Improvement Summit, directed by Dr John Gore and Dr Jonathan Bergman, focused on improving patient-centeredness and care quality by identifying ways to integrate primary palliative care into urology. The summit comprised 2 webinars (available for review on the AUA website) and an in-person meeting. Presenters in the first webinar, "Building a Primary Palliative Care Model for Urology" (available at <https://auau.aunanet.org/content/building-primary-palliative-care-model-urology-webcast-2021>), discussed opportunities for palliative care within urological practice and urologists' roles in providing that care, including how and when to collaborate with palliative care clinicians. Faculty in the second webinar, "Perspectives on Increasing the Use of Palliative Care in Advanced Urologic Disease" (available at <https://vimeo.com/auaedu/review/554816041/7111b07dfc>), covered evidence-based innovations in primary palliative care in urology and role-specific readiness for implementation.

Building on the information and ideas from these webinars, participants in the highly interactive in-person conference collectively identified best practices and strategies for developing and implementing a primary palliative care intervention for urology. Panelists included urologists from various practice settings and experience levels, as well as palliative care physicians and a social worker. A cadre of trainees who received travel stipends to attend the summit engaged in rich dis-

"Some of the key strategies articulated by participants included inviting palliative care providers to speak at urology grand rounds, requiring trainees to meet standardized palliative care competencies at each level of training and complete a palliative care rotation or shadow experience, and implementing a multidisciplinary tumor board with the involvement of palliative care clinicians."

"A key takeaway from the discussions was the unique challenges of providing primary palliative care for urologists in private practice."

cussion of how to operationalize a primary palliative care model in urology, the clinical innovations and interventions needed, and outcomes and metrics that should be tracked. Some of the key strategies articulated by participants included inviting palliative care providers to speak at urology grand rounds, requiring trainees to meet standardized palliative care competencies at each level of training and complete a palliative care rotation or shadow experience, and implementing a multidisciplinary tumor board with the involvement of palliative care clinicians. Metrics discussed included rates of screening and re-screening for palliative care needs, rate of referral to palliative care consult, patient decision regret of treatment choice, and quality of life, among many others. A key takeaway from the discussions was the unique challenges of providing primary palliative care for urologists in private practice.

Additional detailed proceedings and products from the summit will be posted on the AUA website in the near future. I look forward to future discussion and collaboration to advance the primary palliative care model in the field of urology! ■

Advancing Urology in the Caribbean: The Caribbean Urological Association, the AUA, and Global Urology

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The Caribbean Urological Association (CURA) was founded in 1999 in Trinidad and Tobago. CURA continues to foster camaraderie and facilitate academic exchanges within the Caribbean. It includes urologists and urology residents-in-training, primarily from within the English-speaking Caribbean who share a common cultural and geopolitical history. CURA has grown steadily, aided by the support of global organizations such as the AUA, Société Internationale d'Urologie, and *BJU International*.

Regional urologists have benefited from numerous workshops over the years in pediatric and adult reconstructive urology, as well as training initiatives for research and authorship. In these cases, the AUA provided proctors to visit our centers locally. These endeavors have benefited numerous patients, residents in training, and urological surgeons, bringing first-world urology to our shores. This sustained collaboration model has provided the foundation to advance urological care by allowing continuous follow-up and reassessment in order to improve our standards of care. The AUA has also supported these residency training programs in the region, facilitating the donation of surgical equipment and providing sponsorship for 2 residents to attend the annual Fundamentals in Urology Course.

Many outside of the Caribbean are unaware that postgraduate training in urology is possible in the region. In fact, the majority of urologists in the English-speaking Caribbean were trained in the Caribbean. The University of

the West Indies is the premier institution for both undergraduate and postgraduate training in the region. Currently postgraduate training in urology is undertaken in Jamaica and Trinidad and Tobago. The program is 6 years long, with the first 2 years spent in general surgical training. To date, these programs have produced a total of 34 graduates. One of the first graduates from Jamaica, Dr. William Aiken, has now been appointed Professor of Urology at the University of the West Indies. Several graduates from both programs have gone on to complete fellowship training in endourology, urologic oncology, and reconstructive urology. It is our hope that more graduates will pursue

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fellowship training, thereby increasing the pool of subspecialty skills within the region.

The AUA has also been supportive of research and continuing medical education in the Caribbean. Every year, the AUA provides a speaker to CURA's annual conference who delivers an impactful “AUA Special Guest Lecture.” Additionally, for many years CURA held a presence at the AUA Annual Meeting, hosting a joint international society meeting with PAUSA (the Pan African Urological Surgeon Association). Several AUA members currently serve on the CURA international relations committee, including Professors Arthur Burnett, Kurt McCammon, Grannum Sant, and Michael Coburn.

At the last AUA meeting in New Orleans, the Executive Boards of the AUA and CURA met, reaffirming our commitment to work together to carry out CURA's mission—advancing urology in the Caribbean. A range of initiatives were discussed, including joint outreach projects with the Urology Care Foundation as well as support for the creation of a *Journal of the Caribbean Urological Association* to provide a platform for urological research in the Caribbean. We also hope to have a regular schedule of elective U.S. medical students with the primary goal being a rich and immersive clinical and research experience in the Caribbean. Prior to the pandemic, in Trinidad and Tobago we hosted 1 student each from Vanderbilt University and Eastern Virginia Medical School, and we hope to reinstitute and regularize this program.

The 23rd Annual Meeting of CURA will be held in Barbados from November 4 to 6, 2022. Dr. Angelo Gousse joins us this year as the AUA designated speaker, and we look forward to our first in-person meeting since the beginning of the pandemic. We invite all AUA members to attend. CURA salutes the AUA, and we look forward to the continued exchange of informa-

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tion and ideas to advance urology in the Caribbean and contribute to the global urology community ■