

## Poster Session 12: Health Equity, QI Monday, July 1, 2024 • 7:00–8:30

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### MP 12.1

#### A comprehensive analysis of surgical tray utilization in reconstructive urology

*Benedikt Horlemann<sup>1</sup>, Amanda Ross<sup>1</sup>, Luke Witherspoon<sup>1</sup>, Humberto R. Vigil<sup>1</sup>*

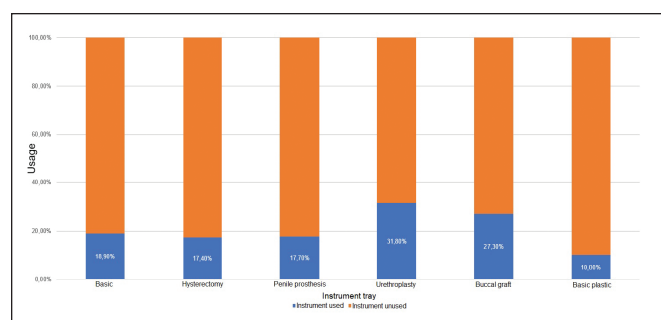
<sup>1</sup>Department of Urology, The Ottawa Hospital, Ottawa, Canada

**Introduction:** The perioperative sector is recognized to be financially and environmentally demanding, and in the context of rising healthcare costs and anthropogenic climate change, initiatives that emphasize cost reduction, efficiency, and sustainability are increasingly important to achieve the quadruple aim of healthcare. In other surgical specialties, surgical trays are known to be superfluous, with utilization rates of only 14–30%. Multiple institutions have demonstrated that surgical tray reduction can result in financial and environmental savings. This study aimed to determine the utilization rate of instrument trays in frequently conducted urologic reconstructive procedures.

**Methods:** A single-site, observational study was prospectively conducted at a large academic center in Ontario, Canada. Current data ranging from October 2023 to January 2024 was included. Four attending surgeons agreed to participate for intraoperative assessment of tray utilization across six common reconstructive procedures: pelvic organ prolapse repair; urethroplasty, penile prosthesis insertion, artificial urethral sphincter insertion, and both male and female urethral sling surgery. The pick sheets for each surgeon were reviewed and the instrument recipes for all major instrument trays were transcribed into Excel for each procedure. A trained observer (AR) recorded the respective usage of individual instruments from these surgical trays for each respective procedure.

**Results:** Across the six urologic procedure types, 17 procedures were observed. The complete list of procedures and associated instrument trays are noted in Table 1. Depending on the procedure, one or multiple instrument trays were opened, resulting in the opening of 30 surgical trays in total. The total instrument count from the 30 surgical trays was 1418, with an actual intraoperative usage of 251 instruments (17.7%) across all procedures. The highest relative instrument usage per surgical procedure was noted for urethral sling insertion at 20.4%, with the lowest usage noted for pelvic prolapse repair at 16.1%. The highest (31.8%) and lowest (10.0%) instrument usage per tray were observed for the urethroplasty and basic plastics tray, respectively (Figure 1).

**Conclusions:** Instrument tray arrangement in reconstructive urology is an important cost and environmental variable that necessitates regular assessment by the surgical team. Based on our initial results, it would appear that the majority of instruments within a specific surgical tray are unused. Surgical tray optimization represents an opportunity to improve surgical value through reduced costs, increased efficiency, and environmental sustainability.



MP 12.1. Figure 1.

### MP 12.2

#### Efficient blood testing in endourology: A Transfusion Dashboard initiative to minimize unnecessary group and screen tests

*Ghizlane Moussaoui<sup>1</sup>, Jacqueline D. Trudeau<sup>2</sup>, Emma Pienaar<sup>3</sup>, Connor M. Forbes<sup>1</sup>*

<sup>1</sup>Department of Urologic Sciences, University of British Columbia, Vancouver, Canada; <sup>2</sup>Department of Anesthesiology, Pharmacology and Therapeutics, University of British Columbia, Vancouver, Canada; <sup>3</sup>Decision Support, Vancouver Coastal Health, Vancouver, Canada

**Introduction:** Group and screen (G&S) testing is routinely performed preoperatively for many endoscopic procedures, despite a low rate of blood transfusion. While important, testing can be costly, unnecessary, and burdensome to patients to obtain G&S in a short timeframe due to expiry. We aimed to assess and reduce unnecessary G&S testing in a safe and collaborative manner through a Transfusion Dashboard. We assessed the effect of reduced G&S testing on cost and the environment.

**Methods:** The Transfusion Dashboard (TD), launched at UBC in 2020, is a quality improvement initiative that tracks procedure-specific transfusion rates. Based on initial findings, recommendations for preoperative G&S for endoscopic procedures were developed. We reviewed the incidence of G&S testing, perioperative transfusion rates, and rescue transfusion rates (when a patient without G&S needs urgent, uncrossed transfusion) in endourologic procedures before and after the implementation of this initiative with the Chi-squared test. We also assessed cost and environmental savings.

**Results:** From 2016–2023, outcomes were tracked for 4393 pre-TD initiative and 2058 post-TD initiative patients who underwent endoscopic procedures (Table 1). We found a statistically significant decrease in G&S testing post-TD for TURP, PNL, HoLEP, and TURBT by as much as 66.5% ( $p < 0.001$ ) (Table 2). There was no change in uncrossed or overall blood transfusions (0% for all groups). In 2022 alone, the overall cost saving across these four procedures was \$11 580.89, while the overall environment saving was 178 Kg CO<sub>2</sub>, which is equivalent to 199 pounds of coal burned.

**Conclusions:** Institutional and procedure-specific G&S testing guidelines decrease unnecessary tests, leading to improved resource stewardship, reduced cost, respecting patients' time, and environmental savings. While the cost saving per group is modest, care improvements may be amplified safely in larger organizations and across more procedures.

MP 12.1. Table 1. Reconstructive urology instrument usage per procedure

Procedure (events)	Trays per procedure	Total number of instruments opened	Total number of used instruments (%)
Pelvic organ prolapse repair (3)	1	161	26 (16.1)
Urethroplasty (5)	3	608	100 (16.4)
Penile prosthesis (1)	2	99	20 (20.2)
AUS (3)	2	290	52 (17.9)
Urethral sling male/female (5)	1	260	53 (20.4)

**MP 12.2. Table 1. Pre and post Transfusion Dashboard initiative group and screen-testing rates and transfusion rates**

	Pre-op GS rates (%)			Transfusion rates (%)								
	Pre	Post	p	Pre				Post				
				Intraop	POD 0	POD 1-3	Overall	Intraop	POD 0	POD1-3	Overall	p
TURP (n=1865)	92.2	28.6	<0.001	0.15	0.38	0.38	0.77	0.36	0.71	0.53	1.24	0.327
HoLEP (n=904)	94.4	78.1	<0.001	0	0.43	1.3	1.73	0.23	0.68	0.90	1.36	0.652
TURBT (n=2034)	8.7	2.9	<0.001	0.21	0.35	0.64	0.85	0.16	0.64	0.80	1.44	0.224
PNL (n=1648)	95.4	83.2	<0.001	1.31	2.54	3.69	5.16	2.10	4.44	2.57	5.61	0.720

**MP 12.2. Table 2. Cost and environmental savings across endourological procedures in 2022 after institution of Transfusion Dashboard Initiative**

Procedure	Cost saving (\$)	Environmental saving (kg CO <sub>2</sub> )
TURP	4881.63	75
HOLEP	337.56	6
TURBT	5868.34	90
PNL	493.36	7
Total	11 580.89	178

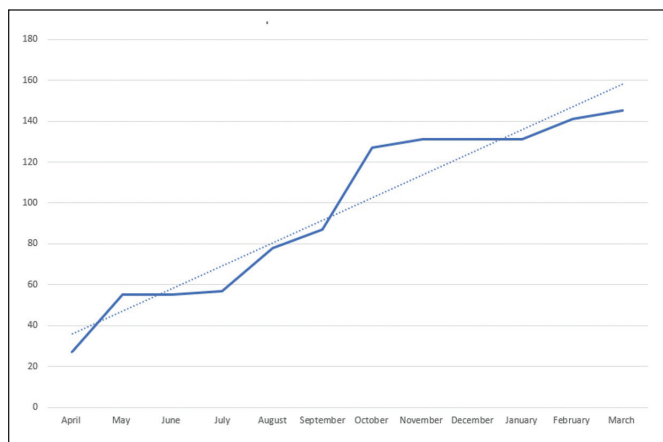
**MP 12.3**  
**Achieving sustainability through digital faxing: A quality improvement initiative**

Ravi Kumar<sup>1</sup>, Melanie Dubreuil<sup>2</sup>, Luke Witherspoon<sup>3</sup>, Husein Moloo<sup>3</sup>, Humberto R. Vigil<sup>3</sup>

<sup>1</sup>Department of Surgery, University of Toronto, Toronto, Canada; <sup>2</sup>Quality and Patient Safety, The Ottawa Hospital, Ottawa, Canada; <sup>3</sup>Department of Surgery, University of Ottawa, Ottawa, Canada

**Introduction:** Ontario's healthcare system annually dispatches around 152 million paper faxes, contributing significantly to greenhouse gas (GHG) emissions. Despite The Ottawa Hospital (TOH) adopting a digital faxing platform in 2010, only 12% of physicians used it. This study aimed to onboard physicians onto the digital faxing platform via a quality improvement (QI) initiative. Secondary aims included quantifying GHG emissions reduction and assessing user satisfaction.

**Methods:** The QI team conducted a root cause analysis to discern reasons for low uptake, employing iterative Plan-Do-Study-Act cycles to drive change. The



**MP 12.3. Figure 1.** Number of new RightFax users, Department of Surgery, April 2020 to March 2021.

numbers of physicians transitioning to digital faxing and the number of digital faxes received was tracked over time and used to populate statistical process control charts. The environmental impact was quantified using Adobe Carbon Footprint and Resource Saver Calculators. User satisfaction was evaluated through surveys.

**Results:** The study was conducted within the Department of Surgery at TOH from April 1, 2020, to March 31, 2021. The key barriers to onboarding were: concerns over losing fax numbers/referrals, missed communications, complex transition process, and lack of electronic medical record (EMR) integration. Implemented interventions included the creation of a streamlined onboarding process, administrator and physician interviews, creation of instructional videos, and EMR integration. At the study's outset, 27 physicians used digital faxing. By its conclusion, 141 new users were onboarded, marking over a fivefold increase within a year (Figure 1). A total of 138 713 inbound digital fax pages were received, resulting in an 89% reduction in carbon footprint (117 934 vs. 1 290 016 g CO<sub>2</sub> equivalent), saving 56 184 L of water, 2347 kg of wood, avoiding 371 kg of waste, and conserving 17 685 909 BTU hours of energy. Most (80%) respondents noted improved workflow and 87% found digital faxing more convenient.

**Conclusions:** Our QI initiative significantly elevated digital faxing adoption among surgeons, substantially reducing paper usage, GHG emissions, and enhancing user satisfaction. Healthcare systems should embrace digital faxing as a sustainable strategy toward achieving the quadruple aim of healthcare.

**MP 12.4**  
**Barriers to fertility preservation among transgender patients**

Cameryn Evans<sup>1</sup>, Jesse Ory<sup>1</sup>, Ainsley Bethune<sup>1</sup>, Emily Chedrawe<sup>1</sup>

<sup>1</sup>Department of Medicine, Dalhousie University, Halifax, Canada

**Introduction:** Transgender/non-binary (TGNB) individuals represent a growing part of the population. Gender-affirming hormone therapies (GAH) can impact fertility, making cryopreservation vital before starting GAH. The objective of our study was to investigate fertility preservation trends among TGNB patients in Nova Scotia, which has the highest per capita number of TGNB individuals in Canada.

**Methods:** Atlantic Assisted Reproductive Therapies in Halifax is the sole provider of fertility preservation services in Nova Scotia. We conducted a retrospective chart review to identify all individuals who underwent sperm cryopreservation between 2017 and 2022. We collected demographic data, referral information, reasons for cryopreservation (cancer, gender transition, IVF), and semen analysis results. Individuals who cryopreserved for IVF were excluded. Total motile sperm counts (TMSC) were calculated from semen analyses.

**Results:** Our analysis included data from 131 individuals assigned male at birth who froze sperm. Of these, 112 patients underwent cryopreservation due to cancer (average age = 26 years, IQR 17.5–33.0), while 19 patients did so for gender transition (average age = 25 years, IQR 20.0–25.5). The time from referral to cryopreservation was eight days for cancer patients (range 0–28) and 191 days for transgender patients (range 8–450). All but one TGNB patient were able to provide a sample via masturbation; 31.6% of TGNB patients had initiated GAH before cryopreservation. The average TMSC was 213.4 (IQR 64.86–326.38) for TGNB patients who froze before starting GAH and 108.7 (IQR 29.52–177.57) for those who froze after starting GAH.

**Conclusions:** Many barriers exist to fertility preservation among TGNB individuals. Delaying cryopreservation can worsen dysphoria and reduce sperm counts if GAH begins first. Reducing wait times for TGNB patients can enhance healthcare equity and potentially improve the well-being of an underserved community.

Acknowledgements: This project is supported by a CUA EDIA (equity, diversity, inclusion, and accessibility) grant.

**MP 12.5**  
**Factors associated with publication of abstracts presented at CUA annual meetings from 2010–2021**

Zizo Al-Daqqaq<sup>1</sup>, Zwetlana Rajesh<sup>1</sup>, Ihtisham Ahmad<sup>1</sup>, Ealia Khosh Kish<sup>1</sup>, Haider Abed<sup>2</sup>, Blayne Welk<sup>2</sup>

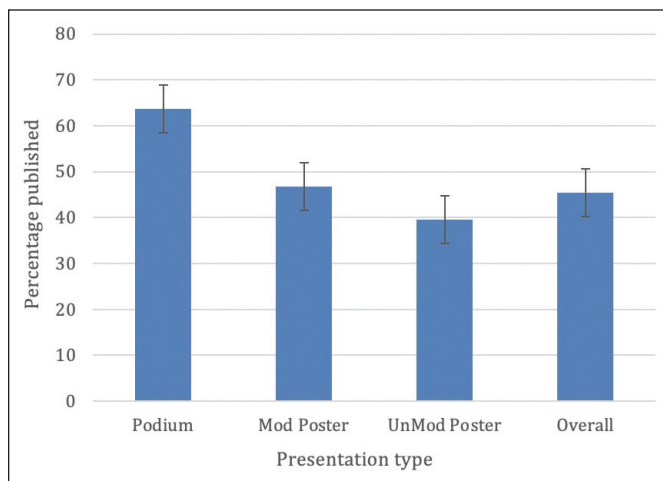
<sup>1</sup>Temerty Faculty of Medicine, University of Toronto, Toronto, Canada; <sup>2</sup>Schulich School of Medicine and Dentistry, Western University, London, Canada

**Introduction:** The Canadian Urological Association’s (CUA) annual meeting is the largest gathering of Canadian urologists. Many abstracts presented at the CUA go on to be published in scientific journals. Our objective was to determine the publication rates and impact of these abstracts and examine predictors associated with their publication.

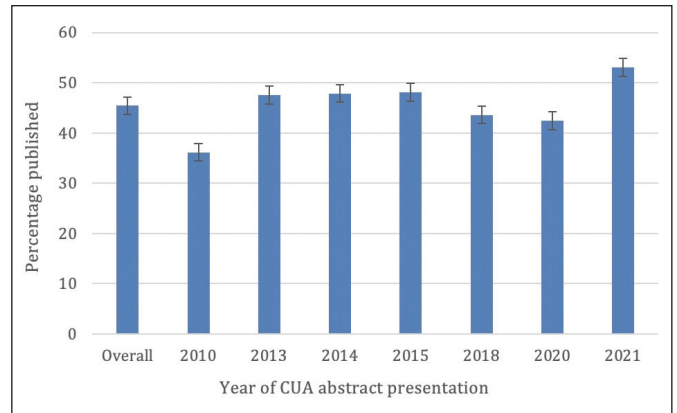
**Methods:** We identified abstracts presented at the 2010, 2013, 2014, 2015, 2018, 2020, and 2021 CUA meetings, and determined if there were matching manuscripts based on author and title using a comprehensive Medline search. Standardized data was extracted. Regression models were used to determine factors associated with manuscript publication and journal impact factors. Medians and interquartile ranges are presented.

**Results:** There were 1732 CUA abstracts in our years of interest. The overall publication rate was 45.4%. Median time to publication in months was 13.2 (6.1–23.3). Type of presentation was significantly associated with publication rate ( $p < 0.01$ ): 63.7% of podiums, 46.7% of moderated posters, and 39.5% of unmoderated posters were published (Figure 1). Abstracts presented in 2021 were more likely to be published (OR 2.59,  $p < 0.01$ ) compared to 2010 (Figure 2). Some Canadian universities had significantly higher or lower odds of abstract publication. Subspecialty area and type of research (such as clinical trial or cohort study) did not significantly impact the chance of publication. The median journal impact factor for published podium abstracts was 3.46 (2.05–5.65), 2.19 (1.37–3.77) for moderated posters, and 2.10 (1.41–3.40) for unmoderated posters (Figure 3). The type of abstract presentation was significantly related to the eventual journal impact factor ( $p < 0.01$ ), while the year of presentation was not ( $p = 0.58$ ).

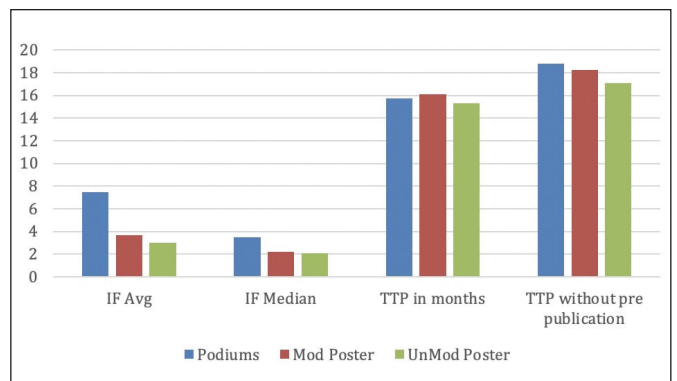
**Conclusions:** Approximately 45% of CUA abstracts end up being published. The type of presentation correlates well with both publication and impact factor, suggesting the CUA review process and scientific program committee does a good job of judging abstract quality.



MP 12.5. Figure 1. Publication percentage by presentation type.



MP 12.5. Figure 2. Publication percentage by CUA presentation year.



MP 12.5. Figure 3. Overall impact factor and time to publication by presentation type.

**MP 12.6**  
**Sex differences in muscle-invasive bladder cancer with radical cystectomy**

Kiera Liblik<sup>1</sup>, D. Robert Siemens<sup>1</sup>, Marlo Whitehead<sup>2</sup>

<sup>1</sup>Department of Urology, Queen’s University, Kingston, Canada; <sup>2</sup>ICES Health Services and Policy Research Institute, Queen’s University, Kingston, Canada

**Introduction:** Emerging research in muscle-invasive bladder cancer (MIBC) suggests that female patients have delayed presentation, differential treatment response, less guideline-concordant care, and worse survival as compared to male patients. The actual degree of these differences and contributing factors are poorly understood. The present study analyzes sex differences in a large cohort of patients who underwent radical cystectomy (RC).

**Methods:** This is a retrospective, population-based study of all MIBC patients that underwent RC in Ontario, Canada from 2009–2013 using records linked to the Ontario Cancer Registry. The primary objective was to assess sex differences in treatment variables and outcomes, including downstaging, cancer-specific survival (CSS), and overall survival (OS).

**Results:** In total, 1573 patients were included (32.9% female) with no sex differences in baseline characteristics. The final pathologic stage was higher in female than male patients (82% vs. 77%  $\geq pT2$ ). Perioperative management was similar between sexes, including wait times, chemotherapy use, and multidisciplinary consultations. Female patients were less likely to undergo a pelvic lymph node dissection (PLND) than male patients (91% vs. 95%;  $p = 0.007$ ). The downstaging rate was also higher in male patients (10.8%) than females (8.1%). Univariate analysis demonstrated a non-significant female vs. male differential in CSS (hazard ratio [HR] 1.17, 95% confidence interval [CI] 0.99–1.37,  $p = 0.06$ ) and OS (HR 1.16, 95% CI 1.00–1.34,  $p = 0.05$ ). After adjusting for confounders, there was no difference in OS between female vs. male patients (HR 1.07,  $p = 0.33$ ).

**Conclusions:** This study represents an important addition to the literature on sex differences in MIBC patients undergoing RC in real-life practice. Although

there were no sex differences in perioperative care, there were lower rates of female PLND and pathologic downstaging. Absolute survival differences were not appreciated; however, this did not adjust for a higher average life expectancy in female Canadians. The results in this modest cohort suggest that the relative survival of female patients is inferior, warranting further investigation. These observations underscore the need to report bladder cancer outcomes by sex as opposed to only using sex as a model variable.

**Acknowledgements:** This study was supported by the Institute for Clinical Evaluative Sciences (ICES), which is funded by an annual grant from the Ontario Ministry of Health and Long-Term Care (MOHLTC). Parts of this material are based on data and information compiled and provided by CIHI. The opinions, results, and conclusions reported in this paper are those of the authors and are independent from the funding sources and CIHI. No endorsement by ICES or the Ontario MOHLTC is intended or should be inferred. Dr. Siemens had full access to all the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis.

**MP 12.7**  
**Increasing medical complexity of urologic inpatients over time: A comparative retrospective chart review**

Liam Power<sup>1</sup>, Kaveh Masoumi-Ravandi<sup>2</sup>, Ross Mason<sup>1</sup>, Andrea Lantz Powers<sup>1</sup>, Tom Skinner<sup>3</sup>, Greg Bailly<sup>1</sup>, Ashley Cox<sup>1</sup>

<sup>1</sup>Department of Urology, Dalhousie University, Halifax, Canada; <sup>2</sup>Faculty of Medicine, Dalhousie University, Halifax, Canada; <sup>3</sup>Department of Urology, Queen's University, Kingston, Canada

**Introduction:** Medical complexity is increasing in Canada over time. Key markers of medical complexity include the presence of multimorbid chronic disease, polypharmacy, and the involvement of multiple medical specialties in patient care. These factors contribute to increased risk of poor patient outcomes and increased healthcare resource utilization. How medical complexity affects urologic care is currently not well understood.

**Methods:** We conducted structured retrospective chart reviews of inpatients admitted to the urology service at the QEII Hospital in Halifax, NS, Canada from September 2006 to March 2007 and September 2019 to March 2020.

**Results:** A total of 244 structured chart reviews have been conducted to date (historic, n=103; recent n=141). Multiple markers of medical complexity were significantly increased in the recent cohort (Table 1). A significantly higher proportion of the recent cohort came to the hospital with existing home supports (11% vs. 2%, X<sup>2</sup>=7.706, p=0.006). Patients in the recent cohort had significantly higher odds of having a non-urology specialist service consulted during admission (OR 2.466, 95% CI 1.299–4.683) and significantly lower odds of a simple discharge home (OR 0.376, 95% CI 0.180–0.785). Length of stay did not differ significantly between cohorts (4.46 vs. 4.17 days for recent vs. historic, p=0.416). When combining cohorts, the number of prescription medications, number of hospital admissions in the year prior, and number of chronic diagnoses were found to correlate significantly with length of stay (Table 2).

**Conclusions:** Markers of medical complexity among urologic inpatients have increased over time. Inpatient management now requires more interdisciplinary care, and patient disposition is more challenging, with patients less likely to be discharged directly to home. These results may help inform resource allocation and provide focus for future research and interventions to improve care for an increasingly complex patient population seen by urologists.

**MP 12.7. Table 1. Significantly increased markers of medical complexity among contemporary urologic inpatients**

	n	Mean	SD	95% CI	p
<b>Number of prescription medications</b>					
Historic	103	3.8	2.96	3.22–4.37	0.026
Contemporary	138	4.69	3.59	4.08–5.29	
<b>BMI</b>					
Historic	86	27.74	4.61	26.74–28.73	0.028
Contemporary	121	29.38	6.92	28.14–30.63	
<b>Number of physician specialties seen in the year prior to admission</b>					
Historic	103	1.33	0.83	1.17–1.49	<0.001
Contemporary	138	2.04	1.34	1.81–2.26	
<b>Number of hospital admissions in the year prior to admission</b>					
Historic	103	3.80	2.97	3.11–4.48	0.003
Contemporary	140	4.84	3.78	3.98–5.70	
<b>Number of physician specialties consulted during admission</b>					
Historic	103	0.28	0.91	0.10–0.46	0.02
Contemporary	134	0.54	1.14	0.35–0.73	
<b>Number of non-physician services consulted during admission</b>					
Historic	103	0.2	0.57	0.09–0.31	0.048
Contemporary	141	0.35	0.73	0.22–0.47	

**MP 12.7. Table 2. Statistically significant correlates of LOS among urologic inpatients**

Correlate	n	Pearson R	p
Number of prescription medications on admission	243	0.246	<0.001
Number of hospital admissions in the year prior to admission	243	0.156	0.015
Number of chronic disease diagnoses on admission	244	0.157	0.014

**MP 12.8**  
**Absence of race/ethnicity reporting in clinical trials of true minimally invasive surgical therapies for the treatment of benign prostatic hyperplasia**

David-Dan Nguyen<sup>1</sup>, Anna-Lisa V. Nguyen<sup>3</sup>, David Bouhadana<sup>4</sup>, Mahmoud Moustafa<sup>2</sup>, Bilal Chughtai<sup>6</sup>, Dean S. Elterman<sup>7</sup>, Christopher J.D. Wallis<sup>8</sup>, Tuan Thanh Nguyen<sup>9</sup>, Quoc-Dien Trinh<sup>5</sup>, Naeem Bhojani<sup>10</sup>

<sup>1</sup>Division of Urology, University of Toronto, Toronto, Canada; <sup>2</sup>Faculty of Medicine and Health Sciences, McGill University, Montreal, Canada; <sup>3</sup>Schulich School of Medicine and Dentistry, Western University, London, Canada; <sup>4</sup>Division of Urology, McGill University, Montreal, Canada; <sup>5</sup>Division of Urological Surgery and Center for Surgery and Public Health, Brigham and Women's Hospital, Boston, United States; <sup>6</sup>Department of Urology, Weill Cornell Medical College/ New York Presbyterian, New York, United States; <sup>7</sup>Division of Urology, University Health Network (UHN), Toronto, Canada; <sup>8</sup>Division of Urology, Mount Sinai Hospital, Toronto, Canada; <sup>9</sup>Department of Urology, University of California Irvine, Irvine, United States; <sup>10</sup>Division of Urology, Centre Hospitalier de l'Université de Montréal, Montreal, Canada

**Introduction:** Under-representation of racial/ethnic minorities limits the external generalizability of randomized controlled trials (RCT) and may exacerbate health

disparities. We sought to determine the extent of racial reporting and enrolment in RCTs of minimally invasive surgical techniques (MIST) for the office-based treatment of benign prostatic hyperplasia (BPH).

**Methods:** We conducted a systematic review for six office-based MISTs: transurethral microwave thermotherapy (TUMT), prostatic artery embolization (PAE), prostatic urethral lift (PUL), temporary implantable nitinol device (TIND), water vapor thermal therapy (WVTT), and Optilume. We searched MEDLINE, Embase, and the Cochrane CENTRAL databases from inception through November 3, 2023. Two independent reviewers completed screening at title, abstract, and full-text levels, with conflicts resolved by discussion. Publications were excluded if they 1) did not address one of the aforementioned office-based MISTs for the treatment of BPH; 2) were not RCTs; 3) were an abstract or conference proceeding; or 4) were not published in English. In addition to study characteristics, data about racial reporting was collected.

**Results:** A total of 61 publications representing 37 unique RCTs (n=4027 unique patients) were reviewed, with publication years spanning from 1993–2023. TUMT, PAE, PUL, WVTT, TIND, and Optilume were addressed in 34 (56%), 11 (18%), seven (11%), six (10%), two (3%), and one (2%) publication, respectively. The most studied TUMTs were the Prostatron system (14/34, 41%) and Targis (7/34, 21%). Most publications (33/61, 54%) were based solely in Europe or North America (15/61, 25%). The rest of the publications were multicontinental (8/61, 13%) or from Asia (3/61, 5%), Africa (1/61, 2%), and South America (1/61, 2%). Fifty-one percent of the publications were multicenter trials, 26% were single-center, and the remaining were unclear. None of the included publications reported on the race/ethnicity of study participants.

**Conclusions:** None of the 61 included publications of RCTs of office-based MISTs provided information on the racial/ethnic composition of study participants. There is a need for standardization of race/ethnicity reporting and enrolment within RCTs of MISTs. More granular data on race/ethnicity allows for better understanding of the relationships between genetic and sociodemographic factors on BPH treatment outcomes.

### MP 12.9

#### Open access publishing in urology: A survey of authors', readers', and editorial boards' knowledge, impressions, and satisfaction

Abbas Guennoun<sup>1</sup>, Kahina Bensaadi<sup>1</sup>, Marc-André Simard<sup>2</sup>, Ryan Schwartz<sup>3</sup>, Liam Murad<sup>4</sup>, Michael Leveridge<sup>5</sup>, D. Robert Siemens<sup>5</sup>, Vincent Larivière<sup>2</sup>, Naem Bhojani<sup>1</sup>, Kelven Chen<sup>1</sup>, Max Levitt<sup>1</sup>, Saud Almousa<sup>1</sup>

<sup>1</sup>Division of Urology, Centre Hospitalier de l'Université de Montréal, Montreal, Canada; <sup>2</sup>École de bibliothéconomie et des sciences de l'information, Université de Montréal, Montreal, Canada; <sup>3</sup>Faculty of Medicine, Université de Montréal, Montreal, Canada; <sup>4</sup>Faculty of Medicine, McGill University, Montreal, Canada; <sup>5</sup>Department of Urology, Queen's University, Kingston, Canada

**Introduction:** We aimed to report the level of knowledge, impressions, and attitudes of urology readers, authors, and editorial boards regarding open access (OA) publishing in the field of urology and to determine their satisfaction with the current OA models.

**Methods:** We developed an online, five-section, cross-sectional survey with 23 questions after multiple rounds of assessment from various stakeholders, including editorial board members, readers, and authors among the urology community. To recruit participants, we used simple random sampling and convenience sampling methods. Herein, we present descriptive outcomes of the responses.

**Results:** Eighty-two participants (86% urologists, 7% residents, 3% fellows, 4% others) from 13 countries responded to the survey between May and September 2023. The majority of respondents (85%) reported having "quite good" to "very good" knowledge regarding OA publishing, and 6% reported that they knew "nothing" about the subject. Of those who responded that they were familiar with the concepts, only 30%, 18%, 18%, and 21%, respectively, knew the definitions of Gold, Green, Diamond, and Hybrid OA publishing models. Of all respondents, 54% reported a "positive" to "strongly positive" impression of and general attitude toward the concept of OA publishing, whereas 18% had "negative" to "strongly negative" impressions. Although a majority replied that OA publishing can improve scientific research (65%) and give more exposure to the author's work (77%), 34% thought that the quality of peer review is lower for OA journals compared to traditional publishing models. The majority of those surveyed have published in an OA journal (74%) and were either "satisfied" or "completely satisfied" with Gold, Diamond, and Hybrid models (65%, 86%, and 83%, respectively).

**Conclusions:** Initial results from this anonymous, international survey show high awareness of OA publishing with low knowledge regarding details. Participants are pessimistic regarding the quality of OA journals and peer review.

### MP 12.10

#### Financial toxicity and quality of life post-chemotherapy for testicular germ cell tumors

Shaun Trecarten<sup>1</sup>, Anand Iyer<sup>1</sup>, Mukund Bhandari<sup>2</sup>, Chethan Ramamurthy<sup>3</sup>, Deepak Pruthi<sup>1</sup>

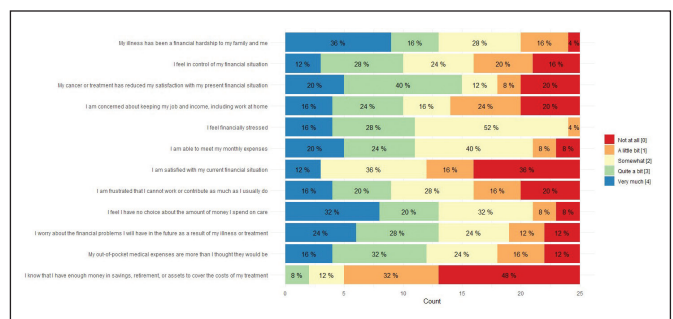
<sup>1</sup>Department of Urology, University of Texas Health Science Center, San Antonio, San Antonio, United States; <sup>2</sup>Department of Population Health Sciences, University of Texas Health Science Center, San Antonio, San Antonio, United States; <sup>3</sup>Department of Medical Oncology, University of Health Science Center, San Antonio, San Antonio, United States

**Introduction:** Financial toxicity (FT) is the direct/indirect healthcare cost that burdens patients and their families, often leading to poorer quality of life. For men with metastatic testicular germ cell tumors (mtGCT), chemotherapy can have long-term physical and mental health consequences, increasing the risk for FT, which has been largely understudied. The purpose of this study was to evaluate and identify risk factors for FT in mtGCT patients post-chemotherapy.

**Methods:** Patients with mtGCT were included if at least >2 cycles of chemotherapy were completed within the last 1–5 years. Between November 2022 and October 2023, eligible patients completed the COMprehensive Score for financial Toxicity (COST), EORTC QLQ-C30, and EORTC QLQ-T26 questionnaires. Demographic and disease-specific data was also collected. Descriptive statistics were used to summarize responses. Wilcoxon rank sum test was used to evaluate differences in survey responses between selected groups.

**Results:** Respondents (N=25, response rate=56.8%) reported a median age of 29 years (IQR 25–33), and 84% (n=21) identified as white-Hispanic. Eight (32%) patients were unemployed and five (20%) and three (12%) patients were uninsured or on Carelink, respectively. Having insufficient funds/savings to cover treatment costs was reported in 48% (n=12) of patients. All patients felt financially stressed, with 44% (n=11) feeling at least "quite a bit" stressed. A response of at least "quite a bit" was reported in 60% (n=15) of patients for a reduction in financial satisfaction due to cancer/treatment, and in 52% (n=13) for the illness being a financial hardship (FH). Those without insurance/on Carelink reported higher median scores for the illness being a FH (4 [very much] vs. 2 [somewhat], p=0.047). Unemployed patients reported higher median scores for financial stress (3 [quite a bit] vs. 2, p=0.005) and frustration at not working/contributing as much as usual (3 [quite a bit] vs. 1.5, p=0.048). Peripheral neuropathy was associated with reduced median quality of life scores (5.5 vs. 7 [max 7], p=0.01) and increased median scores for having physical limitation as a result of the disease/treatment (2 [a little] vs. 1 [not at all], p=0.01).

**Conclusions:** Patients post-chemotherapy for mtGCT (especially those without insurance/employment) suffer from FT. Efforts to support these young men should be promoted.



MP 12.10. Figure 1. Counts and percentages for each item of the Comprehensive Score for financial Toxicity (COST) questionnaire for patients with mtGCT post-chemotherapy.

**MP 12.11**

**Quality and readability of Google search information on holmium laser enucleation of the prostate for benign prostatic hyperplasia**

Yam Ting Ho<sup>1</sup>, Shrivankrishna Ananthapadmanabhan<sup>1</sup>, Jeremy Saad<sup>1,2</sup>, Femi Ayeni<sup>2</sup>, Mohan Arianayagam<sup>1</sup>, Bertram Canagasingham<sup>1</sup>, Ahmed Goolam<sup>1</sup>, Nicola Jeffrey<sup>1</sup>, Mohamed Khadra<sup>1,2</sup>, Raymond Ko<sup>1,2</sup>, Nicholas Mehan<sup>1</sup>, Sachinka Ranasinghe<sup>1</sup>, Celi Varol<sup>1</sup>, Jonathan Kam<sup>1</sup>, Isaac Thangasamy<sup>1,2</sup>

<sup>1</sup>Department of Urology, Nepean Hospital, Kingswood, Australia; <sup>2</sup>Department of Medicine, University of Sydney, Camperdown, Australia

**Introduction:** We aimed to assess the quality and readability of online information on holmium laser enucleation of the prostate (HoLEP) in the management of benign prostatic hyperplasia (BPH) using the most used search engine worldwide, Google.

**Methods:** The Google search terms "Holmium laser surgery" and "enlarged prostate" were used and the initial 150 web pages were reviewed. Web pages that were paywalls, scientific literature, and/or promoted advertisements were excluded from the analysis. Quality assessment tools, such as DISCERN, QUEST, and JAMA criteria, were used, while readability tools like Fleisch-Kincaid grade level, Gunning-Fog Index, Simple Measure of Gobbledygook, and Flesch reading ease score were used. Two authors independently reviewed the included sites for further analysis. If there were any discrepancies, a third author was consulted and would hold the deciding vote.

**Results:** One hundred and seven web pages were included in the data analysis. The median DISCERN score was 42 (IQR 35–49) out of 80; median JAMA score was 0 (IQR 0–1) out of 4; median QUEST score was 9 (IQR 9–12) out of 28; further median scores based on ranking can be seen in Table 1. Readability and quality scores correlated positively (Tables 2, 3). Using non-parametric ANOVA and post-hoc test, significant differences were identified between rankings of webpages. Subgroup analysis showed that the type of sponsorship did not influence the quality of the web pages. The overall readability can be considered moderate-difficult, such that a minimum reading level of grade 11 is needed. Linear regression analysis showed a higher rank web page is a positive predictor for all three quality assessment tools.

**Conclusions:** The overall quality of online information regarding HoLEP is poor. We identified that top-ranked Google searches have a higher DISCERN score and are a positive predictor for DISCERN/QUEST/JAMA. Quality online information can be used to benefit patients but should be used in conjunction with consultation from a medical professional.

**MP 12.11. Table 1. The median total scores (IQR) of all the quality assessment tools, along with the medians scores (IQR) based on webpage rank allocation**

	Total score	Top rank	Middle rank	Bottom rank
DISCERN	42 (35–49)	45 (41–52)	42 (34.5–47.5)	35.5 (31.5–42)
QUEST	9 (9–12)	10 (9–12)	9 (9–13)	9 (9–12)
JAMA	0 (0–1)	0 (0–1.75)	1 (0–1)	0 (0–1)

**MP 12.11. Table 2. Kendall tau correlations between three quality assessment scores**

	DISCERN	QUEST	JAMA
DISCERN	1		
QUEST	$\tau=0.436$ $p<0.001$	1	
JAMA	$\tau=0.3$ $p<0.001$	$\tau=0.646$ $p<0.001$	1

**MP 12.11. Table 3. Kendall tau correlation between readability scores**

	GF	FKG	SMOG	FKE
GF	1			
FKG	$\tau=0.78$ $p<0.001$	1		
SMOG	$\tau=0.82$ $p<0.001$	$\tau=0.85$ $p<0.001$	1	
FKE	$\tau=-0.61$ $p<0.001$	$\tau=-0.71$ $p<0.001$	$\tau=-0.625$ $p<0.001$	1

**MP 12.12**

**Barriers to accessing medical care experienced by women with urinary incontinence living in rural communities**

Karla Rebullar<sup>1</sup>, Bryn Launer<sup>1</sup>, Rosa Park<sup>1</sup>, Melissa Rae Kaufman<sup>1</sup>, Roger Dmochowski<sup>1</sup>, W Stuart Reynolds<sup>1</sup>, Elisabeth Mae Sebesta<sup>1</sup>

<sup>1</sup>Department of Urology, Vanderbilt University, Nashville, United States

**Introduction:** Urinary incontinence (UI) affects half of adult women in the U.S. Studies show only 30% seek care for UI, lower than the rate of seeing a provider for any reason, implicating barriers that are distinct from overall healthcare access. Living in a rural community has been associated with negative health outcomes but little is known about barriers for those with UI in rural areas. Our goal was to assess the barriers in care for women with UI living in rural vs. non-rural areas.

**Methods:** Patients were recruited from our clinic and from the local area via ResearchMatch to complete questionnaires on demographics, urinary symptoms, and barriers to care for UI. Rurality was defined using home zip code according to the Health Resources and Services Administration (HRSA) definition via the Federal Office of Rural Health Policy (FORHP) Data Files. Rates of delaying medical care for UI and reasons for delay were compared between women living in rural vs. non-rural areas using the Chi-squared test.

**Results:** A total of 1096 respondents completed the study. The mean age was 48.5 years, and the majority was white, non-Hispanic (68%); 176 (16%) women identified living in rural areas. UI severity assessed via mean ICIQ-UI SF score was not different between rural and non-rural women. Just over half (580, 52%) of women reported delaying seeking care, treatment, or surgery for UI. There were trends, albeit non-significant, towards more rural women reporting delaying care. Reasons for delaying included the cost of treatment (51%), thinking the condition was not treatable (46%), fear (26%), and work obligations (25%). Rural women more often reported that the cost and distance to travel, and not having transportation were significant barriers to accessing care (Table 1).

**Conclusions:** Most women in our survey reported delaying seeking care, treatment, or surgery. Travel issues were significant barriers identified that disproportionately affected rural women, suggesting that travel to UI specialists is prohibitive to getting the care they need. Telehealth, community outreach, and incentivizing providers who specialize in women's pelvic health to work in rural communities may help bridge some of these gaps in care.

**Acknowledgements:** This study was supported by the Vanderbilt Center for Health Services Research, Health Equity Research Grant.

**Reference:**

1. HRSA. Federal Office of Rural Health Policy (FORHP) Data Files. Available at: <https://www.hrsa.gov/rural-health/about-us/what-is-rural/data-files>. Accessed July 15, 2023.

**MP 12.12. Table 1. Rate of delaying medical care, treatment, or surgery for urinary incontinence among women, and barriers to care as compared between women living in rural vs. non-rural communities**

	Total (%)	Rural (%)	Non-rural (%)	p
Delayed seeking care for UI	522 (47.6)	92 (52.3)	430 (46.7)	0.2
Delayed treatment for UI	444 (40.5)	78 (44.3)	366 (39.8)	0.3
Delayed surgery for UI	38 (21.6)	38 (32.6)	192 (20.9)	0.8
<b>Reasons for delaying care (n=580)</b>				
Cost of treatment	298 (51.4)	54 (52.4)	244 (51.2)	0.8
Cost of travel	65 (11.2)	19 (18.5)	46 (9.6)	0.01
Lack of transportation	53 (9.1)	17 (16.5)	36 (7.6)	<0.01
Travel distance	37 (6.4)	11 (10.7)	26 (5.5)	0.04
No available providers	79 (13.6)	14 (13.6)	65 (13.6)	0.9
Child/elder care	112 (19.3)	21 (20.4)	91 (19.1)	0.8
Work obligations	145 (25.0)	29 (28.2)	116 (24.3)	0.4
Hard to get an appointment	111 (19.1)	20 (19.4)	91 (19.1)	0.9
Insurance	109 (18.8)	23 (22.3)	86 (18.0)	0.3
Other medical problems	93 (16.0)	17 (16.5)	76 (15.9)	0.9
Fear	152 (26.2)	27 (26.2)	125 (26.2)	1.0
Thought it was not treatable	267 (46.0)	46 (44.7)	221 (46.3)	0.8
Negative prior experiences	32 (5.5)	3 (2.9)	29 (6.1)	0.2
Other	99 (17.1)	12 (11.7)	87 (18.2)	0.1

**MP 12.13**

**Prostate cancer screening to transgender women: PSA value to recommend more workup**

Krishna Jani<sup>1</sup>, Asmaa Ismail<sup>1</sup>, Vahid Mehmoush<sup>1</sup>, Hazem Elmansy<sup>1</sup>, Ahmed Zakaria<sup>1</sup>, Ahmed Kotb<sup>1</sup>

<sup>1</sup>Division of Urology, Northern Ontario School of Medicine, Thunder Bay, Canada

**Introduction:** Over the years, the number of people openly identifying as transgender has continued to increase. Thus, the need for informative transgender-specific care has only grown. Within transgender women (TW), there remains a risk of prostate cancer, as the prostate is retained in gender-affirming hormone therapy (GAHT) and surgery. Yet, little is known about prostate cancer screening in the transgender population. While few cases of prostate cancer screening or prostate-specific antigen (PSA) in TW have been identified, the effect of hormone therapies on PSA has been well-studied. Consequently, both GAHT for TW and hormone therapy to treat prostate cancer are similar. Using these similarities, we aimed to create a guideline for baseline PSA and prostate cancer screening in TW.

**Methods:** Through a systematic review, we identified existing PubMed publications on PSA or prostate cancer screening in TW and expected PSA in patients with prostate cancer managed with hormone therapies. Due to the limited research on TW, case studies were also included. The publications and case reports were reviewed and analyzed to form a comprehensive review of expected baseline PSA and prostate cancer screening in TW.

**Results:** We identified nine case studies of PSA values in TW with prostate cancer through our systematic review of PubMed publications. There is no identified guideline regarding PSA or prostate cancer screening in TW, but the existing case studies helped us identify a range of PSA values from 3.3– <100 (ng/ml). Current publications of expected PSA in patients with prostate cancer on hormone therapies show a reduction of PSA >50% post-hormone therapy. Both cases of PSA in TW and hormone therapy patients with prostate cancer

indicate that PSA values in TW presenting with prostate cancer may be lower than in cisgender males with prostate cancer.

**Conclusions:** There is still a large gap in the literature, limiting our understanding of PSA and prostate cancer screening in TW; however, the knowledge surrounding prostate cancer hormone therapy and its effect on PSA can help predict expected PSA in TW. Thus, we concluded that physicians should consider prostate cancer as a possibility in TW with PSA levels >2.0 ng/ml.

**MP 12.14**

**Neighborhood socioeconomic disadvantage is associated with worse urinary risk factors and access to medical management for urolithiasis**

Cyrus Chehroudi<sup>1</sup>, Louisa Ho<sup>1</sup>, Benjamin Jevnikar<sup>1</sup>, Jorge Gutierrez-Aceves<sup>1</sup>, Sri Sivalingam<sup>1</sup>, Smita De<sup>1</sup>, Anna Zampini<sup>1</sup>

<sup>1</sup>Glickman Urologic and Kidney Institute, Cleveland Clinic, Cleveland, United States

**Introduction:** 24-hour urine (24hU) testing guides counseling to prevent recurrent urolithiasis. Poor socioeconomic status (SES) is a risk factor for stone disease, however, these associations are often based on complex statistics not readily available in clinical practice. Area Deprivation Index (ADI) is a quantitative measure of SES that assigns a percentile based on mean income, education, employment, and housing quality from U.S. census data using a geocoded residential address. ADI has been linked to perioperative outcomes across multiple disciplines but not yet urolithiasis. This study aimed to characterize relationships between ADI and urolithiasis risk factors.

**Methods:** A retrospective review of patients undergoing percutaneous nephrolithotomy (PCNL) from 2017–2022 was performed. Addresses were geocoded to national ADI score, with the lowest quartile (scores 1–25) representing the least, and the top quartile (76–100) the most disadvantaged. Demographics, 24hU parameters, and stone composition data were evaluated.

**Results:** A total of 1876 patients underwent PCNL during the study period, of which 909 completed a 24hU study. The distribution of gender and race was different across ADI quartiles, with more females and African Americans in the most disadvantaged quartile (55.5% vs. 41.7%, p=0.02; 16% vs. 4.5%, p<0.001,

**MP 12.14. Table 1. Patient demographics, 24-hour urine parameters, and stone composition according to area deprivation index quartiles**

	ADI Quartile				p-value (ANOVA)
	Least Disadvantaged			Most Disadvantaged	
	1 (ADI 1-25) (n=156)	2 (ADI 26-50) (n=430)	3 (ADI 51-75) (n=666)	4 (ADI 76-100) (n=624)	
<b>Demographics</b>					
Age, mean (SD)	59.6 (14.6)	58.7 (14.1)	58.3 (14.3)	55.7 (14.8)	.001
<b>Gender</b>					
Male, n (%)	91 (58)	201 (47)	326 (49)	278 (45)	.02
Female, n (%)	65 (42)	229 (53)	340 (51)	346 (55)	.02
African American, n (%)	7 (4.5)	11 (2.6)	19 (2.9)	100 (16)	<.001
<b>24-Hour Urine Parameter<sup>*</sup>, mean (SD)</b>					
Volume	2081 (785)	1913 (842)	1946 (813)	1770 (792)	.006
pH (lowest)	5.89 (0.78)	5.97 (0.72)	6.05 (0.77)	5.84 (0.75)	.018
Calcium	244 (129)	232 (143)	217 (129)	218 (139)	.27
Oxalate	42 (18)	42 (21)	43 (24)	40 (20)	.535
Citrate	584 (359)	486 (327)	498 (307)	461 (315)	.021
Uric acid	699 (278)	651 (281)	631 (257)	614 (269)	.052
Na	187 (69)	184 (93)	188 (80)	187 (89)	.971
K	58 (23)	57 (24)	54 (22)	51 (25)	.06
Mg	89 (38)	85 (45)	80 (39)	84 (46)	.319
<b>Stone Composition, n (%)</b>					
Mixed calcium	106 (68)	250 (60)	377 (58)	334 (55)	.029
Pure uric acid	25 (16)	47 (11)	94 (14)	81 (13)	.35
Pure calcium phosphate	20 (13)	85 (20)	119 (18)	142 (24)	.011
Struvite	4 (3)	34 (8)	54 (8)	39 (6)	.049

\*In the setting of multiple 24-hour urine studies, the value furthest outside the normal reference range was used for analysis.

respectively). Patients with the poorest SES were less likely to undergo 24hU testing compared to the least disadvantaged quartile (44% vs. 63%,  $p < 0.001$ ). Higher ADI score was significantly associated with lower 24hU volume, citrate, and pH. Conversely, there was a trend towards increased 24hU uric acid among lower ADI ( $p = 0.052$ ). Struvite and calcium phosphate stones were more common among poorer SES, whereas mixed calcium stones were more prevalent among the lowest ADI quartile.

**Conclusions:** Higher ADI is associated with multiple risk factors for recurrent urolithiasis, including failure to complete 24hU studies, hypocitraturia, low urinary pH, and low urinary volume. Stone types amenable to medical management were more prevalent among higher ADIs. ADI may serve as a simple clinical tool to identify patients at risk for SES, limiting comprehensive endourologic care.

## MP 12.15

### Characteristics and trends of industry-sponsored research funding to urologists in the United States between 2014 and 2022

David-Dan Nguyen<sup>1</sup>, Anju Muramaya<sup>2</sup>, Anna-Lisa V. Nguyen<sup>3</sup>, Liam Murad<sup>4</sup>, Alan Cheng<sup>5</sup>, Dean S. Elterman<sup>1</sup>, Girish S. Kulkarni<sup>1</sup>, Naeem Bhojani<sup>6</sup>, Raj Satkunasivam<sup>7</sup>, Quoc-Dien Trinh<sup>8</sup>, Christopher J.D. Wallis<sup>1</sup>

<sup>1</sup>Division of Urology, University of Toronto, Toronto, Canada; <sup>2</sup>Department of Population Health Science and Policy, Icahn School of Medicine at Mount Sinai, New York, United States; <sup>3</sup>Schulich School of Medicine and Dentistry, University of Western Ontario, Windsor, Canada; <sup>4</sup>Faculty of Medicine and Health Sciences, McGill University, Montreal, Canada; <sup>5</sup>Michael G. DeGroot School of Medicine, McMaster University, Hamilton, Canada; <sup>6</sup>Division of Urology, University of Montreal, Montreal, Canada; <sup>7</sup>Department of Urology & Center for Outcomes Research, Houston Methodist Hospital, Houston, United States; <sup>8</sup>Department of Urology & Center for Surgery and Public Health, Brigham and Women's Hospital, Boston, United States

**Introduction:** Urologists face challenges in obtaining public research funding, leading to increasing reliance on the healthcare industry for research support. Existing research has mainly focused on financial relationships in non-research contexts, while little is known about contemporary financial ties between urologists and the industry for research purposes in the U.S. This study uses federal databases to examine the extent and trends in industry-sponsored research payments to urologists from 2014–2022.

**Methods:** We identified all active American urologists using the Centers for Medicare and Medicaid Services (CMS) National Plan and Provider Enumeration System (NPPES) database and extracted their industry-sponsored research payments data from the CMS Open Payments Database. We performed descriptive analyses of the payments data. The payments were further analyzed by payment year and content of payments. All monetary amounts are presented in 2022 dollar values.

**Results:** Among 13 902 active American urologists, 1330 (9.6%) received at least one industry-sponsored research payment. In total, American urologists received \$USD 605.1M between 2014 and 2022. Of all research payments, 98.7% (\$USD 597.4M) were associated research payments for research where urologists served as principal investigators, while only 1.3% were directly provided to individual urologists. The top 10% of urologists in research payments received 79.3% (\$USD 4.8M) of total research payments. Only 0.4% (\$USD 2.3M) of research payments were made for preclinical research. Research payments for registered clinical trials totaled \$USD 159.0M (26.3% of all research payments). More than \$USD 162.1M (26.8%) and \$USD 86.8M in research payments were associated with Xtandi (enzalutamide) and Keytruda (pembrolizumab). More than half (57.0%; \$USD 345.2M) of industry-sponsored research payments to urologists were associated with 10 medical products, of which eight had cancer-related indications. The average percentage change in total payments showed a significant annual increase of 13.9% (95% CI 11.6–16.3%,  $p < 0.001$ ) in value and 5.5% (2.2–8.8%,  $p = 0.001$ ) in number of payments. There was no significant trend in the number of urologists receiving research payments. Mean research payments were higher in males (\$USD 492 502) than those to females (\$USD 111 523).

**Conclusions:** Industry-sponsored research payments to urologists are substantial and have increased in both payment amount and number. Annual payments and increases remain concentrated in a subset of urologists and primarily fund clinical trials for a small subset of oncologic medical products.

## MP 12.16

### Identifying demographics in patients referred to urology for microscopic hematuria in a large health system

Jonathan Li<sup>1</sup>, Heinric Williams<sup>1</sup>, Alexander Battin<sup>1</sup>

<sup>1</sup>Department of Urology, Geisinger Health System, Danville, United States

**Introduction:** Understanding the referral patterns of microscopic hematuria patients by primary care physicians may help to improve the timely evaluation and early detection of adverse pathology by specialists. The objective of this study was to identify demographics among patients with microscopic hematuria who were referred to urology in a large health system.

**Methods:** This analysis is part of a larger database from an ongoing retrospective cohort study collected using EHR from Geisinger Health System (GHS), from January 1, 2006, to March 31, 2023. Patients > 18 years old who had at least one outpatient visit at GHS and had >50 red blood cells/high power field (high-risk) on urinalysis with microscopy were included. Characteristics of patients who were referred within six months vs. those not referred were summarized by univariate and multivariable analysis.

**Results:** A total of 3471 patients were included. Overall 487/3471 (14%) of patients with microhematuria detected at an outpatient visit were referred to urology within six months. The majority of patients were female (2526/3471, 73%) and Caucasian (3276/3471, 94%). On univariate analysis, referred patients tended to be younger than 65 years old compared to those older than 65 (69% vs. 73%,  $p < 0.001$ ); 21% of males were referred vs. 11% of females ( $p < 0.001$ ). Caucasians were more likely to be referred compared to Asians or African Americans (14% vs. 4% and 9%, respectively,  $p = 0.04$ ). Patients with GHS-affiliated primary care providers (PCP) were more likely to be referred (22% vs. 10%,  $p < 0.001$ ). Multivariate analysis shows increasing referral likelihood with increasing RBCs detected on microscopy, with >50 having OR of 1.87 ( $p < 0.001$ ). The factor most positively associated with referral was having GHS-affiliated PCP (OR 3.15,  $p < 0.001$ ). The demographic least likely to be referred were females (OR 0.41,  $p < 0.001$ ).

**Conclusions:** Overall, only 14% of patients found to have microhematuria at an outpatient visit were subsequently referred to urology within six months. Our analysis shows that while most microscopic hematuria patients were female, this demographic was also associated with decreased likelihood to be referred. Patients who had a PCP who was affiliated with our health system were the most likely to have been referred.

## MP 12.17

### Quality improvement initiative evaluating the use of disposable flexible cystoscopes compared with reusable flexible cystoscopes at bedside

Jennifer Tang<sup>1</sup>, Victoria Turnbull<sup>2</sup>, Shahid Lambe<sup>1</sup>

<sup>1</sup>Division of Urology, McMaster University, Hamilton, Canada; <sup>2</sup>Division of Urology, Western University, London, Canada

**Introduction:** Flexible cystoscopies are performed in inpatients at bedside for a variety of reasons, including insertion of difficult catheters under direct visualization, dilation of stricture disease, and stent removal. Using a standard cystoscope on the ward is quite challenging, as it requires signing out, transporting and returning a large media tower, the scope itself, as well as all required equipment. The advantages of a single-use, disposable cystoscopy would be of greater convenience in setup and minimizing sterilization costs.<sup>1</sup> Previous studies have shown that single-use cystoscopes perform as well clinically as reusable flexible scopes.<sup>2</sup> We set out to determine if single-use cystoscopes are more advantageous in the inpatient setting than traditional reusable cystoscopes at our academic center.

**Methods:** This is a prospective, observational study carried out at two academic centers at McMaster University: St. Joseph's Hospital and the Juravinski Hospital. Residents were surveyed on their experience using reusable and disposable flexible cystoscopes for bedside cystoscopy via a questionnaire. The primary outcome of this study is the overall experience of disposable cystoscopes compared with standard flexible cystoscopy for inpatient indications using a visual analog scale (1 = poor, 5 = excellent).

**Results:** Between July and December 2023, data on 20 bedside cystoscopies were collected, with 13 procedures using a disposable cystoscope and seven using a reusable cystoscope, including three eye-piece reusable cystoscopes. All residents felt comfortable performing the procedure alone at bedside. The aver-

age age of the patient was 68 years. Indications for bedside cystoscopy included false passages, stricture disease, and ureteric stent removal. Overall experience of the disposable scope was superior to reusable scopes, at 4.9 compared to 1.7, respectively ( $p < 0.0001$ ). Additional significant improvements of the disposable scope included ease of transport/maneuvering, with a difference of 3.49 (2.99, 3.99,  $p < 0.001$ ) and quality of cystoscopy at 2.27 (1.49, 3.06,  $p < 0.0001$ ).

**Conclusions:** Disposable scopes offer a better overall experience for bedside cystoscopies compared to traditional reusable scope and performed better in categories such as quality of cystoscopy and ease of maneuverability on the ward.

*Acknowledgements: the flexible disposable cystoscopes used for this study were provided by Ambu.*

References:

1. Kenigsberg AP, Gold S, Grant L, et al. The economics of cystoscopy: A micro-cost analysis. *Urology* 2021;0:1-6. <https://doi.org/10.1016/j.urol-ogy.2020.11.042>
2. Scotland K, Wong VFK, Chan JYH, et al. Evaluation of a single-use flexible cystoscope: A multi-institutional international study. *J Endourol* 2020;34:981-6. <https://doi.org/10.1089/end.2020.0002>