## FRI-1630

**Increased Afferent Nerve Signaling is Associated with the Presence of Bladder Wall Micromotion in a Porcine Model**

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**Introduction and Objective:** Bladder wall micromotion is a physiologic phenomenon that has been linked to urinary urgency, the key symptom in overactive bladder. However, the mechanism through which micromotion drives urinary urgency is poorly understood. The purpose of this study was to describe the relationship between micromotion and subsequent afferent nerve signaling using a porcine bladder model.

**Methods:** Porcine bladders were reanimated using ex-vivo perfusion with a physiologic buffer (Fig 1A). The pelvic nerve adjacent to the bladder was grasped with micro-hook electrodes. Bladders were catheterized and intravesical pressure measurements were taken at a volume of 300 mL before (control) and after the administration of a carbachol (CCh) reagent. Micromotion was observed as rhythmic changes in intravesical pressure after administration of CCh. ENG amplitude and firing rate was calculated in uV and spikes above baseline threshold per minute, respectively. Data between control and micromotion periods were compared using paired T-tests.

**Results:** Data from n = 5 trials were analyzed. Micromotion was detected as rhythmic changes in intravesical pressure after installation of CCh (Fig 1B and 1C). Increased afferent nerve firing was seen as increased ENG amplitude (Fig 1D and 1E) and fire rate when micromotion was observed. The normalized average amplitude (0.66±0.24 uV vs 0.05±0.08 uV) (Fig 1F and 1G) and fire rate (0.68±0.28 spike/min vs 0.18±0.22 spike/min) over five minutes for all bladders was significantly greater in the micromotion period (after instillation of CCh) when compared to the control period ($p < 0.001$).

**Conclusions:** In a porcine bladder model, increased afferent nerve firing is observed during periods of micromotion. Thus, micromotion may drive afferent nerve signaling and may potentially contribute to urinary urgency and OAB.

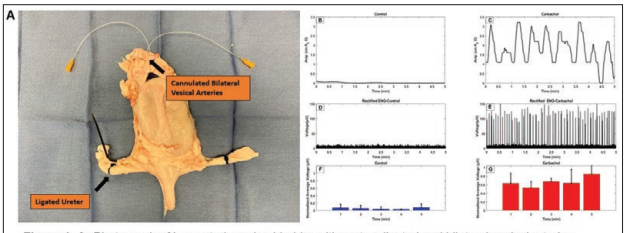


**Figure 1. A:** Photograph of harvested porcine bladder with ureters ligated and bilateral vesical arteries cannulated prior to placing under heat lamp and connecting to pump for perfusion. **B:** Intravesical pressure measurements during control period and **C:** After instillation of carbachol reagent (showing micromotion). **D:** ENG data during control period and **E:** After instillation of carbachol reagent. **F:** Normalized average amplitude in µV during control and **G:** After instillation of carbachol reagent for one-minute periods.

## FRI-1650

**Classic Bladder Exstrophy and Chronic Kidney Disease: A Survival Analysis**

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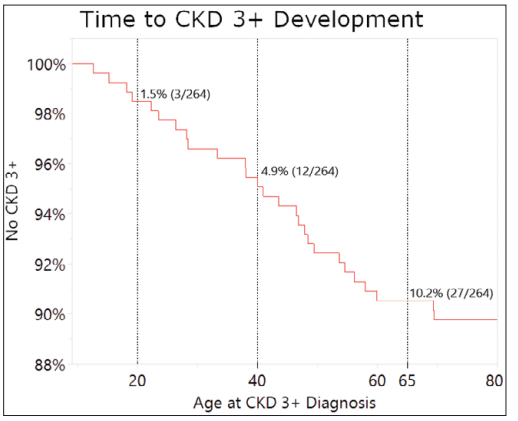
**Introduction and Objective:** Patients with classic bladder exstrophy (CBE) have no outlet resistance at birth; repair of the defect increases voiding pressures. At present, the incidence and age of onset of chronic kidney disease stage 3 or greater (CKD3+) or end stage renal disease (ESRD) in this population is unknown.

**Methods:** A prospectively-maintained institutional database including 1037 patients with CBE was retrospectively reviewed for exstrophy closure and other surgical events and related renal function data. Additional renal function data was extracted from patients' medical record. Patients diagnosed with CBE who had at least one recorded serum creatinine value after 18 years of age were included.

**Results:** Two hundred sixty-four patients (180 males), median age 35.5 (interquartile range [IQR] 27.8 – 44.3), were included. Primary closure was accomplished via complete primary closure of exstrophy in 12.9% (n = 34), modern staged repair of exstrophy in 47.3% (n = 125), or another or an unknown method in 39.8% (n = 105). Regarding continence surgeries, 37.1% underwent bladder neck reconstruction (n = 98) and 38.6% underwent bladder neck transection with stoma creation (n = 102). Twenty-seven patients developed CKD3+. Median onset of CKD3+ was 41.0 years. CKD3+ risk was 9.5% at 65 years (see Figure 1). The reported prevalence of CKD3+ in adults aged <65 years is 1.4%. Two patients developed ESRD, at ages 40.0 and 43.5 years, a rate of 0.8%. The prevalence of ESRD in the general population is 0.2%.

**Conclusions:** In the largest cohort to date, patients born with CBE developed CKD3+ and ESRD at much higher rates than the general population. These results highlight the importance of long-term renal follow-up in this population.




## FRI-1640

**Comparing Surgical Outcomes in Patients Following Robotic Radical Cystectomy Based on Intra-Operative Abdominal Pressure**

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**Introduction and Objective:** Radical cystectomy is one of the most extensive surgeries performed by urologists, and numerous factors contribute to length of hospitalization following the procedure. Our group sought to determine the effect of using the Air Seal (AS) system intra-operatively on various surgical outcomes. Use of the AS allows for consistent, lower intra-abdominal pressure during the procedure.

**Methods:** We identified all instances of robotic cystectomy performed one year prior to introduction of the AS in our practice as well as for one year following its introduction. All patients in the former group underwent surgery at intra-abdominal pressure of 15 mmHg, while the latter group underwent surgery at intra-abdominal pressure of 12 mmHg. These groups were compared regarding average length of surgery, blood loss, post-operative hospitalization, and presence of ileus.

**Results:** A total of 9 cystectomies were performed in with intra-abdominal pressure of 15 mmHg. 10 cystectomies were performed with intra-abdominal pressure of 12 mmHg. There was no significant difference between the two groups regarding age and sex. There was a statistically significant decrease in length of hospitalization in patients undergoing cystectomy with intra-abdominal pressure of 12 mmHg vs. 15 mmhg (6.11 days with 12 mmHg versus 9.63 days with 15 mmHg, p = 0.04). No statistically significant differences were found regarding intraoperative blood loss, length of surgery, and incidence of postoperative ileus.

**Conclusions:** Use of 12 mmHg intra-abdominal pressure in robotic cystectomy results in shorter hospitalization postoperatively when compared to 15 mmHg. We hypothesize that the lower intra-abdominal pressure allows for decreased postoperative pain and accelerated return to bowel function, both of which contribute significantly to length of hospitalization. Based on these results, we suggest surgeons should strive for lower intra-abdominal pressures during robotic cystectomy to optimize patient outcomes. As this is a single-center study, further evaluation is required to substantiate our findings.

## FRI-1700

**Radiation Exposure in Urology and Operating Room Personnel: A Systematic Review on Risk, Compliance, and Safety Measures**

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**Introduction and Objective:** The use of medical ionizing radiation has increased by 600% in the United States within the last four decades. Fluoroscopy is a crucial portion of urological endourological procedures, however its occupational risks and the lack of standardized personal protective equipment seeks to cause harm to practicing urologists.

**Methods:** A systematic review was performed in accordance with PRISMA guidelines. We searched PubMed, Embase, Scopus, and Web of Science for systematic reviews evaluating articles for urological associated radiation knowledge, education, guidelines, safety, PPE, and procedural modification. Articles containing aforementioned criterias for practicing urologists or training urologists were included

**Results:** The annual dose of lens radiation exposure averaged from 1.41-3.73 mSV for urological surgeons. The compliance of PPE was noted to be lowest for lead lined glasses worn by 3-5%-9% worn during surgery. Thyroid shields were worn by 40%-99% of practicing urologists and trainees (Table 1).Thyroid exposure deepdose equivalent (DDE) was 335 mrems while the trunk doses averaged 3.63 mSV. Hand ring dosimeter in urological trainees total DDE was 2,250 mrems. An average of 10% of respondents was not familiar with the ALARA principle, 63%-66% had not received any type of radiation training, and >50% of participants did not have any information about harmful effects of radiation or preventive measures (Table 2).

**Conclusions:** The use of lead lined glasses, thyroid shields, lead gloves, and dosimeters was lowest in practicing urologists. It is imperative to educate urology trainees on the techniques on reducing radiation exposure and utilization of fitted PPE should be the standard of care.

**Table 1. Compliance Study Table**

| First author | Type of study | Sample characteristics | Study description | Compliance |
|---|---|---|---|---|
| Cohen | Retrospective case series | 137 procedures, 1 surgeon | Analyzed data of all fluroscopic stone removal procedures from a single experienced surgeon in a 9 month period. The surgeon wore lead apron, thyroid shield and lead-lined glasses | Compliance for PPE of the eyes (9.7%), hands (17.2%), thyroid (68%), trunk and pelvis (97%) |
| Harris | Survey | All US Urology residents, 136 respondants | US urology residents were surveyed to assess for knowledge and training regarding radiaion safety | Compliance for PPE for eyes (9%), hands(0%), thyroid (99%), trunk (97%) |
| Kumar | Prospective clinical trial | 40 operating room staff were surveyed | Participants were given a survey before and after a structured educational program | 99.9% increase in compliance to PPE and radiation exposure guidelines following education program |
| Kumar | Prospective clinical trial | 40 operating room staff were surveyed | Participants were given a survey before and after a structured educational program | 99.9% increase in compliance to PPE and radiation exposure guidelines following education program |
| Pérez-Fentes | Survey | Survey sent to all urologists in the Spanish Association of Urology and had 238 respondants | Urologists in Spain were surveyed for radiation protection PPE compliance and awareness | Compliance for dosimeter badges of the eyes (2%), wrist (27%), and trunk (57%) |
| Tok | Survey | 127 survey responses from urological surgical staff in Turkiye | Surgical staff across all careers and experience durations were surveyed for understanding of radiation. Following education training, the staff were reassessed for knowledge and compliance | Post-education, there was 18.6% improvement in compliance to radiation safety guidelines. This includes use of PPE for eyes (12%), hands (12%), thyroid (72.4%), trunk (92%), and dosimeters (46.5%) |
| Tzelves | Survey | 211 respondants | Assessed compliance and understanding of radiation safety measures in endourologists and residents | Compliance for PPE of the eyes (14.7%), hands (8.1%), thyroid (84.4%), trunk (89.6%) |
| Vassileva | Prospective cohort study | 315 Procedures from 6 studies (international), 24 surgeons in 6 centers during 3 months | Centers in Turkey, Bulgaria, Greece, Italy and Macedonia. All procedures analyzed were conducted between May-July 2018 and included 5 endourology procedures: PCNL, mini-PCNL, Retrograde intrarenal surgery, semirigid Ureteroscopy and flexible ureteroscopy. All teams wore dosimeters during their procedures and answered survey questions to further classify demographic information | All staff surveyed wore lead aprons and thyroid collars |

## FRI-1710

**Association Between Childhood UTIs and Urinary Urgency in Adulthood**

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**Introduction and Objective:** The pathogenesis of urinary urgency and urgency incontinence (UI) are poorly understood but likely include elements of genetic predisposition as well as environmental insult. The objective of this study is to determine if childhood urinary tract infection (UTI) demonstrates an association with symptoms of adult urgency with the underpinning hypothesis that cycles of bladder infection and inflammation in childhood may predispose the development of urgency as an adult.

**Methods:** Participants were recruited via the ResearchMatch website to complete a 100-item web-based survey. Specific questions were selected to identify respondents who had childhood UTIs (0, 1, 2, or 3+) as well as those who reported urgency or UI within the past 7 days. Chi-square tests and logistic regression were used to test for associations.

**Results:** Of the 1,720 female respondents, 39% (420/1,065) reported at least one childhood UTI. 71% (1,239/1,714) reported urgency, and 37% (642/1,714) reported UI.
A Chi-square test showed a significant, positive association between at least one childhood UTI and both urgency (Chi2 7.42, p=0.006) and UI (Chi2 17.24, p<0.000) as an adult.
Univariate logistic regression demonstrated that having 3+ childhood UTIs was associated with increased odds (OR 1.6, p=0.014) of urgency. Having had only 1 childhood UTI showed no additional risk (OR 1.00, p=0.99), while having had 2 suggested some additional risk that was not statistically significant (OR 1.23, p=0.475). A similar pattern emerged in the logistic regression with UI as the outcome: OR for 1, 2, and 3+ childhood UTIs were 0.93, 1.37, and 1.69, respectively, with only 3+ reaching statistical significance p=0.001.

**Conclusions:** Our analysis confirms a dose-response association between childhood UTI and adulthood urgency and UI. While the ability to draw causal conclusions is limited by the cross-sectional nature of the data, the chronic and cumulative impact of an infectious/inflammatory UTI response offers one possible explanation.

**Table 2. Radiation Risk to Body Parts and Safety Measures Taken**

| Study and Year | Intervention | Type of Study | Risk | | | | Safety Measures |
|---|---|---|---|---|---|---|---|
| | | | Eyes | Hands | Thyroid | Trunk | |
| Alashban 2022 | PPE | | 35-90% reduction of radiation exposure | 20-50% reduction reduction of radiation exposure | >95% reduction reduction reduction of radiation exposure | >95% reduction reduction reduction of radiation exposure | |
| Blair 2013 | | Retrospective study | | | | | Reduced fluoroscopy protocol resulted in 80.8% reduction in fluoroscopy time with similar outcomes |
| Durutovic 2016 | | Prospective cohort study | | | | | Pulsed fluoroscopy technique resulted in 36.79% reduction in fluoroscopic time |
| Harris 2018 | C-arm | | 90.62% reduction in radiation exposure | 90.59% reduction in radiation exposure | | 90.59% reduction in radiation exposure | |
| Hendericksx 2021 | | Survey | | | | | Methods used to decrease radiation exposure: pulsed fluoroscopic procedures (43.5%), used dosimeter (49%), lead screen (1.76%) |
| Kendrick 2015 | | Prospective cohort study | | | | | Methods used to reduce radiation exposure: ceiling-mounted hanging lead shield (51%), table-mounted lead (32%) of observed cases, and both shields (24%) |
| Kiang 2021 | | Retrospective cohort study | | | | | Methods used to decrease radiation exposure: reduced fluoroscopy time (68%), reduced exposed area with a diaphragm (75%), radiation source close to the patient (72%), pulsed fluorscopy (44%) |
| Kim 2016 | PPE | | Radiation reduction 70%-92% | Radiation exposure reduced by 76.6% | Radiation exposure reduced by 96% | Radiation exposure reduced by 98% | |
| Ozaki 2022 | | Prospective cohort study | | | | | Pulsed fluoroscopy resulted in 50% reduction of radiation exposure |
| Sung 2016 | Mini C-arm | | | 52.74% reduction of radiation exposure | 96% reduction of radiation exposure | 100% reduction of radiation exposure | |
| Tzelves 2020 | | Survey | | | | | Methods used to reduce radiation exposure: use of alarm (39%), use of last image hold (64%), and modification of fluoroscopy machine settings (20%) |
| Usawachintachit 2016 | | Prospective cohort study | | | | | Ultrasound-guided protocol had 71.7% improvement in fluoroscopic screening time |

## FRI-1720

**A TriNetX Analysis on Testosterone Replacement and the Risk of Fractures in Men with Hypogonadism**

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**Introduction and Objective:** Recent landmark data indicated patients on testosterone replacement therapy (TRT) had higher rates of bone fractures compared to controls. These perplexing results prompted our group to query an international multi-institutional database to confirm or challenge these counterintuitive findings.

**Methods:** We queried the TriNetX Research Registry in March 2024 (Figure A). We generated cohorts by identifying men 45-80 years old with the diagnosis of testicular hypofunction, decreased libido, hypoactive sexual desire disorder, or male erectile disorder or two lab values of testosterone between 100-300 nanograms/deciliter and whether they were on TRT. Our outcome of interest was bone fracture after diagnosis of hypogonadism. We excluded patients with prostate cancer or previous fracture. All diagnoses were defined by international classification of diseases coding. Statistical analysis was performed using Hazard Ratios (HR) with 95% Confidence Intervals, with significance if the confidence interval did not include 1.0. We performed propensity score matching using age and bisphosphonate, denosumab, and teriparatide usage as covariates. We assessed fracture risk as lifetime (up to 20 years) and within 3 years (consistent with previous literature).

**Results:** After matching, there were 82,151 patients in each cohort. Patients on TRT had a higher risk of fracture compared to those off TRT (HR 1.11 [1.06-1.16] lifetime and HR 1.15 [1.08-1.22] at 3 years).

**Conclusions:** Patients on TRT showed slightly increased fracture risk compared to controls. Perhaps the absence of data on physical activity and risk taking is a primary and significant contributor to these counterintuitive results. Certainly, these results do not suggest that the risk of TRT outweighs the benefits in hypogonadal men, but they may influence pre-treatment counseling recommendations.

**A. Study Design**

| Inclusion Criteria | Exclusion Criteria | Propensity Score Matching |
|---|---|---|
| • Men aged 45-80<br>• 1 or more ICD 10 code related to hypogonadism<br>• 2 testosterone values between 100-300ng/dL separated by 2 days or more | • Any diagnosis of prostate cancer (C61) | • Age<br>• Use of bisphosphonates<br>• Use of denosumab<br>• Use of teriparatide |

**B. Codes Used for Study**

| Hypogonadism | | Fractures | |
|---|---|---|---|
| | | S12 | Fracture of cervical vertebra and other parts of neck |
| E29.1 | Testicular hypofunction | S22.0 | Fracture of thoracic vertebra |
| | | S22.3 | Fracture of one rib |
| R68.82 | Decreased libido | S32 | Fracture of lumbar spine and pelvis |
| | | S42 | Fracture of shoulder and upper arm |
| F52.0 | Hypoactive sexual desire disorder | S62.0 | Fracture of navicular [scaphoid] bone of wrist |
| F52.21 | Male erectile dysfunction disorder | S62.1 | Fracture of other and unspecified carpal bone(s) |
| Testosterone Lab Results | | S62.2 | Fracture of first metacarpal bone |
| LOINC 2986-8 | Testosterone [Mass/volume] in serum or plasma | S62.3 | Fracture of other and unspecified metacarpal bone |
| | | S72 | Fracture of femur |
| | | S82 | Fracture of lower leg, including ankle |
| Testosterone Replacement Therapy | | S92.0 | Fracture of calcaneus |
| | | S92.1 | Fracture of talus |
| TriNetX Curated 10379 | Testosterone | S92.2 | Fracture of other and unspecified tarsal bone(s) |
| | | S92.3 | Fracture of metatarsal bone(s) |

**C. Results**

| N Before PSM | | N After PSM | |
|---|---|---|---|
| TRT | 82,980 | TRT | 82,151 |
| No TRT | 275,225 | No TRT | 82,151 |

**Fracture Rate**

| | Number (%) | 3-year Hazard Ratio | Lifetime Hazard Ratio |
|---|---|---|---|
| TRT | 2,071 (2.656%) | 1.15 (1.08-1.22) | 1.11 (1.06, 1.16) |
| No TRT | 1,752 (2.233%) | | |

## THU-PS1-1015

**TAR-200 in Patients with Bacillus Calmette–Guérin-Unresponsive High-Risk Non–Muscle-Invasive Bladder Cancer: Results from SunRISe-1 Study**

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**Introduction and Objective:** Patients with BCG-unresponsive high-risk non–muscle-invasive bladder cancer (HR NMIBC) have high risk of disease progression and limited treatment options. TAR-200 is an intravesical targeted releasing system, designed to provide sustained delivery of gemcitabine in the bladder. SunRISe-1 (NCT04640623) is an ongoing, randomized, phase 2b study assessing efficacy and safety of TAR-200 + cetrelimab (anti-PD1) (Cohort 1 [C1]), TAR-200 (C2), or cetrelimab (C3) in patients with BCG-unresponsive HR NMIBC with carcinoma in situ (CIS), ± papillary disease, ineligible for/refusing radical cystectomy; TAR-200 is also being assessed patients with papillary-only disease (C4). We report C2 results.

**Methods:** Eligible patients aged ≥18 years had histologically confirmed CIS ± papillary disease (high-grade Ta, any T1) after adequate BCG, and ECOG PS 0-2. TAR-200 was dosed Q3W through Week 24, then Q12W until Week 96. Response was assessed by cystoscopy and centrally-assessed urine cytology, CT/MRI, and bladder biopsy. Primary end point was overall complete response (CR) rate. Secondary end points included duration of response (DOR) and safety.

**Results:** At data cutoff (Jan 2, 2024), 85 patients (median age, 71 years; range, 40-88; concurrent papillary disease, 33%) received TAR-200 monotherapy. Fifty-eight patients were efficacy evaluable. Centrally confirmed CR rate was 83% (95% CI, 71-91) by urine cytology and/or biopsy; investigator-assessed CR rate (86%; 95% CI, 75-94) correlated strongly with central results. The estimated 1-year DOR rate is 75% (95% CI, 50-88), with median follow-up in responders of 30 weeks (range, 14-140); 85% (n=41/48) remain in CR at data cutoff. Forty-seven of 48 (98%) CRs were achieved at first disease assessment. 7 pts (8%) had grade ≥3 treatment-related adverse events (TRAEs); 4 (5%) had serious TRAEs; 4 (5%) had TRAEs leading to discontinuation.

**Conclusions:** TAR-200 monotherapy was associated with a clinically meaningful, high, centrally confirmed CR rate, durable responses, and favorable benefit-risk profile in patients with BCG-unresponsive CIS.

## THU-PS1-1022

**First Safety and Efficacy Results of the TAR-210 Erdafitinib Intravesical Delivery System in Patients with Non–Muscle-Invasive Bladder Cancer with Select FGFR Alterations**

R. Li[1], A. Vilaseca[2], G. Jayram[3], C. Raventos[4], N. Shore[5], D. Zainfeld[6], T. Kang[7], J. Ku[8], J. Meeks[9], Ó. Rodríguez Faba[10], F. Roghmann[11], S. Daneshmand[12], N. Beeharry[13], C. Cost[13], A. Kalota[13], J. Lauring[13], M. Peterson[14], M. Quiroz[13], N. Stone[13], W. Zhu[14], F. Guerrero-Ramos[15]

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**Introduction and Objective:** Treatment options are limited in non–muscle-invasive bladder cancer (NMIBC) recurring after intravesical chemotherapy or BCG. TAR-210 is a novel intravesical targeted releasing system designed to provide local, continuous delivery of erdafitinib (selective pan-FGFR tyrosine kinase inhibitor) within the bladder while limiting systemic toxicities. This open-label, multicenter phase 1 study (NCT05316155) evaluated safety, pharmacokinetics (PK), and efficacy of TAR-210 in NMIBC patients with select FGFRalt.

**Methods:** FGFRalt were identified in tumor tissue or urine cell-free DNA. Cohort 1 (C1) patients had recurrent, BCG-experienced high-risk NMIBC (high-grade Ta/T1; papillary only) not receiving radical cystectomy. Cohort 3 (C3) patients had recurrent, intermediate-risk NMIBC (Ta/T1) with prior low-grade papillary disease. Pretreatment, C1 patients have all visible disease resected; C3 requires visible tumors present. TAR-210 with two erdafitinib release rates were evaluated. Response is assessed every 3 months with continued treatment for up to 1 year if recurrence-free (RF) (C1) or in complete response (CR) (C3).

**Results:** As of August 29, 2023, 16 patients in C1 and 27 patients in C3 have been treated; 11 and 15 patients, respectively, had ≥1 response assessment. 82% in C1 were RF; 87% in C3 achieved CR (Table). Most common treatment-related adverse events (TRAE) were grade 1/2 lower urinary tract TRAEs. There were no dose-limiting toxicities. Sustained erdafitinib concentrations in urine with very low plasma exposures were observed. Updated data (≈47 response evaluable patients) will be presented.

**Conclusions:** TAR-210 appears safe and well tolerated with predominantly low-grade urinary system TRAEs and high CR rate and RF survival in patients with NMIBC with FGFRalt. Results justify further study of erdafitinib-targeted treatment using a novel intravesical delivery system in early-stage bladder cancer.

**Table: Efficacy outcomes and treatment exposure**

| | |
|---|---|
| **Cohort 1 (n=11 with response assessment)** | |
| RF, n (%) | 9 (81.8) |
| Median RFS (95% CI), mo | NE (2.96-NE) |
| **Cohort 3 (n=15 with response assessment)** | |
| CR, n (%) | 13 (86.7) |
| Median duration of CR (95% CI), mo* | NE (NE-NE) |
| **Both Cohorts (n=43 all-treated)** | |
| Median duration of treatment exposure (range), mo | 3.7 (0-12) |
| Total duration of treatment, n (%) | |
| ≥0-<3 mo | 18 (41.9) |
| ≥3-<6 mo | 13 (30.2) |
| ≥6-<9 mo | 6 (14.0) |
| ≥9-<12 mo | 5 (11.6) |
| ≥12 mo | 1 (2.3) |

CI, confidence interval; CR, complete response; mo, months; NE, non-estimable; RF, recurrence-free; RFS, recurrence-free survival.
*All CR in cohort 3 were ongoing as of data cutoff.

## THU-PS1-1029

**New eGFR Equation Disproportionately Impacts the NAC Eligibility for Muscle Invasive Bladder Cancer**

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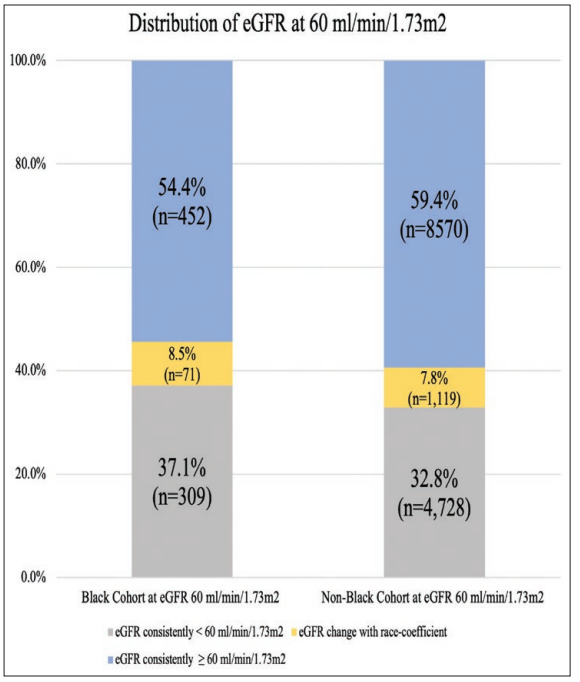
**Introduction and Objective:** In September 2021, the National Kidney Foundation and American Society of Nephrology Task Force announced a new race-free equation for estimated glomerular filtration rate (eGFR). Herein, we evaluate the impact of new CKD-EPI creatinine equation on the eligibility for Neoadjuvant Cisplatin based chemotherapy (NAC) in MIBC patients.

**Methods:** Using the NSQIP database, postoperatively diagnosed MIBC patients (>18 years) who received radical cystectomy were included in this study. eGFR was calculated using the Modification of Diet in Renal Disease (MDRD) equation and the CKD-EPI Creatinine Equation (2021). Patients with missing data were excluded. We calculated the proportion of patients (Black and Non-Black) who were candidates for NAC using eGFR ≥60 ml/min/1.73m$^2$ as the cutoff. Statistical tests as appropriate were employed to report the change in eligibility for NAC. Statistical significance was set at p-value <0.05.

**Results:** Among a total of 15,249 patients, Black cohort constituted 5.46% (832) of the total sample population compared to 94.54% non-Black. CKD-EPI Creatinine Equation (2021) calculated a decrease in the mean eGFR for Black patients, 63.22 ml/min/1.73m$^2$ compared to 70.66 ml/min/1.73m$^2$ as calculated using the MDRD equation (p value <0.0001). However, for non-Black cohort the CKD-EPI Creatinine Equation (2021) calculated an increase in the mean eGFR, 70.66 ml/min/1.73m$^2$ compared to 66.63 ml/min/1.73m$^2$ using MDRD equation (p value <0.0001). Furthermore, using the CKD-EPI Creatinine Equation (2021) 7.8% (n=1,119) more non-Black patients become eligible for NAC (p value <0.0001), however, for Black cohort, the NAC eligible proportion decreased by 8.5% (p value <0.0001). Figure 1

**Conclusions:** Opting the CKD-EPI Creatinine Equation (2021) will preclude some of the previously eligible Black patients from NAC for MIBC management but contrarily will increase the non-Black patients' eligible proportion for NAC.



## THU-PS1-1036

**Durability of Nadofaragene Firadenovec-vncg Response in Participants with Bacillus Calmette-Guérin–Unresponsive Non–Muscle-Invasive Bladder Cancer: 36- and 57-Month Follow-Up of a Phase 3 Study**

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**Introduction and Objective:** Nadofaragene firadenovec-vncg is an intravesical gene therapy for Bacillus Calmette–Guérin (BCG)-unresponsive non–muscle-invasive bladder cancer (NMIBC) with carcinoma in situ (CIS) with/without papillary tumors (± Ta/T1). In a phase 3 study, 53.4% (55/103) of participants with CIS ± Ta/T1 (CIS cohort) achieved a complete response (CR) at 3 months and 72.9% (35/48) of participants with high-grade Ta/T1 (papillary disease [PD] cohort) were high-grade recurrence-free (HGRF) at 3 months. Results from 36 and 57 months of follow-up are reported.

**Methods:** Participants with BCG-unresponsive NMIBC (N=157) were enrolled: 107 with CIS and 50 with PD. Efficacy analyses included 103 participants with CIS and 48 participants with PD who met protocol definitions of BCG-unresponsive NMIBC. Participants received nadofaragene firadenovec every 3 months with cystoscopy and cytology assessments, with biopsy if indicated. A mandatory biopsy was taken at 12 months. Participants remaining HGRF at 12 months could continue treatment at investigator discretion.

**Results:** 13/107 (12.1%) and 5/107 (4.7%) participants with CIS and 10/50 (20.0%) and 7/50 (14.0%) participants with PD received nadofaragene firadenovec at 36 months and 57 months, respectively. Among the participants with CIS with a CR and participants with PD who were HGRF at 3 months after the first dose of nadofaragene firadenovec, 14/55 (25.5%) participants with CIS and 11/35 (31.4%) participants with PD remained HGRF through 36 months. Nadofaragene firadenovec provided a sustained durable response through 57 months in 6/55 (10.9%) participants with CIS and 7/35 (20.0%) participants with PD. Through 5 years of follow-up, 42/103 (40.8%) participants with CIS and 14/48 (29.2%) participants with PD underwent cystectomy. No new safety signals were observed through 57 months of follow-up.

**Conclusions:** Nadofaragene firadenovec administered intravesically every 3 months demonstrated durable response rates through 36 and 57 months in a proportion of participants with BCG-unresponsive NMIBC.

Supplemental Table 1: Patient Characteristics

| Demographics | Clinical Stage cT2 n=34 | Clinical Stage ≥ cT3 n=6 |
|---|---|---|
| **Age at Diagnosis** | 77 (65.3-81.8) | 74 (72.5-74) |
| **Gender** | | |
| Male | 29 (85.3%) | 3 (50%) |
| Female | 5 (14.7%) | 3 (50%) |
| **Race** | | |
| White | 31 (91.1%) | 4 (67%) |
| Non-White | 3 (8.8%) | 2 (33%) |
| **CCI** | 8 (5.3-11) | 10.5 (7-11.8) |
| **BMI** | 26.4 (22.9-30.1) | 23.4 (21-26.1) |
| | | |
| **Treatment** | | |
| Chemotherapy | 24 (70.6%) | 2 (33%) |
| Radiation | 32 (94.1%) | 6 (100%) |
| Immunotherapy | 9 (26.5%) | 3 (50%) |
| TURBT + Chemotherapy only | 2 (5.8%) | - |
| TURBT + Radiation only | 10 (29.4%) | 5 (62.5%) |
| Trimodal | 22 (64.7%) | 3 (37.5%) |

Data presented as *n* (%) or median (IQR) as appropriate
TURBT = Transurethral Resection of Bladder Tumor
*Trimodal = Chemotherapy + TURBT + Radiation

## THU-PS1-1043

**Association of Hemoglobin, Albumin, Lymphocyte, and Platelet (HALP) Score in Muscle-Invasive Bladder Cancer**

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**Introduction and Objective:** Hemoglobin, Albumin, Lymphocyte, and Platelet (HALP) Score is a marker of nutritional status shown to have prognostic value for several cancers. This study sought to investigate for an association between HALP and overall outcomes in patients with muscle invasive bladder cancer (MIBC) who were not candidates for cystectomy and were managed conservatively.

**Methods:** Retrospective chart review of cT2 and cT3 bladder cancer patients managed conservatively at a single academic institution from 2017-2022. A total of 40 patients were included. Hemoglobin, Albumin, Lymphocyte, and Platelet (HALP) is an immuneo-nutritional biomarker calculated by = [hemoglobin (g/L) × albumin (g/L) × lymphocytes (/L)]/platelets (/L).

**Results:** We found that the average HALP score at initial presentation was 59.6 (± 129.4) and 39.8 (± 22.4) for cohorts with cT2 and ≥ cT3 disease, respectively (p=.61). Post- treatment, HALP scores with scores of 49.8 (± 132.9) and 28.1 (± 16.5) for cT2 and ≥ cT3 respectively (p=.13). Most recent follow-up (post-therapy) HALP scores were significantly associated with disease-associated metastasis (p=0.018).

**Conclusions:** The HALP score has been evaluated and has prognostic ability to predict overall survival, progression-free survival, recurrence-free survival, among other outcomes in a number of malignancies. Our early results suggest that a similar relationship exists for MIBC. Future work would evaluate HALP as a marker for fitness and outcomes for patients with MIBC that undergo cystectomy.

**Table 1. Analysis by Clinical Staging**

| | Clinical Stage cT2 | Clinical Stage ≥ cT3 | p-values |
|---|---|---|---|
| **Histologic Type** | | | |
| Urothelial | 32 | 4 | - |
| Squamous | 2 | 1 | - |
| Other | - | 1 | - |
| **Hemoglobin, Albumin, Lymphocyte, and Platelet (HALP) Score** | | | |
| **Initial HALP Score** | 59.6 (± 129.4) | 39.8 (± 22.4) | 0.61 |
| **Most Recent Follow-up HALP Score** | 49.8 (± 132.9) | 28.1 (± 16.5) | 0.13 |
| **Clinical Outcomes** | | | |
| **Metastasis** | 12 (35%) | 3 (50%) | 0.49 |
| **Time to Metastasis (months)** | 16.1 (± 17.2) | 17.2 (± 17.4) | |
| **Mortality** | 12 (35%) | 3 (50%) | 0.49 |
| **Time to Mortality (months)** | 19.4 (± 22.7) | 18.1 (21.8) | |
| **Metastasis vs. No Metastasis** | | | |
| **Initial HALP Score** | 30.1 (±9.7) | 49.5 (26.7) | 0.17 |
| **Most Recent Follow-up HALP Score** | 14.3 (±5.9) | 41.2 (±4.8) | **.0018** |

Data presented as *n* (%) or mean (±SD) as appropriate.

## THU-PS1-1050

**Guideline Adherence in Non-Muscle-Invasive Bladder Cancer Surveillance: An Institutional Retrospective Study on Cystoscopy Frequency**

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**Introduction and Objective:** The 2016 American Urological Association (AUA) Non-Muscle-Invasive Bladder Cancer (NMIBC) guidelines tailor surveillance intensity to patient risk categories to optimize healthcare resource utilization and minimize the financial and emotional burden on patients. This study aims to quantify adherence to these guidelines in the surveillance of NMIBC patients within the first two years after diagnosis.

**Methods:** An IRB-approved retrospective review was conducted to identify patients with NMIBC that underwent outpatient cystoscopy between 2007 and 2021 at a single institution. Data on bladder cancer stage, guideline risk stratification, dates of surveillance cystoscopies, and pathology results were recorded. Patients who were found to have recurrence of their bladder cancer during the surveillance period were censored.

**Results:** 364 of 591 patients were identified as having a confirmed pathologic diagnosis and complete records. Of these, 106 patients were stratified as low risk, 125 patients as intermediate risk, and 133 patients as high risk. 19.8% of low-risk patients underwent more than the guideline-recommended three cystoscopies in the first two years, while 8.8% of intermediate-risk patients received more than five cystoscopies. In contrast, surveillance for high-risk patients complied with the guidelines, with up to seven cystoscopies performed within the same timeframe.

**Conclusions:** There is an overuse of surveillance cystoscopies among low and intermediate-risk NMIBC patients, contrary to national guidelines, which may lead to unnecessary increases in patient costs and burden. Such overuse might stem from the reflexive scheduling of surveillance cystoscopies based on an adherence to outdated guidelines. Our findings highlight the need for heightened awareness and compliance with NMIBC surveillance guidelines among urologists.

## THU-PS1-1057 – video

**En-bloc Prostate Capsule Sparing Radical Cystectomy for Infratrigonal Bladder Cancer: How to Avoid a Positive Margin**

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## THU-PS2-1315

**A Community Assessment of Testicular Torsion and Resulting Longitudinal Quality Improvement Initiative to Improve Testicular Salvage at a Pediatric Tertiary Center**

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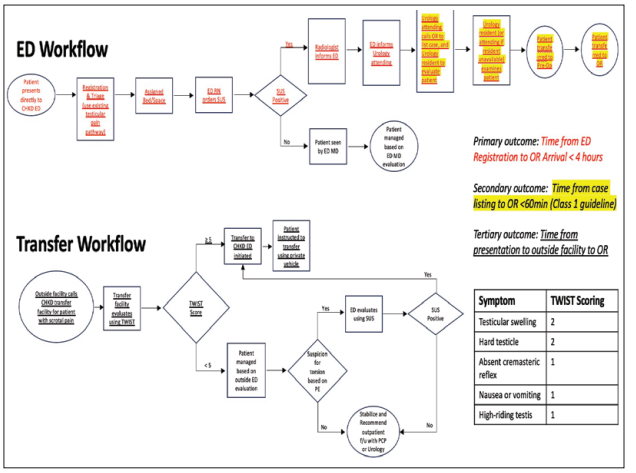
**Introduction and Objective:** Our facility has a lower-than-acceptable average time to surgical intervention for testicular torsion (TT) of 172 minutes and testicular salvage rate of 56%. This study examines the relationship between hospital and demographic factors and TT outcomes and describes the development of a multi-phase quality improvement (QI) initiative to improve testicular salvage within our region.

**Methods:** Phase I involved retrospective chart review of patients who received definitive surgical treatment for TT within 24 hours of presentation from January 2018 to December 2022. Hospital-level data included time from emergency department (ED) registration to operating room. Patient-level data included demographic information, neurocognitive status, transfer, and time from symptom onset to ED presentation. ZIP code demographic data was obtained from the 2022 American Community Survey. Data was collected in REDCap 12.5. Categorical data was compared using chi-square analysis and continuous data compared with student t-tests with statistical significance of $p < 0.05$.

**Results:** Orchiectomy was associated with greater time to surgical treatment than orchiopexy (p=0.0003). Patients who initially presented to PCP's offices and urgent cares more likely delayed presentation over 6 hours (p=0.008) and underwent orchiectomy (p=0.03). Children with neurocognitive delay more likely presented to urgent care (p=0.0001) and underwent orchiectomy (p=0.02). Demographic analysis revealed associations between both Medicaid (p=0.03) and lower median household income (p=0.04) and delayed presentation and Medicaid (p=0.02) and lower median income (p=0.03) and orchiectomy.

**Conclusions:** Hospital and socioeconomic factors impact TT outcomes. This data generated a QI initiative with SMART goal of improving testicular salvage rates to 75% by 2027 through streamlined TT treatment workflow (Phase II) (Figure 1), community outreach through PCP offices (Phase III), and school boards (Phase IV) to improve health literacy regarding TT.



## THU-PS2-1322

**Pediatric Urolithiasis and Disruptive Household Situations: Is There a Link?**

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**Introduction and Objective:** While divorce rates nationally have declined, in our rural state the number of children with disruptive household situations (DHS) has risen. In our healthcare system, 306,590 children were evaluated over 5 years, of whom 3,386 (1.1%) patients had ICD codes consistent with (DHS) (ICD-10 Z63. 5, Z62.2, Z62.21). In this study, we tried to characterize the epidemiology of urolithiasis in children in DHS. We hypothesize that children with DHS are more likely to have unhealthy dietary habits and possible limitations in access to healthcare resources resulting in more complex stone disease.

**Methods:** The electronic database of a single tertiary center was reviewed for all patients <18 years old with urolithiasis between 2018-2023. Baseline patient demographics, stone disease characteristics, management, complications, follow-up and recurrence rate were compared between patients with and without DHS.

**Results:** Ninety-one patients were analyzed. A summary of patient characteristics depicted in table 1. Chi-squared test was used to analyze the categorical variable which failed to reveal any statistically significant differences between the custody and non-custody groups. Mann Whitney U test however revealed a statistically significant difference between stone burden in children with and without custody issues with a higher stone burden seen in children with custody issues (p 0.02).

**Conclusions:** Almost a quarter of our pediatric urolithiasis population had DHS. Patients with DHS had a significantly larger stone burden at presentation. This suggest a higher incidence of urolithiasis in children living with DHS, with a larger stone burden at presentation compared to the general population.

| | Children with DHS (n = 21) | Children without DHS (n=70) | p-value |
|---|---|---|---|
| **Mean age at presentation +/- SD, years** | 11.49 ± 4.49 | 12.50 ±4.03 | 0.649 |
| **Family history of stones** | 5 (24%) | 29 (41%) | 0.143 |
| **Race** | | | 0.139 |
| *White* | 20 (95%) | 68 (97%) | |
| *Black* | 0 (0%) | 2 (2.9%) | |
| *Not disclosed* | 1 (4.8%) | 0 (0%) | |
| **Mean BMI** | 23.9 ± 9.67 | 23.15± 7.51 | 0.953 |
| **Anatomic abnormality present** | 6 (29%) | 13 (19%) | 0.323 |
| **Most common presentation** | Hematuria: 12 (57%) | Hematuria: 41 (59%) | 0.291 |
| **Most common stone location** | Ureter : 12 (57%) | Kidney: 35 (50%) | 0.319 |
| **Laterality** | | | 0.358 |
| *Right* | 9 (42.9%) | 36 (51.4%) | |
| *Left* | 10 (47.6%) | 22 (31.4%) | |
| *Bilateral* | 2 (9.5%) | 12 (17.2%) | |
| **Mean largest stone diameter (cm)** | 1.3±1.08 | 0.89±0.82 | 0.2 |
| **Most common stone type** | Calcium oxalate dihydrate: 11 (52.4%) | Calcium oxalate dihydrate: 30 (43.5%) | 0.176 |
| **Most common management** | URS with laser lithotripsy and stone basket retrieval: 16 (72.6%) | URS with laser lithotripsy and stone basket retrieval: 53 (75.7%) | 0.915 |
| **Missed appointments** | 5 (24%) | 18 (25%) | 0.860 |
| **Follow up attended** | 17 (81%) | 54 (77%) | 0.712 |
| **Recurrence** | 8 (38%) | 22 (31%) | 0.569 |

## THU-PS2-1329

**Non-Narcotic Pathway for Post Operative Pain in Pediatric Patients Undergoing Robotic and Laparoscopic Surgery in High Risk Communities**

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**Introduction and Objective:** As of 2019 half of pediatric urologists were prescribing narcotics to all post operative patients and only 15% reported never prescribing narcotics. Beginning May of 2019, we implemented a non-narcotic pathway for post-operative pain management. This is especially important given our patients reside in regions that are high risk for narcotic-related adverse events. Our objective is to establish a standard of practice for effective post-operative pain control while decreasing narcotic prescriptions for children in high risk communities.

**Methods:** We conducted a retrospective review of 154 robotic/laparoscopic pediatric urology surgeries from 5/1/19 – 4/30/2023. The majority of surgeries were completed robotically (66%) and half were discharged the same day (51%). Patients were primarily male (66%), white (88%) and average age of 5.4 years. We implemented intraoperative multimodal pain control (local anesthesia, intravenous acetaminophen and/or ketorolac) and post-operative oral acetaminophen and ibuprofen. Patients with a catheter were given oxybutynin for bladder spasms and those with a ureteral stent were prescribed oxybutynin and/or tamsulosin.

**Results:** One patient (0.6%) was prescribed outpatient narcotic pain medication. Of those admitted for at least one night, only 4 children (5.3%) received inpatient pain medication. Following discharge, 9 patients (5.8%) sought medical advice for pain. All of these requests were able to be managed without prescription narcotics.

**Conclusions:** We were successful in treating post-operative pain without narcotics in >99% of patients following pediatric urologic robotic/laparoscopic surgeries. This demonstrates feasibility of a non-narcotic pathway in managing pain without sacrificing patient comfort with few seeking care for post operative pain and none of these patients requiring narcotic prescriptions. Of those who called with post operative pain, the majority (n=8) were related to bladder spasms or urinary retention which are better treated with non-narcotic medications. This approach may be of special value for our pediatric patients living in communities with high-risk of drug misuse.

## THU-PS2-1336

**Evaluation of Socioeconomic and Demographic Disparities in Pediatric Kidney Transplant**

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**Introduction and Objective:** Kidney transplantation is essential for end-stage renal disease, significantly improving survival and quality of life. Yet, in pediatric renal disease management, minority children face poorer dialysis outcomes and reduced access to transplantation. This study seeks to uncover and understand these disparities within the pediatric population.

**Methods:** Using ICD-10 codes, we queried the 2019 Kid's Inpatient Database (KID) for admissions with a primary or secondary diagnosis of severe chronic kidney disease (sCKD), namely stages 4 and 5, or a kidney transplant procedure (KT). Patient demographics, insurance types, and hospital stay metrics were assessed through statistical analyses including Wilcoxon Rank Sum, Chi-square, and Logistic Regression.

**Results:** A total of 636 hospitalizations associated with kidney transplant (KT) procedures and 3,733 hospitalizations with a primary or secondary diagnosis of chronic kidney disease (sCKD) were identified. Among KT and sCKD cohorts, the majority were white (42.6% and 36.6%), male (59.8% and 59.8%), aged 12–18 (57.9% and 50.3%), and on Medicaid (35.7% and 43.0%). KT and sCKD were rare among infants 0–1 (1.6% and 9.9%). Analysis of income quartiles among patients with and without KT based on their zip codes revealed no significant distinction. Although mortality rates between patients undergoing KT or with sCKD have no statistical significance, there is a numerical discrepancy, with a higher mortality observed in sCKD (16 vs 4). Black race was associated with lower rates of KT, with an adjusted odds ratio of 0.69 (95% CI: 0.53–0.89), after controlling for socioeconomic and geographic factors.

**Conclusions:** Pediatric kidney transplant recipients are more often male, white, and aged 12-18. Black patients have lower odds of receiving kidney transplants, underscoring the need for targeted interventions to ensure equitable access.

**Table 1 – Demographics and Characteristics of Admissions by Performance of Kidney Transplantation**

| | Kidney Transplant | Severe CKD | Univariate | Multivariate | | | |
|---|---|---|---|---|---|---|---|
| | n (%) or median [IQR] | n (%) or median [IQR] | p-value | OR | 95% CI Lower | 95% CI Upper | p-value |
| **Total discharges** | | | | | | | |
| Unweighted | 636 | 3733 | | | | | |
| Weighted | 859 | 5038 | | | | | |
| **Age, years** | | | < 0.001 ** | | | | |
| 0 – 1 | 10 (1.6) | 371 (9.9) | | 1 | - | - | - |
| 2 – 5 | 105 (24.1) | 593 (15.9) | | 7.76 | 3.96 | 17.57 | <0.0001 ** |
| 6 – 11 | 153 (24.1) | 893 (23.9) | | 7.50 | 3.87 | 16.83 | <0.0001 ** |
| 12 – 18 | 368 (57.9) | 1876 (50.3) | | 8.87 | 4.65 | 19.72 | <0.0001 ** |
| **Sex** | | | 1.0 | | | | |
| Male | 380 (59.8) | 2234 (59.8) | | 1 | - | - | - |
| Female | 256 (40.3) | 1499 (40.2) | | 0.995 | 0.83 | 1.19 | 0.96 |
| **Race** | | | < 0.05 * | | | | |
| White | 271 (42.6) | 1365 (36.6) | | 1 | - | - | - |
| Black | 102 (16.0) | 784 (21.0) | | 0.69 | 0.53 | 0.89 | 0.01 * |
| Hispanic | 181 (28.5) | 1012 (27.1) | | 0.92 | 0.73 | 1.15 | 0.44 |
| Asian/Pacific Islander | 20 (3.1) | 144 (3.9) | | 0.69 | 0.41 | 1.10 | 0.14 |
| Native American | 10 (1.6) | 44 (1.2) | | 1.29 | 0.57 | 2.62 | 0.50 |
| Other | 24 (3.8) | 195 (5.2) | | 0.70 | 0.43 | 1.08 | 0.12 |
| **Zip code Income Quartile** | | | < 0.05 * | | | | |
| Lowest | 179 (28.1) | 1220 (32.7) | | 1 | - | - | - |
| Second | 141 (22.2) | 907 (24.3) | | 0.99 | 0.77 | 1.27 | 0.94 |
| Third | 179 (28.1) | 870 (23.3) | | 1.22 | 0.95 | 1.55 | 0.12 |
| Highest | 130 (20.4) | 672 (18.0) | | 1.13 | 0.86 | 1.49 | 0.37 |
| **Hospital Region** | | | < 0.05 * | | | | |
| Northeast | 102 (16.0) | 553 (14.8) | | 1 | - | - | - |
| Midwest | 143 (22.5) | 724 (19.4) | | 1.13 | 0.84 | 1.52 | 0.41 |
| South | 215 (33.8) | 1498 (40.1) | | 0.85 | 0.65 | 1.12 | 0.24 |
| West | 176 (27.7) | 958 (25.7) | | 0.88 | 0.67 | 1.18 | 0.40 |
| **Primary Payer** | | | < 0.001 ** | | | | |
| Medicare | 131 (20.6) | 868 (23.3) | | 1 | | | |
| Medicaid | 227 (35.7) | 1607 (43.0) | | 0.95 | 0.75 | 1.22 | 0.69 |
| Private insurance | 208 (32.7) | 1025 (27.5) | | 1.18 | 0.92 | 1.53 | 0.20 |
| Self-pay | 20 (3.1) | 43 (1.2) | | 4.06 | 2.13 | 7.60 | <0.0001 ** |
| No charge | 0 (0) | 2 (0.1) | | <0.0001 | NA | $>1.02 \times 10^{11}$ | 0.96 |
| Other | 50 (7.9) | 180 (4.8) | | 1.95 | 1.30 | 2.88 | 0.001 * |
| **Mortality** | 4 (0.6) | 16 (0.4) | 0.71 | | | | |
| **Total charges, $** | 303,106 [187,057] | 38,429.5 (60,987.5) | < 0.001 ** | | | | |
| **Length of stay, days** | 9 [5] | 3 [4] | < 0.001 ** | | | | |

n (%) for categorical data; Median [IQR] for continuous non-parametric data; Odds Ratio (OR)
Statistical significance levels are as follows: *p < 0.05; **p < 0.001. P values are the result of univariate analysis (chi-square or Fischer test for categorical data, and Wilcoxon rank sum test for continuous non-parametric data) and of multivariate logistic regression analysis.

## THU-PS2-1343

**Cross-Fused Testicular Ectopia: A Case Report**

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**Introduction and Objective:** Crossed testicular ectopia (CTE) is a rare abnormality in testicular descent, occurring as both migrate through one inguinal canal. There have been under 150 reported cases and its etiology remains unclear. Crossed-fused testicular ectopia is a variant of this condition characterized by testicular fusion. Ultrasound is the first line imaging study in diagnosis, yet often equivocal for diagnosis of an intra-abdominal testis. In this case, diagnostic laparoscopy can be conclusive and utilized to surgically treat the condition.

**Methods:** We report a rare variant of CTE presenting as a fusion of the testes with each testicle and associated vas deferens retaining their independent blood supplies.

**Results:** A 10-month-old male with a history of proximal penoscrotal hypospadias was referred for non-palpable, undescended right testis. Scrotal US performed at 3 months of age revealed an unremarkable left hemiscrotum and non-visualized right testis.
Diagnostic laparoscopy revealed a right-to-left crossed ectopia of the right testis with fusion to the left testis within a left inguinal hernia. Peritoneal attachments tethering the right and left testis were carefully released, freeing the right testis and vas deferens. A Prentiss maneuver was performed, developing a channel for right testicle delivery into a subdartos pouch where a right orchiopexy was performed. The left inguinal hernia was repaired and a left orchiopexy was performed. The patient tolerated the procedure well and recovered appropriately.

**Conclusions:** Crossed-fused testicular ectopia is a rare condition that can present as a unilateral non-palpable testicle. Diagnosis may evade ultrasound, demonstrating the value of diagnostic laparoscopy as a means for diagnosis and conduit for treatment. This report illustrates the success of the delineated surgical approach in the treatment of a fused variant presentation.

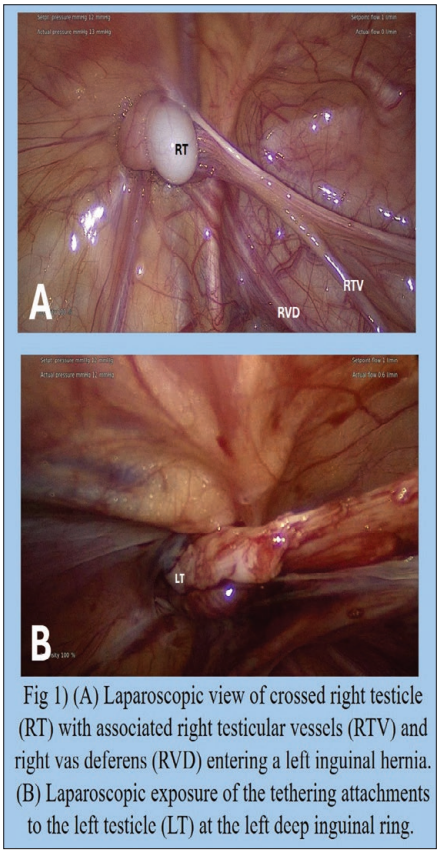


Fig 1) (A) Laparoscopic view of crossed right testicle (RT) with associated right testicular vessels (RTV) and right vas deferens (RVD) entering a left inguinal hernia. (B) Laparoscopic exposure of the tethering attachments to the left testicle (LT) at the left deep inguinal ring.

## THU-PS2-1350

**Comparing the Mitrofanoff Outcomes: Open vs. Robot-assisted**

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**Introduction and Objective:** Continent catheterizable channels (CCCs) serve as an alternative route for CIC. The appendix is the most commonly used conduit for a CCC (Mitrofanoff appendicovesicostomy "APV"). To compare outcomes between open (OAPV) versus robot-assisted laparoscopic appendicovesicostomy (RALAPV).

**Methods:** An IRB approved prospective registry was retrospectively examined to abstract all patients who underwent APV without bladder augmentation (BA) between 2012-2023. Demographics, perioperative details, and long term outcomes were aggregated and analyzed. P-values were two sided and a p-value<0.05 was considered statistically significant.

**Results:** Among 52 patients, 19 (36.5%) underwent OAPV and 33 (63.5%) underwent RALAPV. RALAPV patients had a median age of 9.3 years compared to 8.5 years for OAPV, with no significant difference (p=0.29). RALAPV was associated with longer operative time (p=0.04), less blood loss (p=0.003), and similar postoperative parameters (length of stay, return to diet, return of bowel movement; p=0.07, 0.83, 0.92, respectively). Median morphine use was lower in RALAPV (0.04 mg/kg/d vs. 0.09 mg/kg/d, p=0.01). Complication rates within the first 30 days (p=1.00) and 31-90 days postop (p=0.78) were similar, primarily Clavien Dindo grades I and II. Channel-related complications were comparable between RALAPV (30%) and OAPV (42%) groups (p=0.77). Surgical revision rates were similar (p=1.00), involving stoma or channel revisions. Additional continence procedures were performed in 5 (26%) OAPV patients and 6 (18%) RALAPV patients, with no significant difference (p=0.5). Median follow-up was longer for OAPV (7.73 years vs 3.7 years for RALAPV, p=0.01), with similar continence rates (95% vs 100%, p=0.37).

**Conclusions:** RALAPV shows comparable success to patients who underwent OAPV. The longer follow-up interval for OAPV highlights the recent adoption of minimally invasive surgery.

**Table 1:** Demographics, perioperative, and long-term outcomes between Open vs Robot Appendicovesicostomy w/o Bladder Augmentation (BA)

| | OAPV | RALAPV | |
|---|---|---|---|
| N= 52 | 19 (36.5%) | 33 (63.5%) | |
| Gender | | | 0.76 |
| • Male | 11 (61%) | 22 (67%) | |
| • Female | 7 (39%) | 11 (33%) | |
| Age in years, median (IQR) | 8.5 (6.4, 9.8) | 9.3 (6.5, 12.5) | 0.29 |
| BMI (kg/m$^2$), median (IQR) | 17 (15.1, 21.4) | 17.4 (14.8, 21.1) | 0.77 |
| Operative time in minutes, median (IQR) | 289 (213, 331) | 346 (296, 378) | 0.04 |
| EBL (ml), median (IQR) | 30 (10, 100) | 5 (0, 10) | 0.003 |
| LOS (days), median (IQR) | 5 (4, 9) | 4 (3, 6) | 0.07 |
| Return to regular diet (days), median (IQR) | 3 (3, 4) | 4 (2, 4) | 0.83 |
| Return of bowel movement (days), median (IQR) | 3 (2, 3) | 3 (2, 4) | 0.92 |
| IV morphine (mg/kg/d), median (IQR) | 0.09 (0.03, 0.29) | 0.04 (0.01, 0.07) | 0.01 |
| Discharge on opioids | 8 (44%) | 7 (23%) | 0.12 |
| 1-30 day complication | 11 (58%) | 19 (58%) | 1.00 |
| 1-30 day Clavien Dindo grade | | | 0.16 |
| • I | 3 (27%) | 11 (58%) | |
| • II | 6 (55%) | 4 (21%) | |
| • IIIa | 0 (0%) | 2 (11%) | |
| • IIIb | 2 (18%) | 2 (11%) | |
| 31-90 day complication | 11 (58%) | 17 (52%) | 0.78 |
| 31-90 day Clavien Dindo grade | | | 0.65 |
| • I | 4 (36%) | 8 (47%) | |
| • II | 5 (45%) | 8 (47%) | |
| • IIIb | 2 (18%) | 1 (6%) | |
| Channel related complication | 8 (42%) | 12 (36%) | 0.77 |
| Surgical revision of channel | 6 (32%) | 10 (30%) | 1.00 |
| Type of surgical revision of channel | | | 1.00 |
| • Stoma only revision | 4 (67%) | 6 (60%) | |
| • Entire channel revision | 2 (33%) | 3 (30%) | |
| • Other | 0 (0%) | 1 (10%) | |
| Continence procedure | 5 (26%) | 6 (18%) | 0.5 |
| Type of continence procedure | | | |
| • Monti | 1 | 1 | |
| • Endoscopy | 3 | 5 | |
| • BNR | 2 | 0 | |
| Continence status | | | 0.37 |
| • Incontinent | 1 (5%) | 0 (0%) | |
| • Continent | 18 (95%) | 33 (100%) | |
| Follow up time in years, median (IQR) | 7.73 (3.2, 10.2) | 3.7 (1.4, 5.8) | 0.01 |

## THU-PS2-1357

**Augmentation Cystoplasty in the Bladder Exstrophy-Epispadias Complex: A 20-year Experience**

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**Introduction and Objective:** To determine risk factors for complications after augmentation cystoplasty (AC) in the exstrophy-epispadias complex (EEC).

**Methods:** An IRB approved institutional database of 1515 EEC patients was reviewed retrospectively. Patients that had primary augmentation performed at our institution between 2003-2023 were included. Gender, race, primary closure outcome, bowel segment choice for augmentation and stoma, preoperative bladder capacity, bladder neck status, age at augmentation, 30- and 90-day complications and number of stomal revisions were reviewed.

**Results:** 186 patients underwent primary AC at our institution and 157 met final inclusion criteria. The average age at time of AC was 11.3 years with a median follow up of 6.46 years. There was no significant difference in the length of bowel harvested by the ileum and colon groups (p=0.0836) or closure outcome (p=0.3013). There was increased usage of Monti stoma in patients with an ileum AC (p=0.0117). Stomal revisions were also significantly more common in the ileum group (p=0.0392). Closure outcome did not influence the rate of 30- and 90-day complications (p=0.9607, p=0.5085) or stoma choice (p=0.7364). There was no significant difference between the ileum and colon augment groups in terms of 30- and 90-day complications (p=0.6419, p=0.8889 respectively). Patients with a history of primary successful closure had a shorter hospital stay (p=0.0042) but there was no difference in hospital stay between the ileum and colon groups (p=0.6632).

**Conclusions:** Bowel segment choice for augmentation cystoplasty does not influence the risk for complications in the EEC population. History of a failed primary closure leads to a longer hospital stay after AC, but there is no increased risk for complications. Determining which segment to harvest for augmentation and stoma should be based on the patient's anatomy and surgeon's experience.

## THU-PS2-1404

**The Role of Osteotomy in the CPRE Patient: Is It Essential?**
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**Introduction and Objective:** The authors sought to evaluate the outcomes of the complete primary repair of exstrophy (CPRE) closure with and without the addition of osteotomy, along with the effects of different forms of immobilization.

**Methods:** An institutional database of 1526 exstrophy-epispadias complex patients was reviewed for patients who underwent CPRE closure at outside institutions. Patient outcomes were analyzed based on the use of osteotomy, immobilization, and timing of closure.

**Results:** A total of 177 patients matching the inclusion criteria were identified, with 131 male (74%) and 46 female (26%). Of these patients, 105 (60%) underwent successful primary CPRE closure, and 60% of this cohort (62/105) underwent concomitant osteotomy at the time of closure. However, in the group of 72 failed closures, a majority did not undergo osteotomy (44/72, 61%). The median age at closure was 2 days (IQR 1-6 days) among 157 patients with available data. In the successful cohort, 44% underwent delayed closure beyond 72 hours, compared to 31% in the failed cohort. The successful cohort utilized spica casting (36%), traction immobilization (24%), mummy wrap (8%), unknown immobilization (15%), and no immobilization (8%). The failed cohort frequently utilized spica casting (46%), traction immobilization (14%), mummy wrap (17%), lack of immobilization (15%), and unknown immobilization (10%). Statistical analysis revealed that osteotomy was associated with successful CPRE closures (p=0.03).

**Conclusions:** The results of this study suggest that osteotomy maintains an essential role in achieving successful bladder exstrophy closure, especially when using the CPRE method.

## THU-PS2-1411 – video

**Robot-Assisted Laparoscopic Excision of Bilateral Streak Gonads and Fallopian Tube in Adult Male with Late-Diagnosed 46, XY Complete Gonadal Dysgenesis**
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## THU-PS3-1530

**RCT of Minimally Invasive Surgical Therapy (MIST) vs. Medication in the Initial Treatment of BPH-Associated LUTS: a Preliminary Analysis**
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**Introduction and Objective:** Benign prostatic hyperplasia (BPH) and associated LUTS are initially treated with medical therapy or watchful waiting; however, non-adherence to medical therapy is common due to low efficacy, sexual dysfunction, and adverse effects. MISTs such as the Prostatic Urethral Lift (PUL) offer durable relief from symptoms while preserving bladder health compared to alpha therapy alone or watchful waiting. The IMPACT RCT compares PUL to medical therapy, focusing on patient experience and efficacy through 3mo.

**Methods:** IMPACT is a prospective 1:1 RCT in BPH patients treated with PUL or medication (tamsulosin 0.4 mg daily). Symptom change at 3mo served as the primary endpoint; QoL, treatment goal achievement, satisfaction, sexual function, and adverse events were additional endpoints. This preliminary analysis reports key data gathered to date.

**Results:** 88 PUL and 112 medication subjects were available for preliminary analysis. Baseline demographics were similar between treatment groups. PUL subjects demonstrated greater IPSS improvements (39.1% and 46.8% at 1 and 3mo, respectively) vs 16.9% and 14.2% for medication. QoL at 1 and 3mo for PUL subjects improved by 39.3% and 47.9%, vs. 10.2% and 7.8% for medication subjects (Table 1). Sexual function improvements were greater for PUL vs. medication. PUL subjects reported a more positive treatment perception via PPSM at 1 and 3mo compared to medication. Treatment goals were similar between groups at baseline; overall goal achievement and achievement of highly-rated goals (Table 1) were higher for PUL vs. medication at 1 and 3mo.

**Conclusions:** IMPACT is the first head-to-head RCT comparing any MIST to medication in the treatment of LUTS secondary to BPH. Preliminary data suggests PUL offers greater improvements in quality-of-life and symptoms and higher patient satisfaction.

Table 1. Key outcomes of BPH patients treated with UroLift System and medication at 1 and 3 months

| Assessment<br>Total Score (SD)<br>Point Change, Percent Change | UroLift | | | Medication (tamsulosin 0.4 mg) | | |
|---|---|---|---|---|---|---|
| | Baseline | 1 month | 3 months | Baseline | 1 month | 3 months |
| **Efficacy** | | | | | | |
| IPSS Total (0-35) | 20.6 (5.1) | 11.7 (6.5) | 10.3 (7.1) | 19.2 (5.5) | 15.8 (7.0) | 16.3 (7.2) |
| QoL Score (0-8) | 4.5 (1.2) | 2.5 (1.6) | 2.3 (1.3) | 4.3 (1.1) | 3.7 (1.2) | 3.9 (1.3) |
| **Sexual Function** | | | | | | |
| MSHQ EjD (0-15) | 8.5 (3.0) | 11.9 (3.6) | 11.8 (3.6) | 9.1 (3.2) | 9.4 (3.7) | 9.1 (3.6) |
| MSHQ Bother (0-5) | 2.0 (1.7) | 1.3 (1.6) | 1.2 (1.7) | 2.3 (1.8) | 2.1 (1.6) | 2.3 (1.6) |
| IIEF 15 (0-75) | 43.9 (17.0) | 41.0 (20.9) | 48.8 (19.3) | 46.3 (16.7) | 45.2 (18.0) | 45.5 (18.8) |
| **Patient Satisfaction** | | | | | | |
| PPSM (0-49)* | 18.4 (8.4) | 16. 4 (8.8) | 16.4 (9.0) | 24.4 (6.7) | 25.3 (7.8) | 22.5 (8.9) |
| SAGA | | | | | | |
| Average achievement score** | | 1.4 | 2.7 | | 0.075 | -1.5 |
| Achievement on top 3 highly rated goals | | | | | | |
| Q1: Improve urinary symptoms | – | 66% | 76% | – | 65% | 60% |
| Q7: Prevent symptoms worsening | – | 83% | 87% | – | 79% | 74% |
| Q8: Reduce need for catheter | – | 91% | 95% | – | 85% | 81% |

*Higher scores indicate more dissatisfaction*
**Higher scores indicate more achievement*

## THU-PS2-1537

**Outcomes Comparison in Pre-treated versus Naïve Patients Following Aquablation**

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**Introduction and Objective:** Aquablation is a minimally invasive and effective BPH surgery with associated decreased rates of sexual dysfunction. We assessed if there were any differences in treatment outcomes between patients who have undergone prior outlet surgery compared to those who were treatment naïve.

**Methods:** We retrospectively reviewed seven pre-treated patients and 54 naïve patients who underwent Aquablation between July 2023 and January 2024. Pre-treated patients were defined as those who had undergone any outlet procedure prior to Aquablation. Postoperatively, changes in uroflow, post void residual volume (PVR), hemoglobin levels (Hbg), American Urological Association Symptom Score (AUASS), and Sexual Health Inventory for Men Score (SHIM) were calculated. Secondary outcomes included length of stay (LOS) and void trial data. Statistical analyses were conducted using two-tailed T-tests.

**Results:** Compared to the naïve group, pre-treated patients had similar average changes in Hbg ( -1.27 vs. -1.73, p=0.056), uroflow ( 7ml/s vs. 6.2ml/s, p=0.82), PVR ( -72.3ml vs. -93.9ml, p=0.68), AUASS (-11 vs.-14, p=0.58), QOL scores (-2 vs.-2, p=0.81), and SHIM (0 vs.-2, p=0.40). Secondary outcomes for pre-treated vs. naïve patients are as follows: LOS (1.3 days vs. 1.4 days, p=0.52), catheter removal at POD 1 (57.1% vs. 42.6%, p=0.52), and patients sent home with foley (28.6% vs. 61.5%, p=0.14). Further subgroup analysis revealed that naïve patients that underwent Aquablation were statistically more likely to be sent home with catheter for a delayed TOV (29% vs. 93.8 %, p=0.012). There were no other statistically significant differences ($p < 0.05$) for any other outcomes of interest.

**Conclusions:** There was no significant difference in treatment efficacy or other primary outcomes between pre-treated and naïve patients. However, naïve patients were more likely to have a delayed TOV, though the benefit of delayed TOV in this population is not yet defined.

**Table 2. Perioperative metrics and outcomes of patients undergoing Aquablation, stratified by performance of concomitant procedure, and compared to the WATER I and II cohorts**

| | Total Cohort (n=77) | Aquablation Only (n=65) | Concomitant Procedure (n=12) | WATER | WATER II |
|---|---|---|---|---|---|
| **Operative Time (min)** (mean (SD)) N=77 | **80 (36.1)** | **77.1 (35.4)** | **95.8 (37.3)** | 39.7 (15.2)[a] | 54.5 (19.2)[a] |
| **Length of Stay (days)** (mean (SD)) N=77 | 1.1 (0.4) | 1.1 (0.4) | 1.1 (0.5) | 1.4 (0.7)[a] | 1.6 (1.0)[a] |
| **Duration of Catheterization (days)** (Mean (SD)) N=77 | 4.3 (4.5) | 4.4 (4.7) | 4 (3.4) | 2 (2.3)[a] | 3.9 (3.6)[a] |
| **Change in PVR (ml)** (Mean (SD)) N=60 | -178.1 (268.5) | -161.1 (180) | -263 (535.3) | -55 (93.5)[b] | -84[c] |
| **Change in IPSS Score** (Mean (SD)) N=52 | -12.5 (7.4) | -12.2 (7.5) | -11.4 (7.4) | -16.9 (7.8)[b] | -17.5 (8.3)[c] |
| **Change in IPSS QoL** (Mean (SD)) N=52 | -2.5 (2.3) | -2.6 (2.2) | -2.3 (2.8) | -3.3[b] | -3.2[c] |

[a]Nguyen et al. 2020. "Waterjet Ablation Therapy for Endoscopic Resection of Prostate Tissue Trial (WATER) vs. WATER II: Comparing Aquablation Therapy for Benign Prostatic Hyperplasia in 30-80 and 80-150 mL Prostates." *BJU International* 125 (1): 112–22.
[b]Gilling et al. 2018. "WATER: A Double-Blind, Randomized, Controlled Trial of Aquablation® vs Transurethral Resection of the Prostate in Benign Prostatic Hyperplasia." *The Journal of Urology* 199 (5): 1252–61.
[c]Desai et al. 2019. "Aquablation for Benign Prostatic Hyperplasia in Large Prostates (80-150 mL): 6-Month Results from the WATER II Trial." *BJU International* 124 (2): 321–28.

## THU-PS3-1544

**Real World Adoption of Aquablation**

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**Introduction and Objective:** The WATER and WATER II cohorts are industry-sponsored, international, multicenter clinical trials whose results define current understanding of the safety and efficacy of Aquablation. We aim to present a complementary perspective on Aquablation based on the early experience of implementation at a large, US academic center.

**Methods:** Retrospective chart review was conducted on all patients who underwent Aquablation by a single surgeon from February 2022 to February 2024. Baseline demographics, intraoperative details, and short-term safety and efficacy data were analyzed.

**Results:** A total of 77 patients underwent Aquablation. Postoperative data were collected at 2-3 months. Table 1 shows preoperative patient characteristics. Table 2 shows data shows perioperative metrics and outcomes compared with the WATER and WATER II cohorts, additionally highlighting outcomes among the 12 who underwent a concomitant procedure. Median hemoglobin decrease postoperatively was 1.6 g/dL, with no one requiring transfusion. One patient was readmitted within 30 days and another patient underwent re-treatment within a year. There were no additional Clavien grade II or higher complications.

**Conclusions:** Though limited by single surgeon and shorter-term follow-up, this data represents Aquablation "in vivo" at a large, US academic institution. This real world experience suggests safety outcomes from the WATER trials are reproducible, and that performing a concomitant procedure does not dramatically alter these metrics. However, operative time and length of catheterization were longer in our cohort, suggesting possible logistic challenges in this setting, and less improvement in IPSS was seen in this cohort, likely related to shorter term follow-up and increased population heterogeneity.

**Table 1. Preoperative characteristics of patients undergoing Aquablation**

| | |
|---|---|
| Age (median, (IQR)) | 67 years (61-72) |
| Race/Ethnicity (N (%)) | |
| White, Non-Hispanic | 62 (81%) |
| White, Hispanic | 1 (1%) |
| Black | 11 (14%) |
| Other | 3 (4%) |
| Insurance (N (%)) | |
| Private | 40 (52%) |
| Medicare | 37 (48%) |
| BMI (median (IQR)) | 30.0 (25.1-32.0) |
| Preoperative Prostate Size (median (IQR)) | 77.8 (58.3-95) |
| Preoperative PSA (median (IQR)) | 3.7 (2.4-6.2) |
| Preoperative IPSS[1] score (median (IQR)) | 22 (18-26) |
| Preoperative IPSS QOL[2] score (median (IQR)) | 5 (4-6) |
| Current BPH meds (N (%)) | |
| 5-ARI[3] | 13 (16.9%) |
| α -blockers | 65 (84%) |
| 5mg Cialis | 1 (1%) |
| None | 8 (10%) |
| Prior BPH meds (N (%)) | |
| 5-ARI | 4 (57%) |
| α-blockers | 26 (34%) |
| 5mg Cialis | 3 (3.9%) |
| Saw palmetto | 1 (1.3%) |
| None | 51 (66%) |
| Prior BPH procedures (N (%)) | |
| Urolift | 11 (14.3%) |
| Rezum | 4 (5.2%) |
| PVP[4]/KTP[5] | 2 (2.6%) |
| TUMT[6] | 1 (1%) |
| None | 60 (78%) |
| BPH complications preop (N (%)) | |
| Retention | 32 (42%) |
| Urinary tract infection | 15 (19%) |
| Bladder stones | 9 (12%) |
| Gross hematuria | 2 (3%) |
| None | 37 (48%) |

[1]International Prostate Symptom Score [2]International Prostate Symptom Score Quality of Life subscale [3]5α -reductase inhibitors [4]Photoselective vaporization of the prostate [5]Potassium-titanyl-phosphate laser resection of prostate [6]Transurethral microwave thermotherapy

## THU-PS3-1551

**Fellowship Trained vs. Self Taught: A Comparison of the First 100 Holmium Laser Enucleation of Prostate Cases**

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**Introduction and Objective:** To compared outcomes from the first 100 cases by a fellowship trained (FT) Holmium laser enucleation of the prostate (HoLEP) surgeon vs. a self taught (ST) surgeon to identify learning barriers.

**Methods:** We retrospectively reviewed the first 100 HoLEP cases from 2 surgeons from 2 institutions. One was FT and the other was ST in HoLEP. Outcomes examined were age, operative time, energy used, estimated blood loss (EBL), anticoagulation (AC) status, preoperative retention, post procedure catheterization time, conversion to transurethral resection of the prostate (TURP), morcellated tissue weight, return to operating room (OR) within and outside of 30 days, return to emergency room (ER), and readmission.

**Results:** We included all 200 patients for analysis. Operative time was higher for ST vs. FT, 137.8 minutes vs. 106.5 minutes (p <0.001) as was days without a catheter, 7.3 days vs. 1.7 days (p value < 0.001), respectively. EBL was higher for ST, 131.3 mL vs. 86.9 mL (p < 0.001). Conversion to TURP was 16% for ST vs. 0% (p < 0.001). Morcellated tissue weight was also higher for FT vs ST, 72.4 g vs. 27.8 g (p <0.001). There were no significant differences for age, AC status, energy used, patients in preoperative retention, post operative ER visits, return to OR within or outside of 30 days, or readmission.

**Conclusions:** Our data suggest that there are differences between ST and FT surgeons initially adopting HoLEP into practice including longer operative time, longer blood loss, and higher conversion to TURP. This data may help manage surgeon and patient expectations as these are likely surmountable barriers or both categories of surgeon in their first HoLEP cases in practice.

**Table 1. Preoperative and postoperative variables analyzed between self taught and fellowship trained patient cohorts.**

| | Self Taught (n=100) | Fellowship Trained (n=100) | p-value |
|---|---|---|---|
| Mean Operative Time in Minutes (SD) | 137.8 (40.8) | 106.5 (63.8) | <0.001 |
| Mean Catheter Time in Days (SD) | 7.3 (3.6) | 1.7 (2.5) | <0.001 |
| Mean Total Laser Energy in Kilojoules (SD) | 170.3 (91.5) | 150.1 (72.6) | 0.054 |
| Mean Estimated Blood Loss in milliliters (SD) | 131.3 (49.8) | 86.9 (178.5) | <0.001 |
| Mean Age in Years (SD) | 69.5 (8.8) | 72.0 (9.2) | 0.052 |
| Mean Enucleated Prostate Weight in Grams (SD) | 27.8 (20.3) | 72.4 (76.0) | <0.001 |
| Preoperative Urinary Retention, n (%) | 67 (67.0%) | 56 (56.0%) | 0.130 |
| Any Return to OR, n (%) | 16 (16.0%) | 12 (12.0%) | 0.415 |
| Return to OR within 30 Days, n (%) | 3 (3.0%) | 5 (5.0%) | 0.721 |
| Return to OR not within 30 Days, n (%) | 14 (14.0%) | 7 (7.0%) | 0.165 |
| Postoperative Emergency Room Visit, n (%) | 4 (4.0%) | 0 (0.0%) | 0.251 |
| Hospital Readmission, n (%) | 3 (3.0%) | 10 (10.0%) | 0.082 |
| Intraoperative TURP Conversion, n (%) | 16 (16.0%) | 0 (0.0%) | <0.001 |
| Anticoagulation, n (%) | 10 (10.0%) | 17 (17.0%) | 0.155 |

Abbreviations: OR = operating room, SD = standard deviation, TURP = transurethral resection of the prostate

## THU-PS3-1605

**Role of Minimally Invasive Surgical Therapies in the Development of Persistent Postoperative Opioid Use Following Benign Prostatic Hyperplasia Surgery: A Retrospective Cohort Study**

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**Introduction and Objective:** The opioid epidemic has prompted reevaluation of postoperative pain management, particularly with respect to benign prostatic hyperplasia (BPH) surgeries. Persistent postoperative opioid use (PPOU) is an established surrogate for risk of long-term opioid use. Enhanced recovery after surgery (ERAS) protocols and minimally invasive surgical therapies (MIST) offer potential solutions to mitigate PPOU, however, their impact remains unclear.

**Methods:** Using a retrospective cohort study design, we analyzed data from the TriNetX Research Network to assess PPOU rates following various BPH procedures. Propensity score matching (PSM) was utilized to control for potential confounders and compare MIST and non-MIST procedure cohorts. We also examined the influence of ERAS implementation on PPOU rates, and opioid prescription patterns stratified by procedure type.

**Results:** A total of 89,894 male patients were included in this analysis. MIST procedures (11.00%, [10.36%, 11.65%]) demonstrated a lower risk of PPOU compared to non-MIST procedures (13.38% absolute risk, [12.68%, 14.08%]) in the general population (RR: 1.22 [1.12, 1.32], p<0.0001). However, this protective effect was attenuated in opioid-naïve patients (RR 1.12 [0.97, 1.28], p=0.1265). Opioid prescribing patterns varied significantly by procedure type, with higher early postoperative exposure correlating with increased PPOU rates. Transient influence of ERAS implementation did not significantly affect PPOU rates for BPH surgeries (TURP RR: 0.93 [0.78, 1.11], LVP RR: 1.07 [0.88, 1.30]).

**Conclusions:** MIST procedures offer relative protection against PPOU, particularly in opioid-exposed patients. Opioid prescribing practices significantly impact PPOU rates, highlighting the need for judicious use of opioids in postoperative pain management, and thus, risk of long-term opioid use. Further research is warranted to optimize opioid-sparing strategies in BPH surgeries and to evaluate the efficacy of ERAS protocols in this context.

## THU-PS3-1558

**1470nm Diode Laser Enucleation of the Prostate in Glands Greater than 150 gm**

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**Introduction and Objective:** Laser enucleation of the prostate is an effective and durable BPH procedure. While Holmium and Thulium are considered standards of care, this study investigated the 1470nm Diode laser with adenomas >150 gm.

**Methods:** A retrospective review of one surgeon's experience with DiLEP was conducted in men from Oct 2016 to Apr 2022. Pre-op variables included prostate size and prior procedures. Peri-op variables included operative time, enucleation weight, length of stay, and transfusion rate. We assessed post-op complications and needing further procedures. We compared pre to post-op PVR, retention, IPSS and QOL scores at pre-op, 1, 3, and 12 months post-op.

**Results:** 71 men were included. Mean follow-up was 17.7 (SD 13.5) months. Mean operative time was 143.2 (SD 48.2) minutes. Average enucleation weight was 93.6 (SD 45.0) grams, with mean prostate size of 216.0 (SD 52.1) grams. Mean hospital stay was 1.28 (SD 2.0) days. 2 patients (2.8%) required transfusion. 6 patients (8.5%) had undergone a prior BPH procedure, while 3 (4.2%) required subsequent surgery. 8 patients experienced a significant post-op complication: 3 clot evacuations, 1 urosepsis, 2 DVTs, and 1 CVA. Mean IPSS score at the pre-op, 1, 3, and 12 month post-op mark were 15.5 (SD 8.64), 8.2 (SD 5.8), 5.7 (SD 4.7), and 3.9 (SD 3.4). Similarly, QOL scores were 3.9 (SD 1.4), 2.6 (SD 1.5), 2.0 (SD 1.7), and 1.9 (SD 1.4). The mean pre-op PVR was 396 cc (SD 369) compared to post-op of 64 cc (SD 66). While 65% of patients experienced retention pre-op, only 3% experienced it post-op.

**Conclusions:** To our knowledge this is the largest 1470nm DiLEP series with the large glands. With favorable hemostasis and depth of penetration, this laser appears safe and effective for enucleation. Randomized trials are needed to assess if DiLEP should be considered a standard of care for large glands.

## THU-PS3-1612

**Ambulatory Percutaneous Nephrolithotomy is a New Standard of Care: An Analysis of Over 2000 Cases**

N. Arias Villela[1], L. Xu[1], M. Drescher[1], S. Waghmarae[1], D. Rosen[2], M. Dunne[1], J. Abbott[1], J. Davalos[1]
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**Introduction and Objective:** Percutaneous nephrolithotomy (PCNL) has traditionally been considered an inpatient surgery. The application of endoscopic combined intrarenal surgery (ECIRS) and mini-PCNL (mPCNL) have facilitated the adaptation of PCNL to the ambulatory setting. Here we show that ambulatory PCNL (aPCNL) may be efficaciously and safely performed in most patients.

**Methods:** We analyzed patients who underwent aPCNL, including standard PCNL (24-30Fr) or mPCNL (14-23Fr), at two free-standing ambulatory surgery centers (ASCs) between 2015-2023. Patient exclusion criteria for the ASC included BMI > 50, severe cardiopulmonary conditions, and prior anesthetic complication. Standard practices included ECIRS technique for renal access, ureteral stent for drainage, and rib block for pain control. Patients were observed in the post-anesthesia care unit (PACU) until discharge. Patient demographic, pre-operative, and post-operative data were prospectively collected. Descriptive statistics were used for data analysis.

**Results:** 2106 cases were analyzed (Table 1). The mean age of patients was 57, mean BMI was 30, and mean ASA score was 2. 27% of patients had diabetes and 59% had hypertension. 18% of patients had a treated positive urine culture. The mean stone burden was 31mm. Standard PCNL was used in 60% of cases. Average blood loss was 35mL. The mean treatment time was 18 minutes and mean PACU time was 82 minutes. No planned second look in 91% of cases. 1.9% of patients had a Clavien-Dindo complication > grade 2, but none were grade 5. 1.7% of patients required hospital transfer.

**Conclusions:** aPCNL is efficacious and safe in appropriately selected patients. In our high-volume series, we found a low morbidity rate and low risk for hospital transfer. Unless there are medical or social factors precluding same day discharge, aPCNL should be routinely performed.

**Table 1. Demographics and Operative Characteristics of Ambulatory Surgery Center PCNL Patients**

| | | |
|---|---|---|
| n | | 2106 |
| Age | | 57.8 |
| Gender (F) | | 52.4 (1104) |
| Laterality (L) | | 54.3 (1091) |
| BMI | | 30.4 (12-50) |
| ASA | | 2.3 (1-4) |
| | 1 | 4.2% (85) |
| | 2 | 59.6% (1206) |
| | 3 | 35.9% (724) |
| | 4 | 0.4% (7) |
| Diabetes Mellitus | | 26.9% (546) |
| Hypertension | | 59.5% (1200) |
| Positive Urine Culture | | 18.4% (363) |
| Stone Burden (1Dmm) | | 31.36 (5-170) |
| Staghorn Stone | | 6.2% (130) |
| Complications (Clavien-Dindo Grade 2-5) | | 1.9% (42) |
| Clavien-Dindo Grade | | |
| | 2 | 30.9% (13) |
| | 3 | 33.3% (14) |
| | 4 | 7.12% (3) |
| | 5 | 0 |
| Double J Stent Only | | 98.70% |
| Hounsfield Units | | 875.1 (100-2000) |
| EBL (mL) | | 34.5 (1-500) |
| Fluoroscopy Time (sec) | | 55 (3-332) |
| Treatment Time (min) | | 18.27 (1-200) |
| Operating Room Time (min) | | 89 (25-305) |
| 30F Sheath | | 20.2% (20.2) |
| 24F Sheath | | 39.7% (770) |
| Mini-PCNL | | 40.1% (778) |
| Multiple Accesses | | 8.6% (175) |
| No Planned Second Look | | 90.8% (1739) |
| PACU Time (min) | | 81.8 (15-247) |
| Hospital Transfer | | 1.7% (32) |

## THU-PS3-1619

**An Analysis of Percutaneous Nephrolithotomy in Ambulatory Versus Hospital Setting**

N. Arias Villela[1], L. Xu[1], M. Drescher[1], S. Waghmarae[1], D. Rosen[2], M. Dunne[1], J. Abbott[1], J. Davalos[1]
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**Introduction and Objective:** Percutaneous nephrolithotomy (PCNL) has traditionally been considered an inpatient surgery. Advances in surgical equipment, technique, and careful patient selection have made ambulatory PCNL (aPCNL) possible. Here we compare case characteristics in patients undergoing hospital PCNL versus aPCNL.

**Methods:** Patients underwent aPCNL at a free-standing ambulatory surgical center (ASC) or tertiary hospital between May 2015-August 2023. ASC patient exclusion criteria included BMI > 50, severe cardiopulmonary conditions, and history of prior anesthetic complication. Patients who underwent PCNL at the hospital and did not discharge typically stayed for 23-hour observation. ASC patients were observed in the post-anesthesia care unit for 90 minutes. Patient demographic, pre-operative, and post-operative data were prospectively collected. Descriptive statistics were used for data analysis with statistical significance at $p<0.05$.

**Results:** 2107 ASC and 360 hospital PCNL were analyzed (Table 1). Patients who underwent PCNL in the hospital were on average older (63 vs. 57, $p<0.01$), with higher ASA scores (3 vs. 2, $p<0.01$) and BMI (32 vs. 30, $p<0.01$). The hospital series also demonstrated a significantly higher number of patients with pre-operative positive urine cultures (37% vs. 18%, $p<0.01$), larger stone burden (38mm vs. 31mm, $p<0.01$), and greater Clavien-Dindo grades 2-5 complications (4.7% vs. 1.4%, $p<0.01$). PCNLs performed at the ASC had shorter operative times (89min vs. 106min, $p<0.01$) and lower blood loss (34mL vs. 45mL, $p<0.01$). 56% of hospital based PCNLs were discharged the same day.

**Conclusions:** Patients selected for hospital PCNL have more co-morbidities and are at higher risk for serious complications compared to patients selected for aPCNL. Patient factors, and not case complexity, principally drive the decision for PCNL setting. Appropriate patient selection is paramount in the success and safety of aPCNL.

**Table 1. Demographics and Operative Characteristics: Hospital PCNL versus aPCNL**

| | | ASC (n=2107) | Hospital (n=360) | *p* - value |
|---|---|---|---|---|
| Age | | 57.8 | 63.7 | **<0.01** |
| Gender (F) | | % | 53.60% | 0.1 |
| Laterality (L) | | 54.20% | 48.58% | **<0.01** |
| BMI | | 30.4 | 32.2 | **<0.01** |
| ASA | | 2.3 | 2.9 | **<0.01** |
| | 1 | 4.20% | 1.15% | |
| | 2 | 59.65% | 11.21% | |
| | 3 | 35.80% | 79.02% | |
| | 4 | 0.35% | 8.62% | |
| Diabetes Mellitus | | 26.97% | 29.45% | 0.34 |
| Hypertension | | 59.52% | 59.36% | 0.95 |
| Positive Urine Culture | | 18.41% | 37.61% | **<0.01** |
| Stone Burden (1Dmm) | | 31.29 | 38.07 | **<0.01** |
| Complications (Clavien-Dindo Grade 2-5) | | 1.42% (30) | 4.72% (17) | **<0.01** |
| Clavien-Dindo Grade | 2 | 13 (0.6%) | 7 (1.94%) | |
| | 3 | 14 (0.7%) | 2 (0.5%) | |
| | 4 | 3 (0.1%) | 5 (1.39% | |
| | 5 | 0 | 3 (0.8%) | |
| Double J Stent Only | | 99.23% | 92.31% | **<0.01** |
| Hounsefield Units | | 875.13 | 776.25 | **<0.01** |
| EBL | | 34.49 | 45.78 | **<0.01** |
| Fluoroscopy Time (sec) | | 55.91 | 76.82 | **<0.01** |
| Treatement Time (min) | | 18.27 (1-200) | 18.86 (1-130) | 0.78 |
| Operating Room Time (min) | | 89.03 | 106.4 | **<0.01** |
| 30F Sheath | | 20.21% | 12.03% | |
| 24F Sheath | | 39.69% | 63.49% | |
| Mini-PCNL | | 40.10% | 19.09% | |
| Multiple Accesses | | 8.61% | 7.92% | 0.7 |
| PACU Time (min) | | 81.82 | . | |
| Hospital Transfer | | 1.70% | . | |
| Same Day Discharge (Hospital) | | | 55.90% | |

## THU-PS3-1626

**Acute Management of Obstructive Uropathy: Ureteral Stenting or Percutaneous Nephrostomy?**

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**Introduction and Objective:** Few standardized pathways exist for acute decompression of obstructive uropathy. The purpose of this study was to compare ureteral stenting and percutaneous nephrostomy tube (PCN) placement at a single institution with the goal of identifying factors that can be used to optimize patient selection for each treatment modality.

**Methods:** A retrospective review of all patients who underwent ureteral stenting or PCN placement for urgent upper tract decompression from December 2021 to February 2023 was performed. Ureteral stent placement was performed by urology and PCN placement was performed by interventional radiology. Clinical data were extracted from the electronic medical record and statistical analyses were performed using Fisher's exact tests.

**Results:** A total of 194 patients were identified, with 92 (47.4%) undergoing ureteral stent placement and 102 (52.6%) undergoing PCN placement. Patient age, sex, and race did not differ between groups ($p>0.05$). When comparing emergent status and time of day, ureteral stenting was more likely to be performed emergently (45.7% vs. 22.3%, $p=0.02$) and outside of regular business hours (6 AM-7 PM: 29.3% vs. 3.9%, $p<0.001$). Indications for ureteral stent vs. PCN included stone management (79% vs. 34%, $p<0.001$), SIRS/sepsis (37% vs. 13%, $p<0.001$), and palliation (4% vs. 13%, $p=0.04$). A total of 11 of 102 (10.8%) PCNs were performed due to stent placement failure, which was most commonly associated with anatomic issues such as stricture, tortuous ureters, or extrinsic ureteral compression.

**Conclusions:** At a single tertiary care center, obstructive uropathy is managed more frequently by ureteral stenting in the emergent setting and outside of business hours. In addition, ureteral stenting was used more frequently for stone management and for patients meeting SIRS/sepsis criteria. Palliative decompression was more frequently performed with PCN placement, and a proportion of PCN placements were for stent failure. These findings may help optimize patient selection for stenting versus PCN placement.

## THU-PS3-1640

**A Rocky Road: Bladder Stones in the Augmented Exstrophy-Epispadias Complex Patient**

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**Introduction and Objective:** Many patients of the exstrophy-epispadias complex require augmentation cystoplasty. We hypothesize that bowel segment choice influences the rate of stone formation after bladder augmentation and the rate of complications from bladder stone surgery.

**Methods:** An IRB approved institutional database of 1512 exstrophy-epispadias patients was reviewed retrospectively. Patients that had a history of bladder augmentation and were seen at our institution between 2003 and 2023 were included.

**Results:** Out of 259 patients, bladder stones developed in 21.6% (56), of which the bowel segment used was colon in 147 patients and ileum in 100. Stones formed in 19% of colon augments compared to 29% ileal augments, however this was not statistically significant ($p=0.07$). The most common primary stone component was dahllite, followed by struvite for all augments. The median time to stone treatment after augmentation was 4.14 years (0.75-31). 74% of patients had a recurrence that required a second surgery. The median time from first to second surgery and second to third surgery was 1.4 years and 2.22 years, respectively. Bladder stone surgery complications occurred in 14% of patients, vesicocutaneous fistula being the most common, and complications did not differ by augment type. Median follow up after first stone intervention was 6.07 years (0-19.5).

**Conclusions:** The treatment of bladder stones in the exstrophy-epispadias complex remains challenging. Interventions to prevent recurrence are crucial as the majority of patients will require two or more stone surgeries in their lifetime.

## THU-PS3-1633

**Use of the Trilogy Ultrasonic Lithotripter Leads to Reduced Rates of Sepsis Following Percutaneous Nephrolithotripsy.**

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**Introduction and Objective:** Sepsis is a serious known complication associated with percutaneous nephrolithotripsy (PCNL) that often requires hospitalization and significant expenses to the patient and the healthcare system. We sought to evaluate whether or not rates of sepsis following PCNL were decreased with the introduction of the Trilogy Ultrasonic Lithotripter (TUL).

**Methods:** We compiled all instances of PCNL performed at our institution for the two-year period following introduction of the TUL as well as for the two-year period preceding introduction. We compared these subsets of patients based on age, sex, length of hospital stay, stone burden, and sepsis rates following PCNL. Postoperative sepsis was defined as infection from a urinary source requiring either extended hospitalization during initial surgical admission or readmission within one week of surgery.

**Results:** 230 patients were included. 131 patients underwent PCNL with TUL, and 99 underwent PCNL without TUL. There was no significant difference between the two groups in regards to sex, average stone burden, and length of stay. Patients in the TUL group were statistically significantly older than patients in the non-TUL group (60.76 years versus 56.22 years, $p=0.005$). Patients in the TUL group were statistically significantly less likely to become septic following PCNL when compared to patients in the non-TUL group ($n=2$ in the TUL group versus $n=18$ in the non-TUL group, $p<0.001$).

**Conclusions:** Our results indicate that the use of the TUL is associated with a significantly decreased risk of postoperative sepsis in patients who underwent PCNL. This was true despite the TUL group being statistically significantly older than the non-TUL group. We postulate that this was due to the ability of the TUL to efficiently aspirate during stone treatment resulting in lower intra-renal pressures. Further studies are required to corroborate our results and to confirm that the use of the TUL can reduce postoperative infectious complication following PCNL.

## THU-PS3-1647

**A Comparison of Live-Image Digital Zoom and Conventional Magnification in Endourologic Procedures**

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**Introduction and Objective:** Advancements in endourology has resulted in an increasing use of fluoroscopy, prompting improvement in radiation safety strategies. The aim of the study was to compare image quality and radiation doses to patients from standard fluoroscopic magnification versus live-image digital zoom during endourologic procedures.

**Methods:** A retrospective, single-center study of endourological procedures using GE OEC Elite C-arm (General Electric Healthcare, Boston, MA) was performed. Imaging was performed using conventional magnification in 11 patients (61%) and digital zoom in 5 patients (28%). In two patients (11%), both features were utilized for image comparison. A board-certified urologist and diagnostic radiologist compared the quality of images. Cumulative air kerma and total exposure time were compared between the two groups. Statistical analysis was performed using IBM SPSS Statistics 28 (IBM, Armonk, NY).

**Results:** Substantial difference in the distribution of data was observed for radiation dose, and the calculated mean dose was 43.43 and 84.17 mGy for the zoom and magnification groups, respectively. Magnification resulted in 10% increase in dose in one patient where both functions were utilized. However, the difference did not achieve statistical significance in this small pilot study ($p = 0.8$). Notably, image quality was deemed equivalent between the two groups.

**Conclusions:** Live-image digital zoom offers an alternative to standard magnification. The quality of images was comparable between the two groups. While no statistically significant difference was observed when comparing radiation dose and total exposure time, statistical analysis of this pilot data was carried out for exploratory purposes and results may change with increasing sample size.

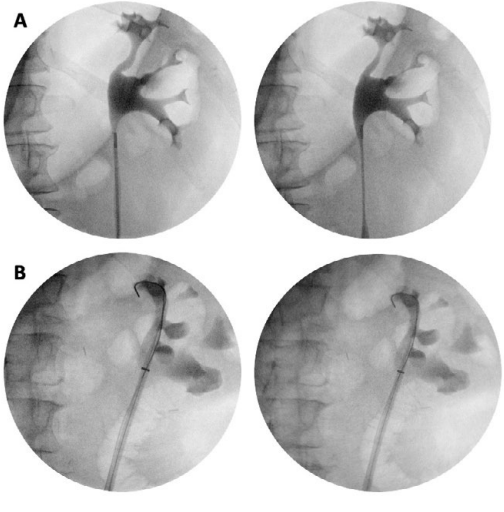


**Figure 1.** Comparison of image quality between magnification and zoom. (A) Retrograde pyelography demonstrates normal filling of contrast within the renal collecting system in the magnified image (left) and zoomed image (right). (B) Fluoroscopy-guided Sensor wire placement in the upper calyx visualized using magnification function (left) and live-image digital zoom function (right).

**Table 1. Statistical analysis between conventional magnification and live-image digital zoom groups**

| | Conventional magnification | Live-image digital zoom | *p*-value |
|---|---|---|---|
| Radiation dose (mGy) | 48.5 (9.3 – 250.4) | 34.7 (14.4– 80.8) | 0.86 |
| Time per procedure (s) | 130 (50 – 527) | 138 (68 – 273) | 0.69 |
| BMI | 30.7 (23.2 – 52.9) | 30.3 (27.3 – 33.9) | 0.69 |
| Age | 57 (22 – 89) | 82 (34 – 96) | 0.14 |

## THU-PS3-1654

**The Utility of Complete Gross Hematuria Workup Following Traumatic Foley Catheterization**

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**Introduction and Objective:** Gross hematuria is a common reason for urologic evaluation. Per American Urologic Association guideline statement in 2020: "If patients have a history of gross hematuria, they require comprehensive evaluation with cystoscopy, upper tract imaging (CT IVP or MR Urogram), and urine cytology." Our group sought to determine if extensive workup is necessary for patients who experience gross hematuria only after foley catheterization.

**Methods:** We collected all instances of cystoscopy performed on new patients at our institution from 2018 through 2022. We evaluated these encounters to determine which were initiated due to gross hematuria solely experienced after foley catheterization, and we examined what pathology was identified. We also reviewed patients' charts to characterize their smoking status and family history of urologic malignancy.

**Results:** We identified 1,298 new patients who underwent cystoscopy. 64 (4.93%) were referred for workup after experiencing gross hematuria only after foley catheterization. Of these patients, only 1 (1.56%) was found to have a bladder mass which was pathology-proven to represent malignancy. 31 of these patients (48.4%) had CT IVP/MR Urogram prior to cystoscopy, and none of the imaging showed concern for malignancy. 18 of the 64 patients (28.12%) had a history of smoking, including the patient who was found to have a bladder malignancy. None of these patients had a documented family history of urologic malignancy. Average follow up for patients that met criteria, determined from time of cystoscopy to last urologic evaluation, was 18 months.

**Conclusions:** Our results suggest that gross hematuria resulting from foley catheterization is extremely unlikely to represent underlying malignancy. This work challenges the utility of the current practice of routine imaging and cystoscopic evaluation for this group of patients. Further studies are required to solidify our results and to better identify which patients in this group, if any, would benefit from such extensive workup.

## FRI-PS4-1115

**5 Years of the Optilume® Drug Coated Balloon For Recurrent Anterior Urethral Strictures: a Summary of ROBUST I, II and III**

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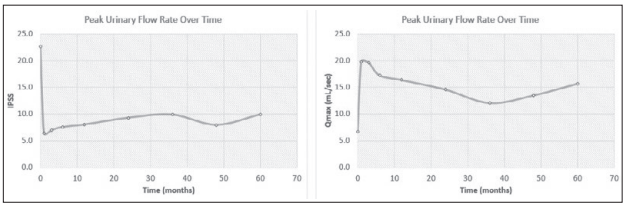
**Introduction and Objective:** The Optilume Drug Coated Balloon (DCB) has been studied in three clinical investigations. ROBUST I, the first in-man trial conducted as a single arm, prospective multicenter study (4 sites, 53 subjects) followed by ROBUST II, early feasibility (5 sites, 16 subjects), and ROBUST III, the randomized pivotal trial (79 Optilume subjects). Data combined from all three studies is presented here.

**Methods:** A total of 148 subjects were treated with Optilume DCB. Men with anterior urethral strictures ≤ 3cm and 1-4 prior endoscopic interventions were included. Patients were excluded who had prior urethroplasty, hypospadias, lichen sclerosus or other confounding pathology. Follow-up was completed at regular intervals. All studies were designed to follow subjects through 5 years with ROBUST I at 5-year follow-up, ROBUST II at 4-year follow-up and ROBUST III at 3-year follow-up. Outcomes included anatomic success at 6 months, International Prostate Symptom Score (IPSS), quality of life, freedom from repeat intervention, erectile function, flow rate (Qmax), post-void residual volume, and adverse events.

**Results:** Patient demographics and stricture characteristics were similar across the studies, with ROBUST III including some patients with penile strictures and prior pelvic radiation. IPSS improved in all patients treated with Optilume from 22.7 at baseline to 9.9 through follow-up. Peak urinary flow rate had a sustained improvement for patients treated with Optilume through follow-up (6.7 to 15.7). Freedom from repeat intervention is approximately 73.1% at 5-years.

**Conclusions:** Subjects with recurrent bulbar strictures treated with Optilume® paclitaxel-coated balloon exhibited significant improvement in symptomatic and functional outcomes through 5 years post treatment with improved recurrence rates. There was no impact on erectile function and there were no serious adverse events across all studies.




## FRI-PS4-1122

**Inflatable Penile Prosthesis Hydrophilic Surface Coatings Rebind Antiseptic Solutions Ex Vivo**

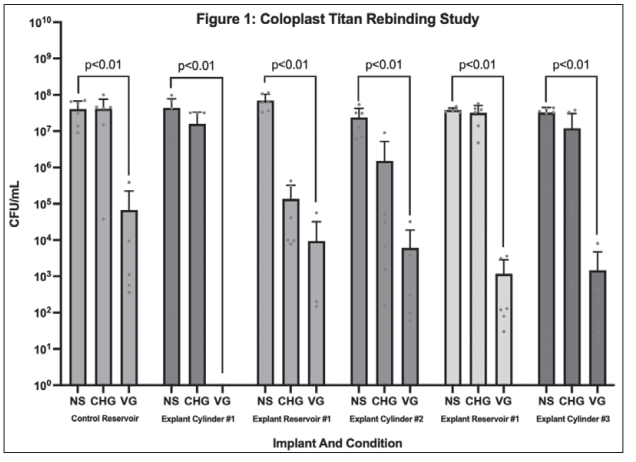
B. Im, A. Giordano, S. Shah, S. Guillaume, R. Evans, N. Hickock, P. Chung
*Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA, USA*

**Introduction and Objective:** To date, no studies exist which evaluate the ability of the IPP hydrophilic surface to rebind antibiotic during revision surgery and confer additional protection against infection. We hypothesize that the IPP hydrophilic surface coating, following device removal, retains its binding properties, thereby conferring antimicrobial efficacy comparable to that of a native implant.

**Methods:** IRB approval was not required. Coloplast implants (3 reservoirs and 2 cylinders) removed from patients due to malfunction were sterilized via sonication, submersed in 70% EtOH, then dried in a laminar flow hood. A sterile reservoir with hydrophilic coating was used as control. Implants were stained with Congo-Red (25g/L in sterile water) at 20C for 10 minutes to assess the hydrophilic surface before and after sterilization. 8mm diameter IPP pieces were submerged for 3 minutes in 3mL of normal saline (NS), 0.05% chlorhexidine (CHG), or a solution of 2mg/mL vancomycin and 160µg/mL gentamicin (VG), rinsed in NS for five seconds, incubated with 10^5 colony forming units per milliliter (CFU)/mL of methicillin-sensitive Staphylococcus aureus ATCC25923 for 48 hours, plated, and counted. Mann-Whitney U tests were performed to compare outcomes, $p<0.05$ considered significant.

**Results:** The hydrophilic surface was not altered by the sterilization process as demonstrated by grossly equivalent Congo-Red staining before and after sterilization. Average bacterial counts with 95% CI are plotted in Figure 1. Both control and ex vivo samples demonstrated significant decreases in bacterial counts in the VG groups relative to both NS controls ($p<0.01$), ranging from ~2.5 to ~7 log reductions in bacterial counts, and 0.05% CHG ($p<0.01$), ranging from ~1 to ~4 log reductions in bacterial counts.

**Conclusions:** IPP hydrophilic surfaces can rebind antiseptic solutions in vitro following removal from patients.



## FRI-PS4-1129

**Antibiotic-Impregnated Penile Implant Surfaces Are Unaffected by Irrigation with 0.05% CHG and Antibiotic Solutions**

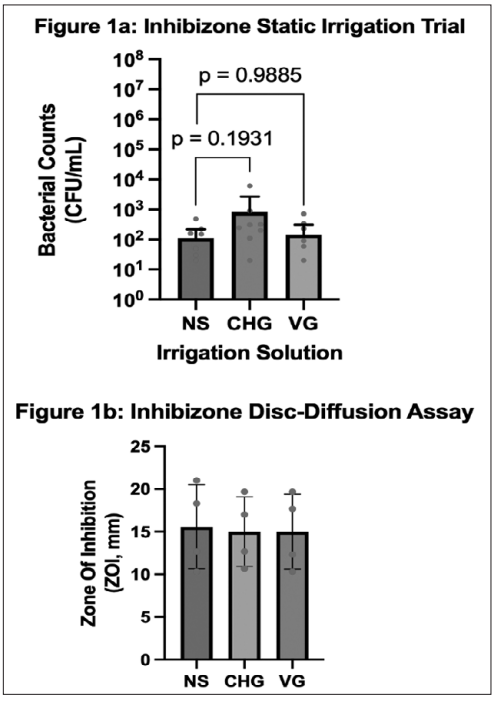
B. Im, A. Giordano, S. Shah, S. Guillaume, R. Evans, N. Hickock, P. Chung
*Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA, USA*

**Introduction and Objective:** It is unknown if 0.05% chlorohexidine gluconate (CHG, Irrisept, Irrimax, Laurenceville, Georgia) irrigation alters the antibacterial efficacy of the minocycline- and rifampin-impregnated surfaces of the Boston Scientific AMS 700 inflatable penile prosthesis (Marlborough, MA). We hypothesize that irrigation with 0.05% CHG or vancomycin/gentamicin (VG) antibiotic solutions do not alter the efficacy of the antibiotic-impregnated implant surface.

**Methods:** Sterile 8mm discs were suspended for 2 minutes in normal saline (NS), 0.05% CHG, or a solution of 2mg/mL vancomycin and 160µg/mL gentamicin (VG). Discs were then rinsed in NS and incubated with 10^5 CFU/mL of methicillin-sensitive Staphylococcus aureus (MSSA) ATCC25923 for 48 hours. Adherent surface bacteria were suspended by shaking in a 0.3% Tween-20 solution, plated, and counted. Disc-diffusion assay: 6mm implant discs were suspended for 2 minutes in NS, 0.05% CHG, or VG, dried for 2 hours in a laminar flow hood, and placed coated-side down onto TSB plates streaked with MSSA, Staphylococcus epidermidis, Enterococcus, and a clinical isolate of Escherichia coli from a penile implant infection. Zones of Inhibition (ZOI) were measured after 24 hours. Mann-Whitney U tests were performed to compare outcomes, $p<0.05$ considered significant.

**Results:** Average bacterial counts and ZOI are plotted in Figure 1. Suspension of implant discs in NS, 0.05% CHG, or VG did not result in statistically significant changes in bacterial counts. Similarly, within a single species, incubation of the implant in 0.05% CHG or VG did not meaningfully alter the ZOI produced using disc-diffusion tests.

**Conclusions:** 0.05% CHG and VG irrigation solutions do not alter antibacterial efficacy of the AMS 700 minocycline- and rifampin-impregnated implant surfaces in vitro. Continued studies are indicated to further characterize the clinical utility of 0.05% CHG.




## FRI-PS4-1136 – video

**Illuminating Robotic Ureteral Reconstruction with Indocyanine Green: A Multi-Institutional Collaborative**

M. Lee[1], K. Zhao[1], L. Ward[1], B. Chao[1], M. Stifelman[2], L. Zhao[3], D. Eun[1]
*[1]Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA; [2]Hackensack Meridian Health, Hackensack, NJ, USA; [3]New York University Langone Health, New York, NY, USA*

## FRI-PS4-1143 – video

**Robotic Assisted Bilateral Ureteral Reimplanation into a Neobladder**

C. McPartland, M. Lesgart, M. Lee, B. Chao, D. Eun
*Lewis Katz School of Medicine, Philadelphia, PA, USA*

## FRI-PS4-1150 – video

**Transurethral Unroofing of a Cowper's Syringocele**

F. Maffucci, J. Clark, A. Rastogi, J. Friedlander, J. Simhan
*Fox Chase Cancer Center, Philadelphia, PA, USA*

## SAT-PS5-1100

**Pelvic Floor Dysfunction and Dyspareunia in Elite Athletes**

K. Michel[1], M. Slinger[2], A. Rangnekar[3], Z. Gan[1], A. Smith[1,3]
*[1]Hospital of the University of Pennsylvania, Philadelphia, PA, USA; [2]Drexel University College of Medicine, Philadelphia, PA, USA; [3]Perelman School of Medicine, Philadelphia, PA, USA*

**Introduction and Objective:** Elite female athletes display increased rates of urinary and fecal incontinence thought to be in part due to pelvic floor hypertonicity and dysfunction (Louis-Charles 2019). We hypothesized that elite athletes may therefore also be at increased risk for other known, pelvic floor-related pathologies such as provoked vestibulodynia (PVD) and dyspareunia. We sought to describe and test for associations between urinary symptoms, PVD, and dyspareunia among a group of young, elite female athletes at our university.

**Methods:** Non-pregnant, female elite athletes (spending ≥10 hours/week on NCAA Division 1 running or jumping sports) were recruited from our undergraduate University. Athletes completed questionnaires on demographics, exercise, medical history, urinary symptoms (Lower Urinary Tract Dysfunction Network Symptom Index-29 (LURN-29)), and pelvic pain (Genitourinary Pain Index (GUPI)).
Scores on the LURN-29 and its sub-domains were compared between athletes with vs without PVD/dyspareunia using the Mann-Whitney test. Logistic regressions further assessed relationships between LURN-29 sub-domains and pain.

**Results:** Among 67 elite female athletes, 7.5% (5/67) had PVD and 16.4% (11/67) reported dyspareunia. Table 1 shows comparative LURN-29 scores between those with vs without pain. Logistic regressions revealed that higher scores on the voiding dysfunction (OR 1.46, p = 0.015) and pain (OR 1.64, p=0.038) sub-domains of the LURN-29 were associated with increasing odds of pain.

**Conclusions:** PVD prevalence of 7.5% in this population is higher than the 1-2% described in the literature (Harlow 2014), indicating elite athletes are potentially a high-risk group. PVD and dyspareunia also demonstrated association with urinary symptoms, supporting the theory that these pathologies share causal mechanisms. Further longitudinal work is needed to definitively understand the relationships between urinary symptoms, dyspareunia, and pelvic floor hypertonicity in elite athletes.

**Table 1. Comparison of median (IQR) scores on LURN-29 for elite athletes with vs without PVD or dyspareunia**

| | All elite athletes (n=67) | Athletes with PVD or dyspareunia (n=11) | Athletes without PVD or dyspareunia (n=56) | Mann-Whitney test[1] result |
|---|---|---|---|---|
| Total LURN-29 (max 100) | 14 (9-21) | 20 (11-27) | 13 (7-18) | **p = 0.033** |
| LURN-29 Incontinence (max 24) | 0 (0-1) | 1 (0-2) | 0 (0-1) | **p = 0.011** |
| LURN-29 Pain (max 16) | 1 (0-1) | 1 (0-3) | 0 (0-1) | **p = 0.046** |
| LURN-29 Voiding difficulty (max 20) | 3 (1-5) | 5 (4-6) | 3 (1-5) | **p = 0.010** |
| LURN-29 Nocturia (max 8) | 1 (0-3) | 3 (1-5) | 1 (0-2) | **p = 0.044** |
| LURN-29 Urgency (max 16) | 2 (0-4) | 2 (0-3) | 2 (0-4) | p = 0.610 |

[1]Two-sided, two-sample Wilcoxon rank-sum (Mann-Whitney) test to determine if the two samples (those with pain vs without) are likely to derive from the same population. Significance indicates they are more likely not the same population

## SAT-PS5-1107

**6-Month Interim Results of a Phase 4, Real-World Study (COMPOSUR) to Evaluate Vibegron in Patients With Overactive Bladder**

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**Introduction and Objective:** To assess vibegron for the treatment of overactive bladder (OAB) in a real-world setting, the COMPOSUR study is evaluating patient treatment satisfaction, tolerability, and safety. We report results of a protocol-defined interim analysis of selected endpoints conducted when most patients completed the 6-month questionnaire and >100 patients completed the study.

**Methods:** COMPOSUR (NCT05067478) is a 12-month, phase 4 study of vibegron that enrolled adult patients with OAB with/without urge urinary incontinence starting a new course of vibegron with previous exposure to anticholinergics (Cohort A) or mirabegron with/without anticholinergics (Cohort B). The primary endpoint is patient satisfaction assessed as a composite of the OAB Satisfaction with Treatment Questionnaire (OAB-SAT-q) questions 1–3, completed monthly. Safety is assessed by adverse events (AEs).

**Results:** As of the 6-month interim analysis, enrollment has completed (Cohort A, n=134; Cohort B, n=266); 124 patients (31%) have discontinued (n=40; n=84, respectively). Mean (SD) age was 56.0 (12.5) years; 71.0% were female. A total of 202 patients completed the 6-month OAB-SAT-q, and 96 completed the 12-month OAB-SAT-q. Mean (SD) OAB-SAT-q satisfaction scale score was 70.3 (21.9) at month 6 and 71.2 (22.8) at month 12; 80.2% and 78.1% of patients, respectively, were consistently satisfied with treatment. Of patients reporting a preference for an oral pharmacotherapy at month 6, 84.8% (151/178) preferred vibegron vs. the treatment received before entering the study; at month 12, 85.2% (75/88) preferred vibegron. Overall, 30.5% of patients experienced a treatment-emergent AE; 6 patients (1.5%) experienced a serious AE. The only AEs reported in ≥2% of patients overall were urinary tract infection (3.8%), headache (2.8%), and dizziness (2.3%).

**Conclusions:** As of the 6-month interim analysis of COMPOSUR, most patients receiving vibegron were satisfied with treatment. Vibegron was generally safe and well tolerated. Data are preliminary, and the study remains ongoing.

## SAT-PS5-1114

**Association Between Current and Pack-Year Smoking History and Urinary Urgency**

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**Introduction and Objective:** The pathogenesis of urgency and urgency incontinence (UI) is multifactorial; cigarette smoking has been implicated as a potential risk factor, though not definitively. In this analysis we aim to better determine how both temporality as well as cumulative exposure to smoking may impact urgency symptoms.

**Methods:** Participants completed a web-based survey via ResearchMatch which gathered demographic, medical, behavioral, and bladder symptom information, including urgency and UI. Smoking history was analyzed in three distinct ways. First, participants were categorized as never, former, or current smokers. Then, pack year history was used as a continuous variable. Finally, smoking was formatted as a categorical variable (0, <1, 1-4, 5-9, 10-19, 20+ pack-years).
Multivariate logistic regressions were performed using each of these three smoking exposure variables to evaluate for an association with urgency, moderate urgency (urgency at least half of the time), and UI while controlling for possible confounding factors: age, body mass index (BMI), menopausal status, parity, diabetes, hypertension, depression, anxiety, and diuretic use.

**Results:** The 1,720 women respondents, 30% reported having ever smoked: 23% former and 7% current. 71% (1,239/1,714) reported some degree of urgency, 22% reported "moderate" urgency (urgency at least half of the time), and 37% reported UI. Table 1 shows logistic regressions performed for each combination of smoking history variable and LUTS outcome.

**Conclusions:** Current smoking shows a consistently strong association with urgency-type LUTS, while former smoking is not significant. The data show a dose-response relationship wherein 20+ pack-years is significantly associated with urgency and UI. While longitudinal and interventional work is necessary to conclude this, these analyses indicate that smoking cessation may be a powerful way to reduce urgency in women.

**Table 1**. Logistic regression[1] using different formats of smoking history as independent variable to predict urgency, moderate urgency, and urgency incontinence.

| | Urgency | Moderate Urgency[2] | Urgency Incontinence |
|---|---|---|---|
| Never smoker | - | - | - |
| Former smoker | OR 1.04, p= 0.82 | OR 1.18, p= 0.29 | OR 1.18, p= 0.24 |
| Current smoker | **OR 2.81, p< 0.01** | **OR 2.26, p< 0.01** | **OR 1.82, p< 0.01** |
| Pack year history (continuous) | **OR 1.02, p= 0.028** | **OR 1.02, p<0.01** | **OR 1.01, p=0.049** |
| Pack year history (categorical): | | | |
| 0 | - | - | - |
| <1 | OR 1.05, p= 0.86 | OR 0.86, p= 0.65 | OR 1.21, p= 0.47 |
| 1-4 | OR 1.42, p= 0.15 | OR 0.93, p= 0.79 | OR 1.50, p= 0.98 |
| 5-9 | OR 0.91, p= 0.78 | **OR 2.10, p= 0.01** | OR 1.13, p= 0.69 |
| 10-19 | OR 1.07, p= 0.82 | **OR 1.89, p= 0.02** | OR 0.90, p= 0.69 |
| 20+ | **OR 2.22, p= 0.01** | **OR 2.01, p< 0.01** | **OR 1.78, p= 0.01** |

[1]Covariates included in every model: age, body mass index (BMI), menopausal status, parity, diabetes, hypertension, depression, anxiety, and diuretic use
[2]Moderate urgency is defined as experiencing urgency "About half the time" or more

## SAT-PS5-1121

**Pelvic Inflammatory Disease is a Risk Factor for Overactive Bladder**

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**Introduction and Objective:** Pelvic inflammatory disease (PID) is an infection-induced inflammatory condition wherein bacteria migrate from the vagina to colonize the uterus, fallopian tubes, and ovaries. PID has been shown to increase the risk of infertility, abscess formation, chronic pelvic pain, and ectopic pregnancies. This study aims to determine the association between PID and OAB.

**Methods:** A retrospective data review was performed using the 2017-2020 National Health and Nutrition Examination Survey (NHANES) database to include patients with history of PID. OAB conversion criteria was used with score system for urge incontinence, frequency, and nocturia. A score of 3 or greater was used as determination for OAB. Descriptive analysis and a multivariate logistic regression were performed to identify covariates.

**Results:** A total of 41,487,108 weighted samples were included in the analysis. Among the cohort, 2,038,703 reported a history of PID and 39,448,405 did not. There was no difference in ratio of family income to poverty or pregnancy status. OAB was seen in 29.3% of the PID group and 11.8% of the non-PID group. In adjusted analysis, older age (P=0.002), Hispanic race (P=0.03), and OAB (P=0.02) was associated with PID. There was no association with White Race, Black Race, or Asian Race.

**Conclusions:** Our analysis shows that there is a more than two-fold increase in OAB in those patients with history of PID. Future studies using urodynamic studies can be useful to determine the etiology of OAB, such as loss of compliance, detrusor instability, or stress urinary incontinence.

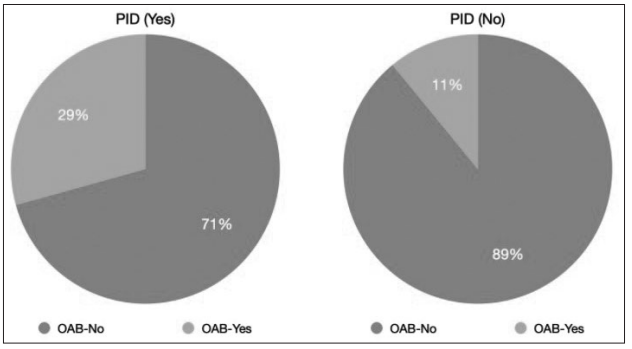


**Table.** PID and OAB Logistic Regression Analysis

| | Univariate | | Multivariate | |
|---|---|---|---|---|
| | Odds Ratio (95% CI) | p-value | Odds Ratio (95% CI) | p-value |
| Age | 1.003 (1.001 - 1.004) | **0.0043** | 1.003 (1.001 - 1.004) | **0.0021** |
| White Race | 0.993 (0.967 - 1.018) | 0.5661 | 1.002 (0.975 - 1.030) | 0.8616 |
| Hispanic Race | 0.982 (0.955 - 1.010) | 0.2043 | 0.968 (0.939 - 0.998) | **0.0343** |
| Black Race | 1.006 (0.978 - 1.034) | 0.6806 | 0.998 (0.970 - 1.028) | 0.9094 |
| Asian Race | 0.99 (0.958 - 1.023) | 0.5406 | 0.974 (0.891 - 1.066) | 0.5685 |
| Other Race | 1.112 (1.001 - 1.237) | **0.0482** | 1.102 (0.992 - 1.224) | 0.0702 |
| Overactive Bladder | 1.086 (1.028 - 1.146) | **0.0030** | 1.07 (1.012 - 1.132) | **0.0181** |

No PID is the reference, controlled for age, race, and education

## SAT-PS5-1128

**Potential Association Between Sodium-Glucose Cotransporter 2 Inhibitor Exposure and Development of Progressive Inflammatory Cystitis: A Case Series**

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*University of Virginia, Charlottesville, VA, USA*

**Introduction and Objective:** Progressive Inflammatory Cystitis (PIC) is defined as an idiopathic cause of end stage bladder (ESB) characterized by lower urinary tract symptoms, reduced capacity and compliance, upper tract abnormalities, and diffuse inflammatory changes on cystoscopy. This case series was conducted in response to two index cases of PIC diagnosed by the senior author. Based on their presentation, we hypothesized that sodium-glucose cotransporter 2 inhibitors (SGLT2i) are associated with PIC/ESB.

**Methods:** We performed a retrospective chart review of patients who met PIC criteria who used SGLT2i. Because PIC/ESB does not have an ICD code, we filtered by symptoms (e.g., urgency urinary incontinence, low bladder capacity) or procedures (e.g., urodynamics) related to PIC. Patients with confounders were excluded (e.g., pelvic radiation, spinal cord injury). Four patients met all criteria.

**Results:** All patients were white and non-Hispanic, half were female, and median age was 58.5 years. Patients presented with variable symptoms, including urinary urgency/frequency (n = 3), hydronephrosis (n = 3), incontinence (n = 2), retention (n = 2), and fungal UTIs (n = 1). Median duration of SGLT2i exposure of 21.5 months (range, 5-36 months). Half the cohort had pre-existing urinary symptoms exacerbated with SGTL2i, and the other half developed symptoms 5 – 26 months after initiating SGLT2i. Cystoscopy results were variable and two patients had no findings. Urodynamics findings included low compliance (median, 5 mL/cmH2O), low/borderline-low capacity (median, 154 mL), and vesicoureteral reflux. One patient progressed to suprapubic catheter and two are undergoing urinary diversion.

**Conclusions:** PIC/ESB is a poorly defined and heterogenous diagnosis with poor prognosis. This case series explores a potential relationship between SGLT2i exposure and PIC/ESB. We propose a potential underlying mechanism of infection, inflammation, and resultant structural bladder changes. Future large population-based case-cohort studies should be performed to compare risk of PIC/ESB in patients with and without SGLT2i exposure.

## SAT-PS5-1135

**Characterization and Treatment Rates of Patients with Urethral Diverticula**

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**Introduction and Objective:** The literature regarding the development, management, and outcomes of urethral diverticula (UD) is limited. Our objective was to characterize the incidence of UD, identify diagnoses predisposing to UD, and report on the development of urologic conditions following UD diagnosis.

**Methods:** Using the TrinetX Diamond database, a collaborative claims and electronic medical record research network of 92 healthcare organizations including more than 113 million individual patients, we conducted a propensity-matched (on age, hypertension, diabetes, and BMI) retrospective cohort study comparing all adult female patients included in the database from 2009-2017, aged 18-75 years old with a diagnosis of UD (ICD-10 N36.1) to a group of age-matched controls who did not have a diagnosis of UD.

**Results:** Prior to matching, data were available for 13,926 UD and 227,513 control patients. After matching we included 12,374 individuals in each cohort. Average age was: UD 43.0 years (standard deviation SD 13.7 years), control: 43.0 (13.9) years. Patients with a diagnosis of UD were more likely to have preexisting genitourinary conditions and to have undergone cystoscopy and urodynamic studies on the bladder. Five years after study inclusion, patients with a diagnosis of UD were more likely to receive a new diagnosis of anterior and/or vaginal vault prolapse, and undergo sling operation for stress incontinence, transurethral instrumentation, or urodynamic procedures; 40 (0.4%) patients with a preexisting diagnosis of UD were diagnosed with urethral cancer 2,071 (16.8%) underwent urethral diverticulectomy.

**Conclusions:** A relatively small proportion of patients diagnosed with UD receive operative care for their condition. Moreover, the incidence of urethral cancer in patients with UD may be smaller than initially hypothesized, supporting more conservative management of UD in patients that are minimally symptomatic.

Table 1. Characterization of Patients with Urethral Diverticula and Outcomes at Five Years After Study Inclusion*
*Controlling for Age at Index, BMI, Diabetes, Hypertension

| **Baseline Characteristics at time of Study Inclusion** | **Urethral Diverticula vs. Control** | |
|---|---|---|
| | Urethral Diverticula (n = 12,374) | Matched Control (n = 12,374) |
| Urinary Tract Infection | **3,436 (27.8%)** | **2,021 (16.3%)** |
| | **p < 0.0001*** | |
| Dyspareunia | **366 (3.0%)** | **131 (1.1%)** |
| | **p < 0.0001*** | |
| Stress Incontinence | **618 (5.0%)** | **150 (1.2%)** |
| | **p < 0.0001*** | |
| Female Genital Prolapse | **750 (6.0%)** | **115 (0.9%)** |
| | **p < 0.0001*** | |
| Cystitis | **968 (7.8%)** | **385 (3.1%)** |
| | **p < 0.0001*** | |
| Endoscopy-Cystoscopy, Cystourethroscopy | **697 (5.6%)** | **139 (1.1%)** |
| | **p < 0.0001*** | |
| Urodynamic Procedures on the Bladder | **918 (7.4%)** | **142 (1.1%)** |
| | **p < 0.0001*** | |
| **Outcome at 5 Years Postoperatively; Relative Risk (95% Confidence Interval)** | | |
| | Urethral Diverticula (n = 12,374) | Matched Control (n = 12,374) |
| Urethral Cancer | 40 (0.3%) | 0 (0%) |
| | -- | |
| Obstructive and Reflux Uropathy | **253 (2.6%)** | **212 (2.2%)** |
| | **1.21 (1.03-1.41); p = 0.02*** | |
| Urolithiasis | **328 (2.7%)** | **274 (2.3%)** |
| | **1.34 (1.20-1.52); p < 0.0001 *** | |
| Anterior and/or Vaginal Vault Prolapse | **451 (3.9%)** | **118 (1.0%)** |
| | **4.04 (3.31-4.94); p < 0.0001*** | |
| Sling Operation for Stress Incontinence | **283 (2.3%)** | **29 (0.2%)** |
| | **9.79 (6.69-14.34); p < 0.0001*** | |
| Urodynamic Procedures on the Bladder | **2,074 (16.8%)** | **345 (2.8%)** |
| | **6.01 (5.38-6.72); p < 0.0001*** | |
| Estrogen Prescription (Non-Vaginal) | **687 (5.9%)** | **465 (4.0%)** |
| | **1.49 (1.33-1.67); p < 0.0001*** | |
| Pelvic Floor Physical Therapy | 20 (0.2%) | (0.1%) |
| | 1.70 2.00 (0.94-4.27); p = 0.07 | |

* Bolded for significance.

## SAT-PS5-1142

**Peri- and Postoperative Complications in Abdominal, Vaginal Extraperitoneal and Vaginal Intraperitoneal Colpopexy**

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**Introduction and Objective:** Pelvic organ prolapse (POP) has an incidence of 40% among the female demographic. A consequential subset of 7-9% of afflicted women necessitate surgical intervention including sacral colpopexy. There are multiple surgical approaches, but limited data comparing approaches and is largely driven by surgeon preference and concomitant procedures. This study aims to identify predictors of the outcomes with the different surgical approaches.

**Methods:** This retrospective study utilized the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) database for sacral colpopexy for POP. The group was subdivided into their surgical approaches that included abdominal, vaginal extraperitoneal, and vaginal intraperitoneal. ANOVA analysis was performed between the three groups and a multivariate logistic regression was performed to determine the 30-day complication rate.

**Results:** Among the 1,275 cases analyzed, 326 (25.6%) utilized an abdominal approach, 425 (33.3%) utilized a vaginal approach, and 524 (41.1%) utilized an extraperitoneal approach. The mean age was significantly higher for patients undergoing a vaginal extraperitoneal (64.5 years) compared to abdominal (62.1 years), and vaginal intraperitoneal (61.6 years). There was no difference in 30-day complication rate between the surgical approaches on adjusted analysis (Table), however vaginal extraperitoneal approach had the longest hospital stay, days from operation to discharge, and total operation time (Figure).

**Conclusions:** Variety of surgical approaches for sacral colpopexy can be employed. In our study, we show that the 30-day complication rate was similar between the three approaches, however the length of hospital stay and operation time was the longest with vaginal extraperitoneal approach and shortest with the abdominal approach.

Figure: Length of Operation Time, Hospital Stay, and Operation to Discharge for Different Surgical Approaches

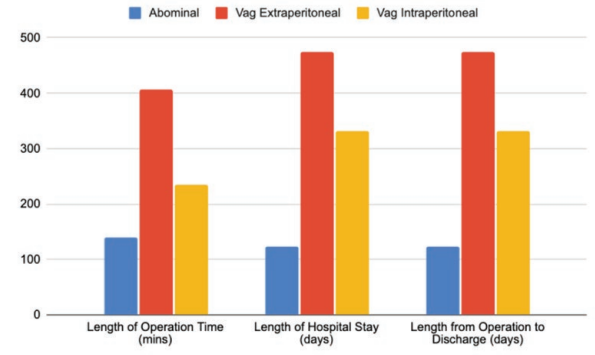


Table: Logistic Regression Model for 30-day Complication Following Colpopexy

| | Univariate Analysis | | | Multivariate Analysis - 6 controls | | |
|---|---|---|---|---|---|---|
| | Odds Ratio | 95% CI | p-value | Odds Ratio | 95% CI | p-value |
| Abdominal | Ref | Ref | Ref | Ref | Ref | Ref |
| **Extraperitoneal** | 0.98 | 0.86 – 1.12 | 0.815 | 0.99 | 0.86 – 1.13 | 0.84 |
| **Intraperitoneal** | 0.95 | 0.83 – 1.10 | 0.509 | 0.96 | 0.83 – 1.10 | 0.519 |
| | | | | | | |
| Extraperitoneal | Ref | Ref | Ref | Ref | Ref | Ref |
| **Abdominal** | 1.02 | 0.89 – 1.16 | 0.815 | 1.01 | 0.89 – 1.16 | 0.84 |
| **Intraperitoneal** | 0.97 | 0.86 – 1.10 | 0.624 | 0.97 | 0.85 – 1.10 | 0.614 |
| | | | | | | |
| Intraperitoneal | Ref | Ref | Ref | Ref | Ref | Ref |
| **Abdominal** | 1.05 | 0.91 – 1.20 | 0.509 | 1.05 | 0.91 – 1.20 | 0.519 |
| **Extraperitoneal** | 1.03 | 0.91 – 1.17 | 0.624 | 1.03 | 0.91 – 1.17 | 0.614 |

## SAT-PS5-1149

**High-Frequency Micro-Ultrasound's Role in the Visualization of Anterior Vaginal Wall and Periurethral Growths**

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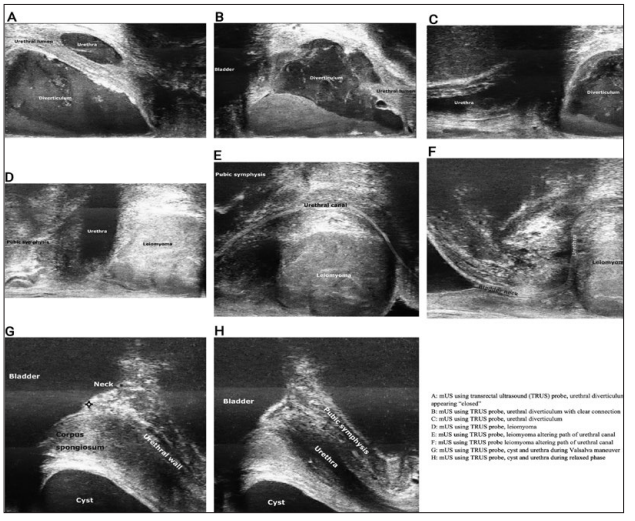
**Introduction and Objective:** Micro-ultrasound (mUS) is an innovative tool used to provide high-resolution imaging of the prostate, giving urologists the ability to perform in-office targeted biopsies. The use of mUS for the evaluation of anterior vaginal wall and periurethral growths has not yet been reported. The standard of care for visualizing these growths is through magnetic resonance imaging (MRI) or conventional ultrasound. In this case series, we report three cases of anterior vaginal wall or periurethral growths visualized using the the ExactVu™ mUS system.

**Methods:** This is a retrospective case series of a 48 year-old female with a urethral diverticulum, a 43 year-old female with a vaginal leiomyoma, and a 32 year-old female with a periurethral cyst, each visualized using the the ExactVu™ mUS system, along with a description of image characteristics.

**Results:** The mUS provides excellent images of the communicating tract between the urethral diverticulum and the urethral lumen (Figure 1A-1C). The borders and contents of the leiomyoma are easy to visualize (Figure 1D-1F), especially when compared to those captured by conventional ultrasound. The images of the periurethral cyst, suspected to be a Skene's gland cyst, are highly detailed and clearly outline the surrounding structures (Figure 1G-1H).

**Conclusions:** The ExactVu™ mUS system has the ability to clearly visualize anterior vaginal wall and periurethral growths, as well as their surrounding structures. It can be utilized in the office rather than resorting to methods with more patient barriers, such as MRI. Further studies will need to be performed to evaluate the efficacy of mUS vs. conventional ultrasound/MRI for the imaging of periurethral cysts, vaginal leiomyomas, and urethral diverticula.



## SAT-PS6-1315

**Characterization of Metabolic and Imaging Profiles in the Diagnosis of Hereditary Pheochromocytoma and Paraganglioma Syndrome**

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**Introduction and Objective:** Hereditary pheochromocytomas and paragangliomas (PPGLs) are associated with mutations in the mitochondrial enzyme succinate dehydrogenase (SDH). Because SDH-related PPGLs have heterogenous clinical presentations, there are no clear universal screening guidelines. We sought to examine the utility of metabolic testing and imaging in diagnosing SDH-related PPGLs.

**Methods:** Our retrospective study included patients with confirmed familial SDH mutations and histologically proven PPGLs or PPGLs with suggestive metabolic and imaging features. We extracted information on age, race, sex, tumor size, tumor location, urine and plasma metabolic testing, and diagnostic imaging. Patients with incomplete diagnostic information were excluded.

**Results:** Our cohort consisted of nine patients with 13 PPGL occurrences from 2003 to 2023. The average age at diagnosis was 31.7 years with a 2.9 cm average tumor size. Five tumors (38.5%) were biochemically silent, with all tumors detected on imaging (Table 1). The remaining patients had a noradrenergic profile, with positive norepinephrine and normetanephrines in plasma and urine. MIBG was the least sensitive (50%) imaging modality, while DOTATATE PET/CT was the most sensitive (100%) (Table 2). 10 (76.9%) tumors were treated with surgical resection; all metabolic results were subsequently negative, except in patients with metastatic disease.

**Conclusions:** Our investigation adds to the current literature on diagnosing SDH-related PPGLs. We highlight the importance of multimodal screening that consists of both functional imaging and metabolic screening, especially given the prevalence of biochemically silent tumors.

**Table 1. Metabolic profiles of PPGL cohort by tumor.** Brackets indicate when multiple tumors belong to one patient (i.e, Tumors 2 and 3 belong to one patient). + is defined as a lab value that exceeds the upper limit of normal, while – is defined as a lab value within normal range. NE = norepinephrine, E = epinephrine, DA = dopamine, NMN = normetanephrine, MN = metanephrine, VMA = vanillylmandelic acid.

| | Urine | | | | | | Plasma | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | NE | E | DA | NMN | MN | VMA | NE | E | DA | NMN | MN | Biochemical Phenotype |
| 1 | + | - | + | + | - | - | + | - | + | + | - | NE, DA |
| 2 | | | | + | - | + | | | | + | - | NE |
| 3 | + | - | - | + | - | | + | - | - | + | - | NE |
| 4 | | | | | | | - | | + | - | - | DA |
| 5 | | | - | - | | | | | | | | Biochemically silent |
| 6 | + | - | - | + | - | | + | - | - | + | - | NE |
| 7 | + | - | - | + | - | | + | - | - | + | - | NE |
| 8 | - | - | - | - | - | - | - | - | - | - | | Biochemically silent |
| 9 | - | - | - | - | - | - | - | - | - | - | | Biochemically silent |
| 10 | | | | + | - | + | | | | + | - | NE |
| 11 | | | | | | | - | - | - | - | - | Biochemically silent |
| 12 | + | - | - | + | - | - | - | - | - | + | - | NE |
| 13 | - | - | - | - | - | - | | | | | | Biochemically silent |
| % | 63 | 0 | 11 | 64 | 0 | 29 | 44 | 0 | 22 | 64 | 0 | |

**Table 2. Imaging profiles of PPGL cohort by tumor.** Brackets indicate when multiple tumors belong to one patient (i.e, Tumors 2 and 3 belong to one patient). + is defined as detected on imaging, while – is defined as not detected on imaging.

| | CT | MRI | FDG/FDOPA PET | DOTATATE | MIBG | Location | Size (cm) | Treatment |
|---|---|---|---|---|---|---|---|---|
| 1 | + | + | + | | + | Nasopharyngeal | 3.5 | Surgical resection |
| | | | | | | Paracaval | 2.2 | Surgical resection |
| | | | | | | Vagal/carotid | 1.5 | No surgery; EBRT |
| 2 | - | + | | | - | Bladder | 6.0 | Surgical resection |
| 3 | - | + | | | | Bladder | 1.1 | Surgical resection |
| 4 | - | - | + | | - | Paraaortic | 1.5 | Surgical resection |
| 5 | | + | | | | Pheochromocytoma | 6.0 | Surgical resection |
| 6 | + | + | - | + | | Periadrenal/renal | 1.1 | Surgical resection |
| 7 | + | + | - | + | | Retrocaval | 1.1 | Surgical resection |
| 8 | + | + | + | + | | Carotid body | 2.4 | No surgery; not surgical candidate |
| 9 | + | + | - | | | Middle ear | 0.4 | No surgery; planning on resection |
| 10 | + | | | | + | Pheochromocytoma | 4.0 | Surgical resection |
| 11 | | + | + | + | | Bladder | 1.9 | Surgical resection |
| 12 | | + | | + | | Bladder | 1.8 | Surgical resection |
| 13 | | + | + | | | Retrocaval | 2.1 | Surgical resection |
| % | 67 | 92 | 63 | 100 | 50 | | | |

## SAT-PS6-1322

**Validating a New Analytical Model for Predicting New Baseline Renal Function After Nephroureterectomy for Upper Tract Urothelial Carcinoma**

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**Introduction and Objective:** In preoperative planning for radical nephrectomy (RN), validated models predict new baseline renal function (eGFR) in patients with renal cell carcinoma (RCC). This study evaluates the performance of RCC models in predicting new base line eGFR in patients undergoing nephroureterectomy (NU) for upper tract urothelial carcinoma (UTUC). We then developed and validated a new predictive model for these patients

**Methods:** Data from 3,404 UTUC patients undergoing NU between 2006 and 2023 were queried. Inclusion criteria involved availability of pre- and 3-12 months postoperative eGFR data. The RCC equation by Palacios et al. was initially utilized to predict postoperative eGFR, with comparison against actual outcomes. Predictive performance was assessed using the area under ROC (AUROC) curve, distinguishing two classes based on an eGFR threshold of ≥45 ml/min/1.73 m2. Two additional models (linear regression and logistic regression) were trained and evaluated using 5-fold cross-validation, comparing them to the baseline RCC model (Table 1).

**Results:** Application of the RCC model to UTUC patients showed reduced predictive accuracy (47.03%, R2: 0.28, Pearson correlation: 0.79), with a notable bias of 13.62, indicating an inclination to overestimate postoperative renal function. Conversely, the linear regression model exhibited improved performance (R2 = 0.62) and significantly reduced bias (-1.40), leading to more precise predictions. The logistic regression model demonstrated superior accuracy (82.58%) in identifying patients with eGFR < 45 ml/min/1.73 $m^2$, boasting the highest AUROC of 0.89.

**Conclusions:** Our study showed that predicting baseline eGFR after nephrectomy with RCC model requires improvement before use in UTUC patients. Patient demographics and tumor biology variations may explain this observation. We developed and internally validated new models with satisfactory predictive performance. External validation is needed before widespread clinical use.

| Metric | RCC Model | Linear Regression | Logistic Regression |
|---|---|---|---|
| $R^2$ | 0.281 | 0.618 (0.032) | |
| Pearson Correlation* | 0.786 | 0.787 (0.020) | |
| Bias** | 13.617 | -1.396 (0.990) | |
| Accuracy*** (%) | 47.033 | 67.039 (1.266) | 82.580 (0.022) |
| AUROC (45.ml/min/1.73m2) | 0.716 | 0.806 (0.019) | 0.888 (0.023) |

*Pearson correlation coefficient between prediction and observed/target values
**Bias is the median of the residuals
***For the linear models Accuracy is the percentage of predicted values within 30% of the observed/target values

AUROC: Area under the ROC

## SAT-PS6-1329

**Comparing Oncologic Outcomes of Percutaneous Renal Mass Ablation for Tumors Less Than or Greater Than 3 cm**

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**Introduction and Objective:** The increasing incidence of renal cell carcinoma (RCC) has prompted expansion of treatment options. Current AUA guidelines only recommend thermal ablation for treating renal masses <3 cm, but literature has variable results on tumor recurrence when using percutaneous ablation techniques for larger renal tumors. We aim to compare the oncologic outcomes of renal mass ablation for masses less than or greater than 3 cm.

**Methods:** Patients were assigned to two groups for comparison: renal mass ≤3 cm and renal mass >3 cm. Groups were compared by recurrence rate, time to recurrence, overall survival, biopsy result, and time to recurrence in biopsy proven cancer. Fisher's exact test and paired t-test were used to determine significant differences between groups, with $p < 0.05$.

**Results:** 222 patients qualified for inclusion from 2018 to 2023. Median follow up was 31 months. 145 had renal masses ≤3 cm, mean size of 2.25cm, while 77 had renal masses >3 cm, mean size of 3.95cm ($p = < 0.001$). Biopsy proven RCC rate, recurrence, and recurrence in biopsy proven RCC were all significantly lower for tumors ≤3 cm compared to tumors >3 cm ($p < .05$).
Mean time to recurrence for ≤3 cm and >3 cm renal mass groups were 24.4 months and 15.92 months, respectively ($p = 0.296$). Mortality rate was 10.34% for patients with a mass ≤3 cm and 16.88% for patients with mass >3 cm; hazard ratio was found to be 1.5 (95% CI, 0.56 to 2.54).

**Conclusions:** Thermal ablation of renal masses >3 cm had significantly higher rate of recurrence in both overall and biopsy proven RCC when compared to thermal ablation of renal masses ≤3 cm. Although not significant, time to recurrence was shorter and overall mortality rate was higher in larger renal mass group.

## SAT-PS6-1343 – video

**Robotic Partial Nephrectomy in a Pelvic Kidney**

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## SAT-PS6-1336

**A Contemporary Analysis of Use, Clinical Outcomes, and Costs of Robotic-Assisted, Laparoscopic, and Open Radical Nephrectomy Using the National Inpatient Sample.**

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*[1]Sidney Kimmel Cancer Center, Thomas Jefferson University, Philadelphia, PA, USA; [2]College of Population Health, Thomas Jefferson University, Philadelphia, PA, USA; [3]Sidney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA, USA*

**Introduction and Objective:** In current practice, minimally invasive surgery, such as laparoscopic radical nephrectomy (LARN) and robotic-assisted radical nephrectomy (RARN), is more common than open surgery in treating renal cancer. This study compared recent trends in use, clinical outcomes, and costs of these surgical methods in renal cancer patients.

**Methods:** Utilizing the 2016-2019 National Inpatient Sample (NIS) database, adult renal cancer patients who underwent LARN, RARN, or open renal surgery were identified using International Classification of Diseases, Tenth Revision (ICD-10) Clinical Modification (CM) and Procedure Coding System (PCS) codes. Trends in LARN, RARN, and open renal surgery were assessed. Patient demographics, comorbidities, primary payer, hospital characteristics, length of stay (LOS), complications, and associated costs were summarized across different surgical types.

**Results:** We identified 30,824 renal cancer patients who underwent radical nephrectomy (mean age 58.7, 56.2% male). In each year of the study period, about 1/3 of procedures were open surgery, yet RARN increased from 21.9% in 2016 to 29.9% in 2019 while LARN decreased from 45.6% in 2016 to 35.6% in 2019. The use of RARN was more common in older patients and patients with comorbidities. Both LARN and RARN procedures tended, on average, to have shorter hospital stays, lower rates of blood transfusions, fewer complications, and fewer deaths compared to open surgery. Median hospital costs were lower for LARN ($13,919) when compared to RARN ($16,686) and open surgery ($17,844).

**Conclusions:** Minimally invasive surgery was the most prominent approach [SK1] to treating complex renal tumors in these patients, with RARN being used increasingly often over time. Compared to open surgery, both LARN and RARN seem to be associated with better clinical outcomes, although RARN remains slightly more costly than LARN. Additional statistical analyses are needed to demonstrate the clinical and cost effectiveness of RARN and LARN over open surgery.

## SAT-PS6-1350

**Pelvic Exenteration & Urologic Complications – A 90-Day Audit of the Practice at a Single Tertiary-Level Medical Center**

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*University of Texas Health Science Center, San Antonio, TX, USA*

**Introduction and Objective:** The management of locally advanced and/or recurrent pelvic malignancies has evolved significantly over the years with improvements in neoadjuvant treatments and perioperative care. In this series, we sought to summarize recent outcomes with a urologic focus and to investigate which factors were associated with morbidity and survival.

**Methods:** We conducted a retrospective review of patients who underwent pelvic exenteration at a tertiary-level medical center from 2009 to 2022 who had a urinary diversion for an underlying malignancy. Patient demographics, comorbidities, neoadjuvant therapy, urinary diversion type (ileal/colonic), and surgical data were recorded. The primary endpoints included 90-day post-operative complication rates, hospital length of stay (LOS), ICU course, and survival rates.

**Results:** Thirty-nine patients met our inclusion criteria. Of the primary malignancies recorded, 15 were urologic, 4 were gynecologic, 13 were colorectal, and 2 were of soft tissue origin. The median patient age was 73 years. 23% of patients had a history of diabetes and 77% underwent neoadjuvant treatment. 18% had colonic/sigmoid urinary diversion, while 82% had ileal urinary diversion. 28% of patients required a VRAM or gracilis flap. 38% experienced a major complication (Clavien-Dindo>=3). There were six patients who had a major cardiopulmonary/cerebrovascular event. Overall, 51% of patients died with 26% dying within 1 year of surgery. Three patients required laparotomy within 30 days, and two patients had C. difficile infections. 28% had urine leaks requiring either a nephrostomy tube placement or drain insertion. 10% of patients had UTIs in the immediate post-operative period. While multivariate regression analysis did not demonstrate definitive risks, a history of diabetes correlated to higher Clavien-Dindo complication scores ($p<0.05$). Hospital LOS statistically correlated with BMI ($p<0.05$).

**Conclusions:** Pelvic exenteration remains a morbid procedure with the potential of cerebrovascular and cardiac complications. Urologic complications predominate, often resulting in subsequent procedures. Consideration should be given to prolonged use of nephrostomy tubes.

## SAT-PS6-1357

**Direct Oral Anticoagulants (DOACs) are Non-Inferior to Enoxaparin for Extended Post-Operative Thromboprophylaxis in Radical Cystectomy: a Meta-Analysis of Preliminary Non-Randomized Studies**

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[1]*University of Illinois Urbana-Champaign, Urbana, IL, USA;* [2]*Drexel University College of Medicine, Philadelphia, PA, USA;* [3]*George Washington University School of Medicine, Washington, DC, USA*

**Introduction and Objective:** Venous thromboembolism (VTE) and pulmonary embolism (PE) are common complications of radical cystectomy (RC) with rates between 2-12% within 30 postoperative days (p.o.d). EAU practice guidelines recommend extended Enoxaparin thromboprophylaxis for 28 p.o.d, to reduce VTE/PE occurrence. Enoxaparin thromboprophylaxis may be limited by poor patient adherence, due to inadequate insurance coverage and discomfort from repeated subcutaneous injections. DOACs have emerged as a viable alternative, with convenient oral dosing and favorable cost profile, however, their routine use in urologic surgery remains sporadic. Here, we summarize the current evidence on the efficacy and safety of DOACs versus Enoxaparin in patients with urothelial cancer undergoing RC.

**Methods:** A systematic review of publications on the comparative safety and efficacy of >1 DOACs versus Enoxaparin, for postoperative thromboprophylaxis in RC patients was performed. Efficacy (i.e., VTE/PE rates); and safety (i.e., bleeding and re-admission rates) within the first 30-90 p.o.d, were pooled in a random-effects model meta-analysis. Odds ratio (OR) and 95% confidence intervals (CIs) were estimated for each outcome measure.

**Results:** Four studies, involving n=1,412 patients were included in the meta-analysis. Table 1 summarizes the key study characteristics. There were no significant differences in VTE/PE (OR: 2.81, 95% CI: 0.93-8.52, p=0.07, I2=0.0%), postoperative bleeding (OR: 0.66, 95% CI: 0.14-3.05, p=0.60, I2=0,0%), and postoperative readmission (OR: 0.84, 95% CI: 0.59-1.20, p=0.34, I2=0.0%) risk, between DOACs and Enoxaparin cohorts (Fig.1A-C).

**Conclusions:** DOACs are non-inferior to Enoxaparin for extended thromboprophylaxis in RC patients. Randomized controlled trials (RCTs) would help strengthen the evidence in support of DOAC use in urologic surgery.

| Study ID | Year | Setting | Study Design | Procedure Type | | *N* | | DOACs investigated, *N* | Postoperative Thrombo-prophylaxis Duration | Postoperative Follow-up Duration |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | Open | Robotic | Enoxaparin | DOAC | | | |
| Ortiz, et al | 2021 | Single-institution | Retrospective | - | 66 | 37 | 29 | Rivaroxaban *10mg daily* 21<br>*20mg daily* 3<br>Apixaban *2.5mg twice daily* 1<br>*5mg daily* 3<br>Dabigatran *7.5mg daily* 1 | 30 days | 90 days |
| Faraj et al | 2022 | Single-institution | Retrospective | 24 | 77 | 55 | 46 | Apixaban *2.5mg twice daily*<br>Rivaroxaban *10mg daily* | 30 days | 90 days |
| Westerman et al | 2022 | Single-institution | Prospective non-randomized | 151 | 164 | 161 | 154 | Apixaban *2.5mg twice daily* | 28 days | 30 days |
| Rich et al | 2023 | Single-institution | Retrospective | - | 374 | 250 | 124 | Apixaban *2.5mg twice daily* | 21 days | Bleeding 30 days<br>Readmission<br>VTE 90 days |

**Table 1:** Study characteristics of included studies

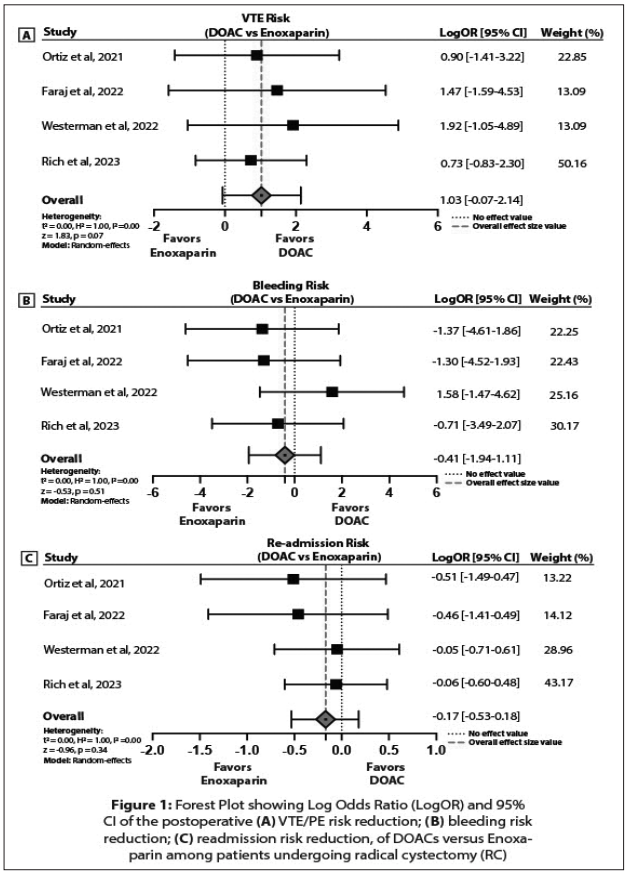


**Figure 1:** Forest Plot showing Log Odds Ratio (LogOR) and 95% CI of the postoperative **(A)** VTE/PE risk reduction; **(B)** bleeding risk reduction; **(C)** readmission risk reduction, of DOACs versus Enoxaparin among patients undergoing radical cystectomy (RC)

## SAT-PS6-1404

**The Impact of Hospital Consolidation and For-Profit Status on Prostate Cancer Costs and Quality of Care**

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**Introduction and Objective:** Some theorize that hospital consolidation may be driving rising healthcare costs. Others, however, postulate that increased consolidation may lead to cost savings, and regardless may be justified by improved clinical care. In this study we examine the associations between hospital competition, for-profit status, costs, and quality of care within the Medicare prostate cancer population.

**Methods:** Claims for men with localized prostate cancer (1999-2019) were collected from the Surveillance, Epidemiology, and End Results (SEER)–Medicare database. Hirschman-Herfindahl index (HHI) was calculated to quantify hospital competition (higher values indicate more concentration and thus less competition). Generalized linear models were used to predict expenditures, Poisson models for emergency room (ER) visits, and Cox models for mortality. A propensity score derived from age, race and ethnicity, marital status, cancer grade, census tract poverty indicator, and Charlson co-morbidity score, as well as an interaction term between HHI and hospital profit status were also included.

**Results:** Models showed that for each increasing unit of HHI (i.e. less competition) there was 9% increase in expenditure (eβ: = 1.09, 95% CI, 1.04–1.17) and 17% increase in ER visit rate (IRR: 1.17, 95% CI: 1.15–1.19). There was no statistically significant association between HHI and mortality. The interaction term between profit status and HHI was non-significant, however each unit increase in HHI increased the rate of ER visits by 24% for for-profit hospitals and 48% for not-for-profit hospitals, and increased hazard of mortality by 9% for for-profit hospitals and 15% for non-profit hospitals.

**Conclusions:** Lower hospital competition was associated with higher expenditure and ER visits for Medicare prostate cancer patients. The impact of competition may be greater on non-profit hospitals. This highlights the need to be cautious in allowing hospital consolidation and for further research exploring these relationships with more granularity and for other diseases.

## SAT-PS6-1411

**Evaluation of Transitional Zone Lesions on Multiparametric MRI and MRI-targeted Biopsy in Detecting Clinically Significant Prostate Cancer in the Community Setting: A Retrospective Study**

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**Introduction and Objective:** Magnetic resonance imaging is the most accurate diagnostic imaging tool for detecting clinically significant prostate cancer. Transitional zone lesions can be difficult to characterize on imaging or sample on prostate biopsy due to other conditions such as benign prostatic hyperplasia or prostatitis typically occurring in the same area. The purpose of this study is to retrospectively compare the diagnostic yield and pathologic outcomes of transitional lesions compared to peripheral zone lesions when using MRI-targeted biopsy.

**Methods:** Retrospective review of fusion prostate biopsies from 2020-2022. PIRADS lesions 3 and higher were included. Patient characteristics including age, ethnicity, family history of prostate cancer, prostate size, lesion size, lesion location, number of cores, radiologist, and eventual treatment of positive biopsy findings were recorded. Clinically significant prostate cancer was defined as Gleason group grade 2-5.

**Results:** In all, 434 patients were analyzed. This resulted in 514 peripheral and 100 transitional zone lesions. The transitional zone lesions were associated with larger lesion size (16.7mm vs. 10.6mm), higher prostate-specific antigen (12.9 vs. 7.1 ng/mL), and a higher proportion of PIRADS 5 lesions (32.0% vs. 15.2%). When analyzed by PIRADS lesion, PIRADS 4 transitional zone lesions demonstrated higher rates of clinically significant prostate cancer than peripheral zone lesions designated as PIRADS 4 (44.0% vs. 22.9%). There was no difference between PIRADS 3 or PIRADS 5 lesions.

**Conclusions:** Transitional zone lesions pose a challenge to radiologists in assigning PIRADS designations. In particular, PIRADS 4 lesions are important to pay attention to, as our study demonstrated that these lesions are often a higher grade group than the corresponding peripheral zone lesion and are more likely to represent the highest grade group of the positive cores.

## SAT-PS6-1425 – video

**Reverse Lymphatic Mapping during Robotic Inguinal Lymphadenectomy for the Prevention of Lymphedema**

B. Mora-Garijo[1], J. Mason[1], L. Tom[2], N. Mendhiratta[3], L. Stamatakis[2], M. Gupta[1], K. Kowalczyk[1], R. Krasnow[2]
*[1]Medstar Georgetown University Hospital, Washington, DC, USA; [2]Medstar Washington Hospital Center, Washington, DC, USA; [3]National Cancer Institute, Bethesda, MD, USA*

## SAT-PS6-1418

**Performance Characteristics of ExoDx Urinary Biomarker: A Single-Institution Analysis**

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**Introduction and Objective:** Prostate cancer screening relies on prostate-specific antigen, which may lead to unnecessary biopsies. The ExoDx Prostate (EPI) test, a urinary exosome assay, was developed to detect clinically significant (Gleason Grade Group ≥2) prostate cancer (csPCa) to improve specificity. This study analyzes performance characteristics of EPI compared to/in concert with a multiparametric MRI (mpMRI)-based pathway at a single academic institution.

**Methods:** Patients who underwent EPI testing between 10/2019-5/2023 were reviewed for EPI score (high risk ≥15.6 vs. low risk <15.6), MRI characteristics, and biopsy results. Biopsies and MRIs were compared between EPI risk groups using Chi square and Mann Whitney-U test. Spearman correlation estimated the relationship between EPI, PI-RADS and Gleason scores. Receiver operator curve (ROC) analysis assessed the performance of EPI and PI-RADS scores for prediction of csPCa. An optimal EPI cutoff value was determined using ROC along with the sensitivity, specificity, positive predictive value (PPV), and negative predictive value (NPV). Statistical comparisons were two-sided with a p-value <0.05.

**Results:** Of n=173 patients with EPI scores, 28.9% and 71.1% were low and high-risk, respectively. EPI weakly correlated with PI-RADS score on MRI ($r = 0.30$, $p<0.001$). An optimal EPI score for detecting csPCa was ≥26.43 (sensitivity: 0.720, specificity: 0.537, PPV: 0.367, NPV: 0.800). On ROC analysis, PI-RADS score ≥4 had better predictive performance for detecting csPCa with an Area Under the Curve (AUC) of 74.6% (sensitivity: 0.696, specificity: 0.721, PPV: 0.485, NPV : 0.862), versus an AUC of 63.1% with EPI testing. Utilizing a criteria of PI-RADS score ≥4 and EPI ≥26.43, PPV and specificity improved over either alone (PPV: 0.556 vs. 0.485 vs. 0.367, respectively) (specificity: 0.873 vs. 0.721 vs. 0.537, respectively). Utilizing either PI-RADS score ≥4 or EPI ≥26.43, NPV and sensitivity improved (NPV: 0.962 vs. 0.862 vs. 0.800, respectively) (sensitivity: 0.957 vs. 0.696 vs. 0.720, respectively).

**Conclusions:** Our study supports EPI testing to assess risk for csPCa in combination with mpMRI, and prompts reevaluation of 15.6 as an optimal cutoff EPI score.

## THU-MP1-1115

**Real-World Analysis of an Exosome-Based Screening Tool for Prostate Cancer: Results from Combined Veterans Affairs Hospital and Private Practice Cohorts**

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*[1]Virginia Commonwealth University Health System, Richmond, VA, USA; [2]Virginia Urology, Richmond, VA, USA; [3]Division of Urology, Central Virginia VA Health Care System, Richmond, VA, USA*

**Introduction and Objective:** The ExoDx IntelliScore® (EPI) is a urine-based diagnostic tool which has shown promise in risk-stratifying patients undergoing screening for prostate cancer to help determine in whom a prostate biopsy can safely be deferred. The purpose of this study was to examine the characteristics of this test in a combined heterogenous cohort of Veterans Affairs (VA) and private practice (PP) patients.

**Methods:** Retrospective chart review was performed on all patients undergoing EPI testing at single VA and PP institutions. EPI testing was recommended in men with elevated PSA who desired additional risk stratification prior to proceeding with prostate biopsy. Statistical analyses were performed using T-tests, chi square tests, and regression analysis.

**Results:** A total of 342 (VA=80, PP=262) patients were analyzed. The positive test rate across both cohorts was 71.3% (VA=77.5%, PP=68.9%). Increasing age was correlated to higher EPI scores and higher likelihood of having a positive test ($p<0.001$). PSA and PSA density were not found to be related to test positivity. The positive test rate was higher in black patients compared to nonblack patients (87.8% vs. 66.1%, $p<0.001$) and biopsy naïve men compared to men with a prior negative prostate biopsy (79.7% vs. 62.6%, $p<0.001$). The positive test rate for black men was 92.3% in the VA cohort and 80% in the PP cohort. Of the patients with a positive test, Gleason 7 or higher disease was detected in 33.8% (51/151) of biopsy specimens.

**Conclusions:** In a diverse patient cohort, EPI positive test rates are relatively high, with the likelihood of having a positive test being correlated to older age, being biopsy-naïve, and black race. Test utility may decrease in populations with older patients and a higher proportion of black patients. Around one third of men with a positive EPI test will be found to have clinically significant prostate cancer on biopsy.

## THU-MP1-1125

**Impact of Pre-Existing Diagnosis of Anxiety and/or Depression on the Management of Low-Risk Prostate Cancer: A Real-World Study**

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**Introduction and Objective:** Many men with Gleason Grade (GG) 3+3 prostate cancer (PCa) are stratified as low-risk, for which active surveillance (AS) is recommended rather than definitive local treatment. AS involves regular prostate-specific antigen (PSA) screenings and repeat biopsies every 12-18 months. Enrollment in AS significantly impacts mental health, as living with a cancer diagnosis can be burdensome. This study aims to assess whether pre-existing mental health diagnoses of anxiety and/or depression influence patients' AS compliance.

**Methods:** Patients with low-risk PCa were identified retrospectively from multiple institutions' health records between 2018 and 2022. Patients were categorized based on prior anxiety and depression diagnoses. AS compliance was defined by at least one PSA screening and one repeat biopsy within 18 months of diagnosis. Premature treatment was defined as receiving definitive therapy without disease progression. Data was analyzed using descriptive statistics and Fisher's exact test with significance at $p<0.05$.

**Results:** The average PSA at the time of diagnosis was 6.09 ± 2.75 ng/mL (n=379). 42% of patients with pre-existing diagnoses of anxiety and/or depression were compliant with AS. AS non-compliance was higher among patients with depression compared to those without; 67% vs. 43%, p=0.042, odds ratio (OR): 2.65, 95% confidence interval (CI): 1.02 to 6.80. Patients with anxiety or depression had higher rates of premature treatment compared to those without a diagnosis (52% vs. 35%, p=0.028, OR: 2.02, CI: 1.09 to 3.58).

**Conclusions:** Many men with low-risk PCa will be prematurely treated or lost to follow-up. Those with a pre-existing diagnosis of anxiety and/or depression have higher rates of non-compliance and overtreatment. The lack of proper AS compliance is likely due to a complex web of factors that should be further investigated.

## THU-MP1-1120

**Ultrasound Echogenicity on MP-MRI/US Fusion Guided Biopsy Improves Risk Evaluation for Clinically Significant Prostate Cancer**

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**Introduction and Objective:** The combination of Multiparametric Magnetic Resonance Imaging (MP-MRI)/ ultrasound-guided fusion biopsy, a targeted biopsy technique, is gaining prominence as an alternative for diagnosing Prostate cancer (PCa). Many patients, including those under active surveillance, require repeated biopsies along with a series of MRIs. We investigated whether echogenicity observed during MRI-ultrasound fusion may be associated with detecting clinically significant PCa during targeted biopsy of MP-MRI lesions.

**Methods:** In this retrospective study conducted between March 2017 and February 2022, we examined patients who underwent both standard 12-core random biopsies and targeted MP-MRI/US fusion-guided biopsies at our institution. We recorded the ultrasound echogenicity specific to each lesion. Lesions observed during the target biopsy were categorized as strongly, weakly, or not hypoechoic. Clinically significant Prostate Cancer (csPCA) was defined as having a Gleason score of ≥ 7, while intermediate cancer was defined as having a Gleason score of 6.

**Results:** In an analysis of 221 biopsy patients, 59.3% were diagnosed with PCa, with 68% having csPCa. Among 429 lesions, 19.1% were strongly hypoechoic, with 45% csPCa; 29.8% were weakly hypoechoic, with 25% csPCa, and 51.1% weren't hypoechoic, with 11.8% csPCa ($p<0.0001$). Figure 1 shows Gleason grades distribution with echogenicity and PIRADS scores. For PIRADS ≤3, echogenicity increased csPCa detection from 7% (non-hypoechoic) to 27% (strongly hypoechoic). For PIRADS 4, it rose from 13.1% to 35.1%, and for PIRADS 5, it improved from 42% to 64%. The ROC curve for csPCa detection showed AUCs of 0.69 for PIRADS, 0.69 for Echogenicity, and 0.74 for their combination (all $P<0.001$).

**Conclusions:** Lesion echogenicity detected via ultrasound during prostate biopsy complements PIRADS in diagnosing csPCa. Clinicians can utilize echogenicity for cancer risk assessment, aiding their biopsy decision-making.

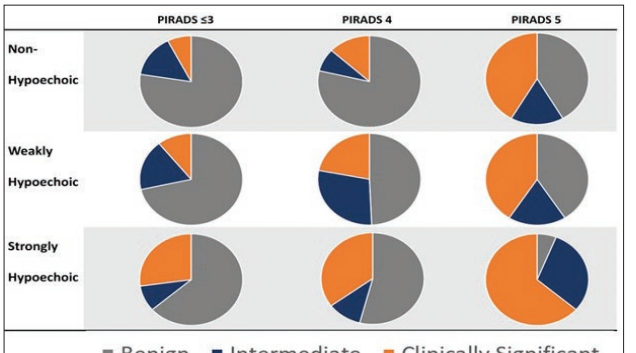


Figure 1. Distribution of Clinically significant (Gleason Grade ≥7), Intermediate (Gleason Grade = 6), and Benign lesions of prostate cancer detected by MP MRI/US guided Biopsy

## THU-MP1-1130

**Radiological Evaluation of Cystic Renal Masses: Bridging the Gap with Pathological Findings**

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**Introduction and Objective:** Cystic renal cell carcinoma (cRCC) is a rare subset of renal cell carcinoma (RCC), accounting for 2.5-5% of all RCC cases. While cystic renal masses often carry benign or low-grade malignancies, recent reports suggest 1 in 5 lesions may harbor more aggressive biology. Indeed, preoperative differentiation of cRCC from biologically more aggressive variants remains a clinical challenge.

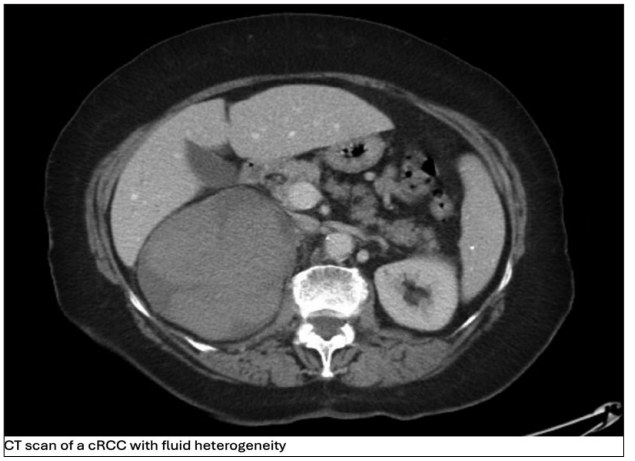
**Methods:** A single institution database of 4,340 kidney lesions treated with either active surveillance or intervention between 2000-2020 was queried for radiographic cystic renal masses. Lesions ≥ 7 cm were identified as large solid renal masses with central necrosis can often mask as benign or low-grade lesions. Associations between radiographic features and high-grade pathology were evaluated. Radiographic features were peripheral thickening, fluid heterogeneity, calcifications, septations, and density mass >20 HU.

**Results:** We identified 387 radiographically confirmed cystic lesions in 367 patients, with 50 lesions detected as ≥ 7 cm. Among lesions undergoing intervention (72%, n=36), 33.3% (n=12) were benign and 66.7% (n=24) malignant. Fluid heterogeneity and cystic density >20 HU were associated with malignancy (P<0.05). High-grade pathology was present in 29.7% (n=11) malignant lesions and significantly associated with fluid heterogeneity (P<0.05) (Table 1).

**Conclusions:** Cystic indolent RCC imposters such as solid renal lesions with central necrosis highlight the discordance between radiographic and pathologic characterization. In large cystic lesions (≥ 7 cm), fluid heterogeneity can serve as a predictor of adverse pathology to appropriately identify patients for intervention. Future work is still needed for the prevention of both over and under treatment.

**Table 1. Radiological Characteristics**

| | Total | Benign | Malignant | p-value |
|---|---|---|---|---|
| Peripheral Thickening | | | | 0.5 |
| Yes | 21 | 8 (38.1%) | 13 (61.9%) | |
| No | 13 | 3 (23.1%) | 10 (76.9%) | |
| Fluid Heterogeneity | | | | 0.02 |
| Yes | 20 | 3 (15.0%) | 17 (85.0%) | |
| No | 14 | 8 (57.1%) | 6 (42.9%) | |
| Calcification | | | | 0.7 |
| Yes | 16 | 6 (37.5%) | 10 (62.5%) | |
| No | 18 | 5 (27.8%) | 13 (72.2%) | |
| Septations | | | | 1 |
| Yes | 11 | 4 (36.4%) | 7 (63.6%) | |
| No | 23 | 7 (30.4%) | 16 (69.6%) | |
| Density > 20 HU | | | | 0.02 |
| Yes | 14 | 1 (7.1%) | 13 (92.9%) | |
| No | 18 | 9 (50.0%) | 9 (50.0%) | |



CT scan of a cRCC with fluid heterogeneity

## THU-MP1-1135

**Propensity Matched Analysis of Overall Survival with Immunotherapy Incorporation in Trimodal Therapy for Muscle-Invasive Bladder Cancer**

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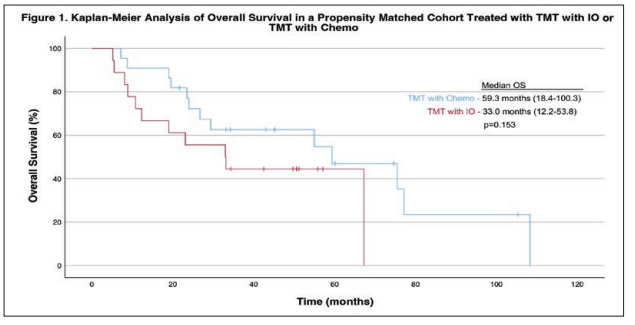
**Introduction and Objective:** Management of muscle-invasive bladder cancer (MIBC) presents a clinical challenge, with trimodal therapy (TMT) emerging as a promising therapeutic for bladder preservation. However, TMT is reserved for patients who are chemo-eligible given chemotherapy's side effects. In contrast, immunotherapy (IO) offers potentially improved efficacy and safety profile. Given limited evidence supporting IO's role in TMT, we evaluated the efficacy of IO incorporation into TMT.

**Methods:** The National Cancer Database was queried from 2004-2021 for patients with urothelial MIBC treated with transurethral resection of the bladder tumor and adjuvant radiation. Patients were stratified by utilization of adjuvant IO or chemo and 1-to-1 propensity-matched. Overall survival (OS) was compared between TMT with chemo vs IO using Kaplan-Meier. Multivariate Cox Proportional Hazards model (CPH) assessed the influence of IO utilization in TMT on OS while accounting for age, cT stage, and tumor size.

**Results:** Of 4,282 patients included, 26 and 4,256 patients received TMT with chemo and TMT with IO, respectively. Patients treated with TMT with IO had a higher median age (79 vs. 78 years, p=0.037) and tumor size (5.0 vs. 4.2 cm, p=0.039). After propensity matching, median OS between patients treated with TMT with chemo or IO did not differ significantly (59.3 vs. 33.0 months, p=0.153). CPH demonstrated an insignificant effect of IO incorporation in TMT on OS (HR=2.499, p=0.061).

**Conclusions:** IO's intriguing role in bladder-preserving therapy is largely unexplored. We report an insignificant difference in OS between cohorts treated using TMT with chemo or IO. However, our analysis was limited by small sample size and unknown chemo-ineligibility or PD-L1 status. Given these limitations, our exploratory analysis should only be used as a stepping stone for future prospective studies.



## MP1-1140

**Single Institution Characterization of Patients Undergoing Trimodal Therapy for Muscle-Invasive Bladder Cancer**

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**Introduction and Objective:** Trimodal therapy (TMT) is a bladder-preserving approach to treatment for muscle-invasive bladder cancer (MIBC), consisting of maximal tumor debulking via transurethral resection of bladder tumor (TURBT) with adjuvant chemoradiation. Recent publications indicate that TMT has non-inferior rates of survival compared to radical cystectomy. The purpose of this study was to evaluate a single institution's patient outcomes when managed conservatively

**Methods:** The present study analyzes a retrospective database of patients undergoing TMT therapy at a single academic institution from 2017 to 2022. All patients had cT2 disease and initially presented for evaluation for radical cystectomy with curative intent. Exclusion criteria included patients 18 years and younger, and those receiving concomitant treatment for other malignancies.

**Results:** A total of 25 patients fit our inclusion criteria. Table 1 describes population demographics. All patients had histologic high-grade urothelial carcinoma. 18/25 (72%) patients required a second TURBT for maximal resection and 7/25 (28%) received neoadjuvant chemotherapy prior to repeat TURBT. Survival of the overall cohort was 76% at a median 24.3 (95% CI 20.7-39.8) months follow-up. Table 2 contains outcomes stratified by initial treatment regimen.

**Conclusions:** Populations undergoing TMT for MIBC are heterogenous in their treatment regimen but have overall favorable short-term survival and bladder preservation. While chemoradiation remains most frequently performed, differences in TMT regimen may not significantly impact short-term survival, time to metastasis, or need for salvage therapy.

**Table 1. Population characteristics.**

| Characteristics | N (%) |
|---|---|
| Age at diagnosis, mean (SD) | 74.5 (10.2) |
| Male sex | 20 (80%) |
| BMI, mean (SD) | 27.6 (4.8) |
| *Race or ethnic group* | |
| White | 23 (92%) |
| Black | 1 (4%) |
| Hispanic | 1 (4%) |
| Charlson Comorbidity Index, mean (SD) | 8.1 (3.6) |
| Score ≥7 - 0% 10 year survival | 17 (68%) |
| *Smoking* | |
| Never | 3 (12%) |
| Current | 2 (8%) |
| Former | 19 (76%) |
| Current chewing tobacco use | 2 (8%) |
| Pack years, mean (SD) | 39.5 (28.8) |

**Table 2. Tumor characteristics and outcome stratified by therapy.**

| Characteristic | Radiation + Chemotherapy + Immunotherapy | Radiation + Chemotherapy | Radiation + Immunotherapy | Radiation only |
|---|---|---|---|---|
| N (% of group) | 4 (16%) | 14 (56%) | 3 (12%) | 4 (16%) |
| *Required Salvage Therapy* | | | | |
| Any type | 1 (25%) | 4 (29%) | 1 (33%) | 0 |
| Cystectomy | 0 | 2 (14%) | 0 | 0 |
| Chemotherapy | 1 (25%) | 0 | 0 | 0 |
| Radiation | 0 | 0 | 1 (33%) | 0 |
| Immunotherapy | 1 (25%) | 2 (14%) | 1 (33%) | 0 |
| *Survival* | | | | |
| N (%) | 3 (75%) | 12 (85%) | 1 (33%) | 4 (100%) |
| Months from diagnosis, mean (SD)* | 28.6 (14.9) | 30.7 (29.0) | 25.0 (19.3) | 34.4 (9.5) |
| *Metastasis* | | | | |
| N (%) | 2 (50%) | 4 (29%) | 2 (66%) | 0 |
| Months from diagnosis, mean (SD)** | 21.3 (15.3) | 19.0 (11.2) | 11.5 (13.0) | 0 |

* p=0.92 via one-way ANOVA
**p=0.72 via one-way ANOVA

## MP1-1145

**Differences Between Local Ablation and Radical Nephroureterectomy in Effect on Renal Function and Need for Renal Dialysis Following Treatment for UTUC**

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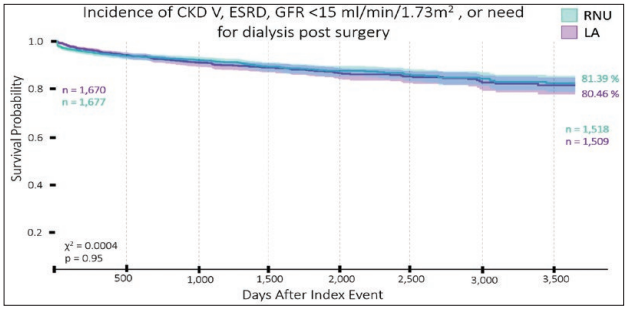
**Introduction and Objective:** Local ablation (LA) and radical nephroureterectomy (RNU) are two treatment modalities for upper tract urothelial carcinoma (UTUC). While RNU has a known risk of causing decline in renal function, it is unclear whether LA also carries a risk. We examine whether there is increased risk of renal function deterioration between these modalities.

**Methods:** Retrospective cohort review of patients from TriNetX database using ICD 9 and 10 diagnosis codes and CPT treatment codes from 2003-2023. Inclusion criteria were patients 18-90 years old with diagnoses of UTUC who were treated by either RNU or LA. Matched analysis was performed based on demographic and major comorbidities. Primary outcome was relative risk of developing chronic kidney disease (CKD), end-stage renal disease (ESRD), GFR <15, or dependence on dialysis within 10 years after treatment.

**Results:** There were 3,710 patients in LA group and 1,824 patients in RNU group. 1,773 patients were included in matched analysis from each cohort. There was no difference in rates of dialysis, CKD 5, ESRD or GFR <15 with 9.6% of LA and 9.5% of RNU (RR 1.02, CI 0.83-1.25, p=0.88). There was no difference in need for renal dialysis alone with 2.4% of LA and 2.0% of RNU (RR 1.19, CI 0.77-1.84, p=0.44). There was a significant difference in development of CKD 4 within 10 years of surgery, with 20.7% of LA patients and 24.1% of RNU patients (RR 0.86, CI 0.75-0.97, p=0.018).

**Conclusions:** TriNetX analysis does not find a significant difference in relative risk of development of CKD 5, need for dialysis or GFR <15 mL/min/1.72m$^2$ following treatment of UTUC between LA and RNU. There was a significant increased risk for development of CKD 4 with RNU.



## MP1-1150

**Impact of Inflammatory Bowel Disease on Radical Cystectomy Perioperative Outcomes: A National Inpatient Sample Analysis**

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**Introduction and Objective:** Creating a urinary diversion (UD) during a radical cystectomy (RC) relies on the reconstruction of the alimentary canal, posing potential surgical challenges for IBD patients. Our study sought to assess IBD's impact on perioperative RC outcomes and the choice of UD.

**Methods:** We conducted a retrospective analysis querying the National Inpatient Sample (NIS) from 2015 to 2020, identifying n=43,470 patients undergoing RC, of whom 299 had IBD. A 1:3 propensity match was performed between the IBD and non-IBD groups accounting for age, sex, race, Elixhauser Comorbidity Index, insurance, facility type, and income, resulting in 1,201 patients (299 IBD patients, 902 non-IBD patients). Descriptive statistics compared postoperative complications and the method of UD between the IBD and non-IBD groups.

**Results:** Cutaneous ureterostomies were more often used in IBD patients (33.0% vs. 21.1%, p=0.038), while ileal conduits were less used for IBD patients (60.2% vs. 67.4%,p=0.006). After propensity-matched analysis, IBD patients exhibited higher rates of perioperative complications, including postoperative infections (p<0.0069), ileus (p<0.0005), and gastrointestinal complications (p<0.0012). Subgroup analysis of UD approach showed no significant differences in perioperative complications. IBD patients had a mean hospital stay of 10 days compared to 6 days for non-IBD patients undergoing cystectomy (p<0.001). IBD cystectomy patients were more frequently treated at urban teaching hospitals than non-IBD patients (82% vs. 72%, p<0.001) and incurred higher total hospital costs (117,574 vs. 86,008, p=0.0015).

**Conclusions:** Our findings indicate that RC becomes a more morbid operation in the setting of IBD, and IBD may impact the choice of UD utilized. However, the approach to UD in IBD patients did not significantly impact perioperative complication rates. Therefore, any clinically appropriate diversion can likely be safely offered to IBD patients. IBD patients undergoing RC may warrant special consideration, given their longer hospital stays and higher rates of postoperative ileus, infections, and gastrointestinal complications.

## MP1-1155 – video

**Robotic Nephroureterectomy from an Ileal Conduit - Techniques and Methods**

K. Zhao, L. Ward, M. Lee, B. Chao, D. Eun
*Temple University Hospital, Philadelphia, PA, USA*

## FRI-MP2-1030

**Does "Stacking" Multiple Aquablation Cases on One Operative Day Improve Outcomes?**

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*[1]Drexel University College of Medicine, Philadelphia, PA, USA; [2]Fox Chase Urologic Institute - Temple University Hospital, Philadelphia, PA, USA*

**Introduction and Objective:** Aquablation is characterized by reliably fast operative time regardless of prostate size, which is not necessarily true with other BPH treatment options. Aquablation representatives encourage urologists to "stack" multiple cases in one day, though it is unclear if stacking cases adds any clinical benefit.

**Methods:** We retrospectively reviewed 62 patients who underwent Aquablation from July 2023 to January 2024. Patients were divided into those that were the only case on that day ("solo") versus having two or more cases per day ("stacked"). We analyzed perioperative outcomes including, length of hospital stay, AUASS, PVR, Qmax, and void trial data. Secondary outcomes included complications (clot retention, transfusions, infections).

**Results:** Solo and stacked cases had comparable improvements in AUASS (-16.00 vs. -13.11, p=0.47), PVR (-88.8cc vs. -77.15cc, p=0.88) and Qmax (+7.5 cc/sec vs. +5.33 cc/sec, p=0.18). Compared to the solo cases, the stacked cases had higher percentage of primary void trials rather than delayed (53.7% vs. 37.5%, p=0.39), though solo cases had higher percentage of failed void primary void trials (37.5% vs. 11.1%, p=0.05). Clavien-Dindo class I and II complications were mixed between the two groups and did not reach statistical significance. One patient in the stacked group had a Clavien-Dindo IIIb complication for transfusion-dependent hematuria requiring fulguration and clot evacuation under general anesthesia. Average LOS was 1.4 days for both groups (p=1).

**Conclusions:** As Aquablation gains popularity, its representatives emphasize the convenience of stacking cases, though our study did not demonstrate any significant clinical benefit or decreased complication rate when stacking cases.

## FRI-MP2-1035

**Correlation Between Major Depressive Disorder and Benign Prostatic Enlargement**

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**Introduction and Objective:** BPE impacts quality of life and voiding patterns. Studies have investigated correlations between major depressive disorder and BPE concluding depression to be reactive to deterioration of health, LUTS, and ED. Our study aims to strengthen correlations between BPE and MDD, education, poverty, age, and race.

**Methods:** The National Health and Nutrition Examination Survey database included a population with self-reported BPE. The frequency of MDD (PHQ-9), race, education, poverty, and age were compared in BPE and non-BPE cohorts. The cohorts were compared using Pearson chi-square test, t-test, or Welch-tests. The dataset was weighted for independent variables and standardization of weight samples was performed. Priori method was performed for independent variable confounders. And multivariate logistic regression performed.

**Results:** A total of 106,236,315 samples were extracted. MDD was present in 3,445,289 patients (prevalence of 17.1%). BPE cohort was older, more likely to be college graduates, white, and lower socioeconomic stature. Multivariate logistic regression demonstrated that BPE was a risk factor for MDD (OR 1.5, 1.05-2.1, P=0.03). There was association with age (OR 1.09, 1.08- 1.1, P<0.001), education (OR 1.2, 1.09-1.3 P<0.01), poverty (OR 1.16, 1.05 - 1.28, P<0.01). There was no significance with race analysis.

**Conclusions:** Our study confirmed that MDD and BPE are correlated. The prevalence of BPE rose with the age. Lower socioeconomics experienced greater prevalence of prostate enlargement presumably due to dietary, occupational and social factors. Higher education levels were more likely to experience BPE. This may be a selection bias. Early recognition and treatment should be pursued in the setting of MDD/BPE.

Table 1. Patient characteristics

| Variable | Prostatic Enlargement n = 20,159,782 | % / SE | No Prostatic Enlargement n = 86,076533 | % / SE | Total Cohort n = 106,236,315 | | P-values |
|---|---|---|---|---|---|---|---|
| **Major Depressive Disorder** | | | | | | | |
| MDD Present | 3445289 | 17.09% | 14514074 | 16.86% | 17959363 | 16.91% | 0.9143 |
| MDD Absent | 16714493 | 82.91% | 71562459 | 83.14% | 88276952 | 83.09% | |
| **Race** | | | | | | | |
| Mexican American | 657798 | 3.26% | 5526350 | 6.42% | 6184148 | 5.82% | **0.000465** |
| Other Hispanic | 533082 | 2.64% | 2654198 | 3.08% | 3187280 | 3.00% | |
| Non-Hispanic White | 17070221 | 84.67% | 65306929 | 75.87% | 82377150 | 77.54% | |
| Non-Hispanic Black | 1411885 | 7.00% | 8481385 | 9.85% | 9893271 | 9.31% | |
| Other - Including Multiracial | 486795 | 2.41% | 4107672 | 4.77% | 4594467 | 4.32% | |
| **Education** | | | | | | | |
| Less Than 9th Grade | 1489086 | 7.39% | 6908083 | 8.03% | 8397169 | 7.90% | **0.003685** |
| 9-11th Grade (Includes 12th grade with no diploma) | 1488419 | 7.38% | 10277187 | 11.94% | 11765606 | 11.07% | |
| High School Grad/GED or Equivalent | 4382498 | 21.74% | 22491866 | 26.13% | 26874364 | 25.30% | |
| Some College or AA degree | 6738947 | 33.43% | 22601184 | 26.26% | 29340131 | 27.62% | |
| College Graduate or above | 6060832 | 30.06% | 23798214 | 27.65% | 29859046 | 28.11% | |
| **Age** | 64.752 | 0.5779 | 54.098 | 0.2537 | 56.12 | 0.2476 | **< 0.001** |
| **Poverty to Income Ratio** | 3.401 | 0.0732 | 3.3404 | 0.0413 | 3.365 | 0.062 | 0.123 |

Table 2. Multivariate Logistic Regression Associated with BPE

| Multivariate Analysis | | |
|---|---|---|
| | **Odds Ratio (95% CI)** | **P-value** |
| Age | 1.092(1.080, 1.103) | **<0.001** |
| Education | 1.210(1.089, 1.343) | **<0.001** |
| Poverty to Income Ratio | 1.163(1.055, 1.281) | **0.002** |
| Race | 0.889(-0.769, 1.028) | 0.113 |
| Major Depression Disorder | 1.485(1.051, 2.100) | **0.025** |

## FRI-MP2-1040

**Our Initial Experience with Aquablation – Defining Our Learning Curve**

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**Introduction and Objective:** Aquablation has comparable efficacy with decreased rates of sexual dysfunction compared to transurethral resection of prostate. Notably, its short learning curve is unchanged by prostate size. We aim to demonstrate institutional improvement in treatment outcomes by comparing the first half of our Aquablation cohort to the second (Group 1 versus Group 2).

**Methods:** This study retrospectively analyzed 62 patients that underwent Aquablation between July 2023 and January 2024. Bivariate analysis examined factors including length of stay (LOS), void trial data, changes in AUASS and SHIM values, and complications.

**Results:** Compared to Group 1, Group 2 had similar changes in hemoglobin (-1.62 vs. -1.68, p=0.78), AUASS (11.42 vs. 13.65, p=0.51), and SHIM (2.285 vs. 0.5, p=0.296). Groups were also similar in postoperative day 1 (POD1) catheter removal (51.6% vs. 45.1%, p=0.61), proportion of patients who passed voiding trial after POD1 catheter removal (75% vs. 71.4%, p=0.82), and post-operative blood transfusions (3.2% vs. 0%, p=0.31). Group 2 showed higher proportion of patients with improved PVR (73.6% vs. 92.8%, p=0.15) as well as actual PVR improvement (47.7mL vs. 106.2mL, p=0.08). Group 2 had a significantly shorter LOS by 0.5 days (1.645 versus 1.161 days, p=0.004). Both groups had complications (41% in Group 1 vs. 52% in Group 2; p=0.06), though Group 1 had only two Clavien-Dindo class III complications compared to the latter group having three class III complications.

**Conclusions:** The comparable improvements in symptom scores and objective measurements re-demonstrates the advantages of a short learning curve. Hospital stay was significantly shorter for group two, perhaps due to experience. Our institution has not yet trialed same day discharges, though this is a step we may pursue moving forward, as the hospital becomes more familiar with Aquablation.

## FRI-MP2-1045

**Understanding BPH Treatment Device Safety in the FDA's MAUDE Database Requires Context of Total Number of Procedures**

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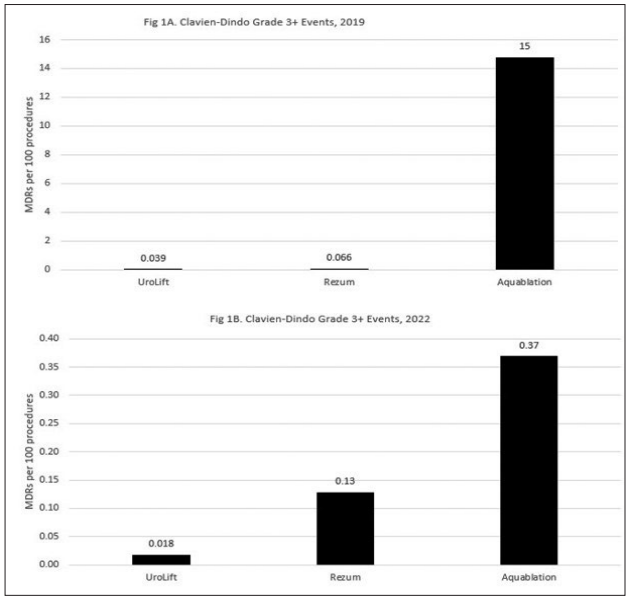
**Introduction and Objective:** The FDA's MAUDE database of medical device reports (MDRs) provides safety information for BPH treatment devices. Placing MDRs in context of the total number of procedures performed provides a more complete understanding of device safety. Here, we contextualize the number and severity of MDRs for BPH treatment devices in MAUDE as proportions of total procedures performed annually.

**Methods:** FDA's MAUDE database was probed for "UroLift," "Rezum," and "Aquabeam" between January 1, 2019 and December 31, 2022. Independent physician adjudication assigned timing and severity scores to post-operative events using the Clavien-Dindo (CD) scale; irrelevant/duplicate entries were excluded. An independent market model of Medicare CPT codes yielded an estimated total number of UroLift System, Rezum, and Aquablation procedures performed in the US in 2019-2022.

**Results:** UroLift was the most frequently performed procedure throughout all years analyzed; Aquablation had the greatest increase in total procedures (2019: 291, 2022: 8400). Estimated numbers of procedures were consistent with prior publications. The number of MDRs submitted from 2019-2022 increased for all devices. In 2019, 15% of Aquablation patients experienced serious events (CD3+, Fig 1A). The proportion of serious events for UroLift patients was significantly lower than Aquablation ($p<0.001$) and Rezum ($p<0.001$) in 2022 (Fig 1B). Between 2019-2022, the rate of mild to moderate events (CD 1-2) remained lowest for UroLift (2019: 2.0/10,000; 2022: 1.7/10,000) compared to Rezum (2019: 4.5/1,000; 2022: 3.7/1,000) and Aquablation (2019: 4.5/100; 2022: 3.7/1,000).

**Conclusions:** When placed in context of total procedures performed, the yearly proportions of mild, moderate and severe events were significantly higher for Aquablation than the minimally invasive surgical therapies analyzed. PUL had the lowest proportions of mild, moderate, and severe complications each year within MAUDE.



## FRI-MP2-1050

**Predicting Patient Centered Outcomes of a Prostate Artery Embolization Cohort**

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**Introduction and Objective:** Prostate Artery Embolization (PAE) is a treatment for benign prostatic hyperplasia (BPH) touted for low morbidity and minimal risk to continence and sexual function. However, optimal patient selection criteria are still unclear. Our study aims to use clinically relevant patient-centered composite outcomes to establish the peri-operative factors that predict success.

**Methods:** All PAEs over 7 years (2016-2023) at a single site were retrospectively reviewed. The primary outcome was "clinical success," defined as a patient with no additional BPH procedures within 3 years plus one of the following endpoints: catheter independence within 3 years, discontinuation of prostate medications within 3 years, or > 8-point IPSS reduction at 1 year.

**Results:** 41/70 (59%) procedures were deemed successful, and 20/70 (29%) patients pursued a second BPH procedure at an average 14 months post-op. 27% percent of patients received a suboptimal embolization (unilateral or incomplete), often due to atherosclerosis. Figure 1, identifies catheter dependence, unilateral embolization, and prominent median lobe presence as risk factors for a clinically unsuccessful procedure. Mean pre-PAE prostate size was not different between groups and was not predictive of success.

**Conclusions:** Our PAE cohort were suboptimal surgical candidates due to their baseline comorbidities, which likely contributed to our less efficacious outcomes. 30% of our patients were catheter-dependent, 40% had PVRs >200, and 24% had CCI ≥5, indicating severe comorbidities. Despite that, we found interesting results showing that patients with catheter dependence or prominent median lobes on evaluation had low success rates, which can be part of patient counseling when discussing goals and expectations.

**Figure 1.** Peri-operative factors predicting clinical failure in PAE. Abbreviations: PVR, Post-Void Residual; IPSS, International Prostate Symptom Score. Asterisk indicates statistical significance ($p < 0.05$).

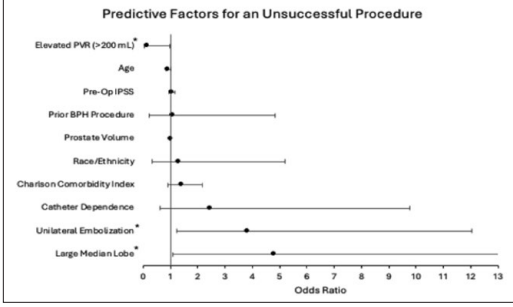


**Table 1.** Prostate artery embolization patient characteristics. Abbreviations: IQR, Interquartile Range; PVR, post-void residual; IPSS, international prostate symptom score; QOL, quality of life; A-1A, alpha-1 receptor antagonists; 5-ARI, 5-alpha reductase inhibitors.

| Characteristic | N (%); n=70 |
|---|---|
| Age, median (IQR) | 73.0 (66.9-78.2) |
| Race/Ethnicity | |
| Caucasian | 59 (84%) |
| African American | 9 (13%) |
| Other | 2 (3%) |
| Charlson Comorbidity Index, mean (St. Dev) | 3.4 (1.8) |
| Score ≥5 (<10-year estimated survival) | 17 (24%) |
| Catheter dependent | 20 (28%) |
| History of previous BPH procedure | 11 (16%) |
| Pre-operative prostate volume, median (IQR) | |
| Small <30cc | 1 (1%) |
| Average 30-80cc | 17 (24%) |
| Large 80-150cc | 29 (41%) |
| Very Large >150cc | 23 (33%) |
| PVR | |
| <200cc | 42 (60%) |
| 200-500cc | 18 (26%) |
| >500cc | 10 (14%) |
| Pre-operative IPSS, mean (St. Dev) | 20.4 (7.5) |
| Mild (0-7) | 3 (4%) |
| Moderate (8-19) | 23 (33%) |
| Severe (20-35) | 44 (63%) |
| IPSS QOL score, mean (St. Dev) | 4.2 (1.2) |
| Prominent median lobe on imaging | 47 (67%) |
| Use of A-1A or 5-ARI | 53 (76%) |

## FRI-MP2-1055

**Adherence to AUA Guidelines for the Work-up, Medical Management, Surgical Evaluation and Treatment of BPH: Work from a Quality Improvement Collaborative**

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**Introduction and Objective:** Previous studies noted varied adherence to clinical practice guidelines (CPGs), but studies have yet to quantify adherence to American Urological Association BPH guidelines. We studied guideline adherence in the context of a new quality improvement collaborative (QIC).

**Methods:** Data was collected as part of a statewide QIC. Medical records for patients undergoing select CPT codes from January 2020 to May 2022 were retrospectively reviewed for adherence to selected BPH guidelines.

**Results:** Most men were treated with transurethral resection of the prostate. 53.3% of men completed an IPSS and 52.3% had a urinalysis. 4.7% were counseled on behavioral modifications, 15.0% on medical therapy, and 100% on procedural options. For management, 79.4% were taking alpha blockers and 59.8% were taking a 5-ARI. For evaluation, 57% had a PVR, 63.6% had prostate size measurement, 37.4% had uroflowmetry, and 12.3% were counseled about treatment failure. Postoperatively, 51.6% completed an IPSS, 57% had a PVR, 6.50% had uroflowmetry, 50.6% stopped their alpha blocker, and 75.0% stopped their 5-ARI.

**Conclusions:** There was adherence to preoperative testing recommendations, but patient counseling was lacking in the initial workup and preoperative evaluation. We will convey the data to key stakeholders, expand data collection to other institutions, and devise an improvement implementation plan.

## FRI-MP2-1100

**Conversion to Single-Use Cystoscopes Reduces Positive Culture Rate in Patients Undergoing Ureteral Stent Removal After Renal Transplantation**

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**Introduction and Objective:** Ureteral stents are placed at the time of renal transplantation to prevent complications such as anastomotic stricture and urinary leak. Cystoscopic removal may contribute to urinary tract infection (UTI) and other complications in immunocompromised transplant recipients. The use of disposable, single-use cystoscopes may mitigate these risks by eliminating potentially suboptimal equipment reprocessing and other concerns about sterility. The goal of this study was to investigate whether the conversion to disposable cystoscopes reduces the incidence of 30-day positive urine cultures, ER visits, and inpatient admissions after transplant ureteral stent removal.

**Methods:** Retrospective chart review was performed on all patients undergoing renal transplantation and subsequent ureteral stent removal from 2018 to 2023 at our institution. Transition to disposable cystoscopes occurred mid-way through this time period. Statistical analysis was performed using chi-square tests.

**Results:** A total of 807 patients were analyzed with n=424 in the non-disposable scope group and n=383 in the disposable scope group. The positive culture rate after cystoscopy was 34.5% (29/84) in the non-disposable group compared to 19.6% (60/306) in the disposable group (p<0.01, NNT=6.7). Rates of 30-day ER admissions (11.8% vs. 13.6%, p>0.05) after cystoscopy did not differ between groups, however patients undergoing cystoscopy with disposable cystoscopes were more likely to have a hospital admission within 30 days of their stent removal (17.5% vs 24.5%, p=0.01) (Table 1). E. coli (35.5%) was the most common bacteria of the positive urine cultures in the non-disposable group, while the most common bacteria of the positive urine cultures in the disposable group was Klebsiella (23.3%) followed by Enterococcus (21.7%).

**Conclusions:** Conversion to single-use cystoscopes decreases the rate of 30-day positive urine cultures after cystoscopy for transplant ureteral stent removal.

| | Non-Disposable (%) | Disposable (%) | *p*-Value |
|---|---|---|---|
| **Total (n = 807)** | 424 (52.5%) | 383 (47.5%) | |
| **Urine Culture Drawn** | 84 (19.8%) | 306 (79.9%) | |
| **Positive Urine Culture⁺** | 29 (34.5%) | 60 (19.6%) | 0.003* |
| **ER Visits** | 50 (11.8%) | 52 (13.6%) | 0.45* |
| **Inpatient Admissions** | 74 (17.5%) | 94 (24.5%) | 0.01* |

**Table 1.** Outcomes of positive urine cultures, ER visits, and inpatient admissions 30 days after ureteral stent removal with non-disposable versus disposable cystoscopes.

⁺Positive urine culture is presented as positive urine cultures divided by total number of urine cultures taken

*Denotes chi-square test used

## FRI-MP2-1105 – video

**Pulsed Thulium Laser Enucleation of Prostate After Prior Failed Aquablation**

M. Lee, C. McPartland, E. Ghiraldi
*Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA*

## FRI-MP2-1110 – video

**Pulsed Thulium Laser Enucleation of Prostate: Our Initial Experience Using Thulio by Dornier MedTech**

M. Lee, C. McPartland, J. Friedlander, E. Ghiraldi
*Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA*

## FRI-MP3-1315

**Testicular Torsion: A Series Case Review**

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**Introduction and Objective:** The preferred management of testicular torsion is surgical correction, however when surgery is not available, manual detorsion may be attempted to salvage the testicle. If manual detorsion is performed in the wrong direction, the degree of torsion is increased, which is correlated with reduced salvage rates. This study explores the prevalence of lateral testicular torsion, and reflects on other factors influencing patient outcomes.

**Methods:** A total of 16 consecutive testicular torsion cases performed by a single urologist at one institution between 2014 and 2022 were reviewed. Descriptive statistics were used to identify trends in the data.

**Results:** Of the 16 cases, 8 resulted in orchiopexy and 8 resulted in orchiectomy. Six of the 8 orchiectomy cases were transferred from external facilities. Lateral torsion occurred in 5 cases, while medial torsion occurred in 11 cases. Mean time from pain onset to surgery start time was 31.2 hours in the orchiectomy group and 6.5 hours in the orchiopexy group (Figure 1).

**Conclusions:** Timely treatment is crucial to salvage a torsed testicle. Surgical intervention may not be readily available due to delays in seeking care, hospital delays and limited surgeon availability in rural, or underserved areas, especially as the current urologic workforce continues to retire. Manual torsion is an alternative, non-invasive treatment option, although it carries significant risks. There is great need to reevaluate existing teaching models and increase awareness of proper technique as well as the potential risks of performing manual detorsions.

**Table 1. Demographics and outcomes of consecutive single surgeon cases of testicular torsion from 2014 - 2022**

| | Total N = 16 | Orchiopexy N = 8 | Orchiectomy N = 8 |
|---|---|---|---|
| **Age (years), mean (SD)** | 14.2 (3.3) | 12.6 (2.1) | 15.9 (3.4) |
| **Transfer from External Facility, (number of cases)** | 8 | 2 | 6 |
| **Direct Presentation to ED (number of cases)** | 8 | 6 | 2 |
| **Direction of Torsion (number of cases)** | | | |
| Medial | 11 | 7 | 4 |
| Lateral | 5 | 1 | 4 |
| **Degree of Torsion, degrees, median (min, max)** | 450 (180, 720) | 360 (180, 720) | 450 (360, 720) |
| **Laterality of Testicle, (number of cases)** | | | |
| Right | 5 | 4 | 1 |
| Left | 11 | 4 | 7 |
| **Time from Pain Onset to OR, (hours)** | | | |
| Mean (SD, min, max) | 18.9 (29.3, 3.3, 120.0) | 6.5 (2.1, 3.3, 9.2) | 31.2 (38.5, 6.0, 120.0) |
| Median (IQR) | 8.0 (6.0, 19.4) | 7.0 (4.5, 8.3) | 17.5 (6.7, 42.5) |

## FRI-MP3-1320

**Neonatal E.coli Epididymo-Orchitis Treated Successfully with Antibiotics**

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**Introduction and Objective:** Epididymo-orchitis (EO), characterized by inflammation of the epididymis and testes, is rare in neonates. This case report aims to underscore the challenges faced during diagnosis and management while highlighting the importance of prompt recognition to reduce the risk of complications.

**Methods:** This case report was written by some of the providers that provided direct care for the infant during the entire disease course and reviewed the chart following discharge.

**Results:** We are presenting the case of a neonate born at 37 weeks with VATER syndrome. He underwent a divided colostomy on day of life [DOL] 2 for an imperforate anus and suspected fistula between the rectum and genitourinary tract. On DOL 13, an enlarged, hardened, and tender left testis with erythema of the overlying scrotum was noted. Scrotal ultrasound showed increased blood flow to the left epididymis and left testis without torsion. Urine culture confirmed E. coli infection and he was managed with 10 days of ceftazidime at 150mg/kg/day dosing. Symptoms completely resolved and he was discharged with 20mg/kg/day cephalexin prophylaxis. Neonatal EO presents a diagnostic challenge due to its overlapping symptoms with conditions such as inguinal hernias, scrotal hematoma, or testicular torsion. The etiology of neonatal EO is often due to ascending genitourinary bacterial infections, congenital genitourinary anomalies such as fistulas, or through hematogenous spread. Some reported bacterial causes are E. coli, Salmonella, M. tuberculosis, and P. aureginosa. Treatment may entail antibiotic therapy or surgical management to hinder complications such as testicular infarction, abscess formation, testicular loss, and mortality.

**Conclusions:** This case report hopes to shed light on a clinical course of epididymo-orchitis in a neonate and emphasize the importance in uncovering the underlying cause of such a rare yet consequential condition. This can be used as a guide for providers treating similar conditions.

## FRI-MP3-1330

**Novel Use of Intravesical N-Acetylcysteine in Recurrent Bladder Stone Formers of the Exstrophy-Epispadias Complex**

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*Johns Hopkins University, Baltimore, MD, USA*

**Introduction and Objective:** Although augmentation cystoplasty remains a durable and necessary procedure for many exstrophy-epispadias complex (EEC) patients, stones are a known risk when using bowel for a continent reservoir. Prevention of recurrence of bladder stones remains a challenging goal for chronic stone formers. We present on the initial implementation of daily intravesical n-acetylcysteine (NAC) instillation to prevent bladder stones in patients with a history of augmentation cystoplasty in the EEC.

**Methods:** NAC instillation was implemented in patients who were considered high-risk for recurrent bladder stone formation (having >4 prior stone surgeries) or at high-risk for complications from repeat stone surgery (history of vesicocutaneous fistula or pre-existing chronic kidney disease). Patients were instructed to dilute 10ml of 20% NAC with 50ml of normal saline and then instill the solution into the bladder via catheterization for 30-60 minutes of dwell time, twice daily. Patients were followed with renal bladder ultrasounds at 6-12 month intervals.

**Results:** All 4 patients had a history of an ileal augmentation and continent urinary stoma. Three patients had a history of at least 4 prior stone surgeries, 2 patients had a history of vesicocutaneous fistula after percutaneous cystolithalopaxy and one patient had a history of kidney transplantation prior to starting NAC instillations. The four patients had an average of 0.92 stone surgeries per year (range 0.38-1.2) prior to starting NAC. The mean follow up was 25.9 months (range 12.4-41). Three patients have remained stone free on surveillance ultrasounds. One patient had a recurrence of a 7mm bladder stone 6 months after a previous stone surgery and is awaiting treatment.

**Conclusions:** NAC instillation may be useful as an adjunct to prevent bladder stone formation in high-risk stone formers. Further research will be needed to determine long-term efficacy. Further research in non-stone formers and first-time stone formers will be needed to determine long-term efficacy.

## FRI-MP3-1325

**Mitochondrial Architecture and Metabolism Differentiate Exstrophy from Normal Bladder Smooth Muscle Cells In Vitro**

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**Introduction and Objective:** Bladder exstrophy is a rare congenital malformation of the lower urogenital tract that results in exposure to the environment. Surgical management requires a large enough bladder template to contain urine without harming the kidneys. Delayed closure allows for bladder growth, but the biological factors affecting bladder growth are unknown. Previous literature suggests a mitochondrial connection.

**Methods:** Biopsies were obtained from patients with classic bladder exstrophy undergoing primary closure and from patients with normal bladders undergoing ureteral reimplantation. Bladder growth was assessed by postoperative serial cystography. Detrusor smooth muscle cells were isolated from stromal tissue and frozen at -80° C until use. Frozen cells were thawed and incubated in Dulbecco's modified Eagle medium (DMEM) with 10% fetal bovine serum (FBS).
Mitochondrial architecture: Cells were incubated with Mitotracker dye (Invitrogen, Waltham, MA). Fluorescence microscopy was recorded via Micro-Manager software (Vale Lab, San Francisco) and analyzed using proprietary software.
Protein expression: Cell lysates were prepared using Laemmli lysis buffer (Sigma-Aldrich, Darmstadt, Germany). Concentration of DRP1 protein was determined via Western blot.
*Glucose/lactate metabolism*: Culture media was reserved prior to cell lysis. Glucose-to-lactate ratio was determined using the 2500 Biochemistry Analyzer (YSI, Yellow Springs, OH).
*Calcium handling*: Culture media was replaced with DMEM with 3% FBS for 24 hours. Cells were incubated with Fura-2AM dye, then bathed in aerated Krebs solution (0.02M K) for 15 minutes and high K+ aerated Krebs solution (0.01M K) for 10 minutes. Change in fluorescence was photographed and analyzed using the InCyt2 software (Intracellular Imaging, Cincinnati, OH).

**Results:** Biopsy samples were utilized from 5 exstrophy patients and 5 normal patients. All experiments have been completed but data and analysis are forthcoming.

**Conclusions:** Differences in the mitochondrial architecture, protein expression, and glucose metabolism could predict the growth potential of exstrophy bladders and provide objective data to guide surgical management.

## FRI-MP3-1335

**Management of Urinary Stoma Stenosis in Bladder Exstrophy: a Review of Outcomes and Optimizing Results**

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**Introduction and Objective:** Many patients with classic bladder exstrophy (CBE) require a continent urinary stoma (CUS) to achieve urinary continence. Stomal stenosis is the most feared complication as it is common, progressive and recurrent. The aim of this study was to review CBE patients that received a CUS to 1) determine if any variables increased the risk of stenosis, and 2) review strategies to treat stenosis and compare their effectiveness.

**Methods:** An institutional database of 1490 exstrophy-epispadias complex patients was reviewed for CBE patients who received a CUS and developed stenosis. Risks for stenosis included age, ethnicity, body mass index, stoma type, number of prior midline laparotomies and umbilicoplasty suture material. Surgical revision techniques for stenosis included stomal incision, with or without triamcinolone or scar excision with a local tissue rearrangement using a V-Y advancement flap or Z-plasty.

**Results:** 260 CBE patients underwent CUS creation of which 65 (25.0%) developed stenosis. Stenosis was increased when monofilament suture was used for the umbilicoplasty compared to monofilament suture (p=0.009). This remained significant after multivariate logistic regression analysis (p=0.003, OR 4.3, CI 1.4-13.1). Stenosis etiology included scar contracture (n=41), keloid (n=17), and hypertrophic scar (n=7). Most scar contractures were incised without triamcinolone with success in 100% whereas triamcinolone was curative in only 54.5%. Hypertrophic scars and keloids responded best to excision with a local tissue rearrangement (66.7%) while triamcinolone was curative in 42.9%.

**Conclusions:** Stomal stenosis remains a common complication and is a challenge for the reconstructive surgeon. Strategies to reduce its incidence are greatly desired and use of monofilament suture for the umbilicoplasty may reduce its' incidence. Stomal incision achieved the greatest success for scar contractures while excision with a local tissue rearrangement was most effective for hypertrophic scars and keloids. Utilizing these strategies to guide management towards etiology may minimize re-stenosis.

## FRI-MP3-1340

**Cloacal Exstrophy Closure without Osteotomy and Immobilization: A Bone to Pick**

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**Introduction and Objective:** Cloacal exstrophy (CE) remains one of the most severe birth defects compatible with life with a constellation of anomalies involving the bladder, genitals, hindgut, and spinal cord. Adjunctive measures, like osteotomy and immobilization, have been used to aid in bladder closure, yet debate persists of the proper role these adjuncts should play. The authors sought to evaluate the outcomes of CE primary closure without the use of osteotomy or lower extremity/pelvic immobilization.

**Methods:** An institutional database of 172 cloacal exstrophy patients was reviewed for patients closed without the use of osteotomy and/or limb immobilization. Patient records were reviewed for continence procedures, reclosure operation data, and continence outcomes.

**Results:** A total of 67 closure events that met inclusion criteria were identified with a total of 64 unique patients. 42 closure events developed eventual failure (42/67, 62.7%) with 3/4 secondary closure events also resulting in failure. The majority of closures did not use an osteotomy (63/67, 94.0%). Immobilization was used in a majority of closures (42/67), of which 17/42 were successful (40%). Failures were attributed to dehiscence and bladder prolapse respectively (20/42, 47.6%) (22/42, 52.4%). Median age at closure was 1 day old (1- 9.5 IQR) with a median diastasis of 6 cm (4.6-8 cm IQR). Median number of closure attempts needed to close the bladder in this cohort was 2 attempts (1-2 IQR). Of the 44 patients with recent continence data, 25 have greater than 3 hours of daytime continence, with the entirety of these patients catheterizing a stoma or from below.

**Conclusions:** These results highlight the necessity of utilizing available adjunctive interventions like osteotomy and post-operative immobilization to prioritize the outcomes of bladder closure in cloacal exstrophy.

## FRI-MP3-1345

**Vaginoplasty in Female Bladder Exstrophy-Epispadias Complex: Analysis of Technique, Outcomes, and Complications**

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**Introduction and Objective:** Bladder exstrophy-epispadias complex (BEEC) is a rare, serious congenital malformation. After achieving urinary continence and upper tract preservation, genital reconstruction is performed for function and cosmesis. We evaluated our institutional experience with vaginoplasty, including technical considerations and postoperative outcomes.

**Methods:** An IRB-approved database of BEEC patients undergoing vaginoplasty from 2000-2023 was retrospectively reviewed. Outcomes analyzed were age, reconstruction method, suture type, and postoperative complications, including vaginal stenosis requiring re-operation (VS), dehiscence, fistula, rectal injury, urinary tract infection (UTI), and surgical site infection (SSI).

**Results:** A total of 240 patients undergoing vaginoplasty were identified with 54 (22.5%). Mean age at vaginoplasty was 14.6 +/- 7 years old. The majority of cases were perineal flap vaginoplasty (87%). Nylon suture was most commonly used (42.6%), with PDS used in 24.1% of cases. Postoperative complication rates were VS 14.8%, dehiscence 3.7%, SSI 5.6%, and UTI 3.7%, 0% rectal injuries, 0% fistula (Table 1). The overall complication rate was 18.5%. We found no significant association between reconstruction method and VS (p=0.1). Among VS events, PDS was used in 62.5% of cases (p=0.015). On univariable analysis, PDS use was significantly associated with VS (OR 7.92, 95% CI [1.56-40.1], p=0.012). This finding remained significant when adjusting for reconstruction method on multivariable analysis (OR 10.0, 95% CI [1.79-56.1], p=0.009) (Table 2).

**Conclusions:** In this large retrospective study, overall incidence of postoperative complications is low, but VS is most common. Use of PDS during vaginoplasty was significantly associated with VS, suggesting other suture types may be more advantageous for successful surgical outcomes.

Table 1. Female Vaginoplasty Cohort and Outcomes Summary

| Variable | BEEC Cohort (2000-2023) |
|---|---|
| **Number of vaginoplasties** | 54 |
| **Average age (years)** | 14.6 +/- 7.4 |
| **Reconstruction Method (n, %)** | |
| Perineal flap | 47 (87) |
| YV vaginoplasty | 2 (3.7) |
| Posterior cutback | 3 (5.6) |
| Sigmoid vaginoplasty | 1 (1.9) |
| Neovagina creation | 1 (1.9) |
| **Suture Type (n, %)** | |
| Vicryl | 18 (33.3) |
| Nylon | 23 (42.6) |
| PDS | 11 (20.4) |
| Nylon and PDS | 2 (8.3) |
| **Concurrent Procedure (n, %)** | |
| Yes | 28 (51.9) |
| No | 26 (48.1) |
| **Complications (n, %)** | |
| Vaginal stenosis requiring return to | 8 (14.8) |
| OR | 3 (5.6) |
| Surgical site infection | 2 (3.7) |
| Dehiscence | 0 (0) |
| Fistula | 0 (0) |
| Rectal injury | 2 (3.7) |
| Urinary tract infection | |
| **Overall event complication rate (n, %)*** | 15 (27.8) |
| **Overall patient-specific complication rate (n, %)** | 10 (18.5) |

*This rate represents total number of complication events, including each event in a single patient

Table 2. Associations with Vaginal Stenosis Requiring Re-operation

| Characteristic | N (%) | | | p-value |
|---|---|---|---|---|
| | Total | Vaginal Stenosis Requiring Reoperation | | |
| | | Yes | No | |
| **Number of Patients** | 54 (100) | 8 (14.8) | 46 (85.2) | |
| **Method of Reconstruction** | | | | |
| Perineal Flap Vaginoplasty | 47 (87.0) | 7 (87.5) | 40 (87.0) | 0.1 |
| Cutback Vaginoplasty | 3 (5.5) | 0 (0) | 3 (6.5) | |
| YV Vaginoplasty | 2 (3.7) | 0 (0) | 2 (4.3) | |
| Sigmoid Vaginoplasty | 1 (1.9) | 1 (12.5) | 0 (0) | |
| Neovagina Creation | 1 (1.9) | 0 (0) | 1 (2.2) | |
| **Suture Type** | | | | |
| Nylon | 23 (42.6) | 2 (25.0) | 21 (45.6) | 0.048 |
| PDS | 11 (20.4) | 4 (50.0) | 7 (15.2) | |
| Nylon/PDS | 2 (3.7) | 1 (12.5) | 1 (2.2) | |
| Vicryl | 18 (33.3) | 1 (12.5) | 17 (37.0) | |
| **Suture Type (Use of PDS)** | | | | |
| PDS | 13 (24.1) | 5 (62.5) | 8 (17.4) | 0.015 |
| No PDS | 41 (75.9) | 3 (37.5) | 38 (82.6) | |

| Regression analysis for reoperation due to vaginal stenosis as outcome | | | | |
|---|---|---|---|---|
| Variable | Univariable Analysis | | Multivariable Analysis | |
| | OR (95% CI) | p-value | OR (95% CI) | p-value |
| **Method of Reconstruction** | | | | |
| Perineal Flap | REF | - | REF | - |
| Other | 0.95 (0.10-9.16) | 0.9 | 0.36 (0.03-4.32) | 0.4 |
| **Use of PDS** | | | | |
| No | REF | - | REF | - |
| Yes | 7.92 (1.56-40.1) | **0.012** | 10.0 (1.79-56.1) | **0.009** |

## FRI-MP3-1355

**Comparing Surgical Approaches: Open vs. Robot-Assisted Laparoscopic Dismembered Ureteral Reimplant for Primary Obstructive Megaureter**

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**Introduction and Objective:** Dismembered ureteral reimplant (DUR) is done to treat primary obstructive megaureter (POM). To describe and compare outcomes between open dismembered ureteral reimplant (ODUR) versus robot-assisted laparoscopic dismembered ureteral reimplant (RALDUR).

**Methods:** An IRB approved prospective registry was used to retrospectively identify all patients who underwent DUR for POM between 2015-2022. Demographics, preoperative, perioperative and long-term outcomes were analyzed. P values were two sided and a $p<0.05$ was considered significant.

**Results:** Our cohort consisted of 50 patients, 14 (28%) underwent ODUR and 36 (72%) underwent RALDUR. Preoperatively, no differences were noted between RALDUR and ODUR in terms of antenatal hydronephrosis (p=1.00), febrile UTI (p=0.09), and reflux grade on preoperative VCUG (p=0.53). Ipsilateral kidney function was 37% in the RALDUR group compared to 32% in the ODUR, with no difference between them (p=0.74). RALDUR was associated with a longer procedure time (278 minutes vs. 191 minutes, p=0.001) and a higher percentage of ureteral tapering (63% vs. 0%, p=0.01). Both cohorts had similar length of stay (p=0.33) and IV morphine use (p=0.84). Postoperatively, both groups had a similar 30 day complication (p=0.44), primarily Clavien Dindo grades I and II. During follow up, 30 (91%) patients in the RALDUR group had stable/improved hydronephrosis in their most recent ultrasound compared to 12 (86%) in the ODUR (p=0.63). Neither group underwent a reintervention procedure.

**Conclusions:** RALDUR is shown to have comparable success and efficacy to ODUR. A longer procedure time and higher rate of ureteral tapering is reported in RALDUR.

**Table 1:** Demographics and preoperative, and perioperative details of ODUR[1] vs RALDUR[2]

| | ODUR | RALDUR | |
|---|---|---|---|
| N= 50 | 14 (28%) | 36 (72%) | |
| Gender | | | 0.5 |
| - Male | 9 (64%) | 27 (75%) | |
| - Female | 5 (36%) | 9 (25%) | |
| Antenatal hydronephrosis | 8 (62%) | 21 (58%) | 1.00 |
| Hydronephrosis on RBUS | 12 (86%) | 31 (97%) | 0.22 |
| SFU hydronephrosis grade | | | 0.62 |
| - I | 1 (8%) | 4 (13%) | |
| - II | 2 (17%) | 2 (6%) | |
| - III | 4 (33%) | 7 (23%) | |
| - IV | 5 (42%) | 18 (58%) | |
| Preoperative VCUG | 9 (64%) | 18 (50%) | 0.53 |
| Reflux grade | | | 0.11 |
| - 0 | 3 (33%) | 11 (61%) | |
| - I | 0 (0%) | 2 (11%) | |
| - II | 0 (0%) | 1 (6%) | |
| - III | 0 (0%) | 1 (6%) | |
| - IV | 2 (22%) | 0 (0%) | |
| - V | 4 (44%) | 3 (17%) | |
| Ipsilateral kidney function (%), median (IQR) | 32.15 (25.78, 49) | 37 (26.3, 51.95) | 0.74 |
| Febrile UTI | 8 (57%) | 9 (25%) | 0.09 |
| Laterality | | | 0.73 |
| - Left | 6 (43%) | 20 (56%) | |
| - Right | 6 (43%) | 13 (36%) | |
| - Bilateral | 2 (14%) | 3 (8%) | |
| Age in months, median (IQR) | 24.28 (19.58, 57.88) | 48.11 (21.47, 98.43) | 0.12 |
| Procedure time in minutes, median (IQR) | 191 (160, 258) | 278 (251, 327) | 0.001 |
| Ureteral tapering | 0 (0%) | 22 (63%) | 0.01 |
| LOS in days, median (IQR) | 2 (1, 3) | 2 (1, 2) | 0.33 |
| IV morphine (mg/kg/d), median (IQR) | 0 (0, 0.05) | 0 (0, 0.05) | 0.84 |

[1] Open dismembered ureteral reimplant
[2] Robot-assisted laparoscopic dismembered ureteral reimplant

Table 2: Postoperative, and long-term outcomes of ODUR vs RALDUR

| | ODUR | RALDUR | |
|---|---|---|---|
| N= 50 | 14 (28%) | 36 (72%) | |
| 1-30 day complication | 4 (29%) | 6 (17%) | 0.44 |
| 1-30 day Clavien Dindo grade | | | 0.43 |
| - I | 1 (25%) | 3 (50%) | |
| - II | 2 (50%) | 1 (17%) | |
| - IIIa | 1 (25%) | 0 (0%) | |
| - IIIb | 0 (0%) | 2 (33%) | |
| Postop febrile UTI | 2 (14%) | 3 (8%) | 0.61 |
| Postop VCUG | 2 (14%) | 2 (6%) | 0.57 |
| De novo or worsened reflux | 2 (100%) | 0 (0%) | 0.33 |
| Hydronephrosis status | | | 0.63 |
| - Stable/improved | 12 (86%) | 30 (91%) | |
| - De novo or worsened | 2 (14%) | 3 (9%) | |
| Reintervention | 0 (0%) | 0 (0%) | |
| Follow-up duration in months, median (IQR) | 31.5 (20, 64) | 23.5 (10, 56) | 0.13 |

## FRI-MP3-1400

**Implementation and Utility of the da Vinci Single Port (SP®) in Pediatric Urology**

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**Introduction and Objective:** The da Vinci Single Port (SP ®) Robotic Surgical System, designed to perform complex procedures through a single 2.5 cm incision, offers an alternative to traditional multi-port pediatric robotic surgery. This review aims to evaluate the implementation and utility of the SP system in pediatric urology, focusing on its feasibility, advantages, and outcomes compared to traditional multi-port (MP) robotic system.

**Methods:** A saturation review of the literature was conducted on the use of the SP system in pediatric urology. The fundamental metrics analyzed included operative times, hospital stay duration, postoperative pain and complications, cosmetic outcomes, and the learning curve associated with the adoption of this technology. This review also considers technical challenges and adaptations required for the successful implementation of the SP system in pediatric patients.

**Results:** The SP system has been successfully utilized in a variety of pediatric urological procedures, including pyeloplasty, nephroureterectomy, and appendicovesicostomy. Reports have shown mixed operative times but similar hospital stay durations, and postoperative outcomes between SP and MP robotic surgery. The learning curve for surgeons transitioning from MP to SP systems in a pediatric population appears manageable, though a smaller abdominal circumference in pediatric patients seems to be a notable hurdle in adopting the technology. This review did not consider the initial and ongoing cost of the SP to a hospital system as it is assumed the SP will be primarily purchased and utilized by adult services.

**Conclusions:** The da Vinci SP robotic system emerges not as a replacement but as a complementary option to pediatric urological robotic surgery. There may be some unique advantages to the SP over MP in specific scenarios. Cosmetic outcomes appear similar but need additional research. Future research should focus on patient-centered outcomes to fully understand the benefits of the SP and optimize its use in pediatric patients.

## FRI-MP4-1515

**Infectious Complications After Prostate Biopsy: A Multidisciplinary Investigation and Intervention at a Major Veterans Affairs Medical Center**

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**Introduction and Objective:** Prostate biopsy remains the cornerstone of prostate cancer diagnosis. Although a brief, outpatient procedure, infectious complications occur in 2-6% of cases including urinary tract infection, prostatitis, epididymitis, bacteremia, and sepsis. At our medical center, there was an increase in the rate of post-prostate biopsy infections between 2021-2022, from ~0.93% to 4.27%. We assembled a multidisciplinary team from urology, nursing, and infectious disease departments to investigate causes. Targeted interventions were developed aimed at reducing the rate of infections, which we started implementing in March 2022 (Table 1). The objective of this study is to evaluate the outcomes of our efforts.

**Methods:** We identified prostate biopsies performed at our institution between October 2018-February 2024 using retrospective chart review. All were transrectal ultrasound guided biopsies. Infectious complications occurring within 30 days were included.

**Results:** Of the 2,433 prostate biopsies reviewed, 38 were associated with a post-biopsy infectious complication (Figure 1). Our analysis defined three time periods with different rates of infectious complication. The first (October 2018-August 2021) with an average infection rate of 0.87% ± 0.02%, the second (September 2021-December 2022) 4.22% ± 0.05%, and the final (January 2023-February 2024) 0.82% ± 0.01%. Lower rates of infection occurred in the first and third time periods as compared to the second period (both $p<0.001$).

**Conclusions:** After the introduction of our targeted interventions, we appreciated a significant reduction in the rate of infectious complication after prostate biopsy. We are limited in our ability to distinguish which interventions were most impactful as we implemented the majority of them simultaneously.

| Concerns Identified from Multidisciplinary Investigation | Targeted Interventions |
|---|---|
| Suboptimal coverage for infectious pathogens | • Ensured appropriate timing of pre-procedural antibiotics<br>• Added Ciprofloxacin to pre-procedural antibiotics<br>• Started Fosfomycin susceptibility testing |
| Inadequate rectal site preparation | • Began prepping rectal vault and perianal area with betadine-soaked swabs<br>• Mixed betadine into lubricant used on probe<br>• Pre-procedure bowel prep transitioned to enema instead of suppository |
| Inconsistencies in procedural documentation and pre-procedural patient counseling | • Improved procedural documentation and standardized patient phone calls by nursing |

**Table 1.** Summary of Findings from Investigation of Period of Increased Rate of Infectious Complications and Subsequent Interventions

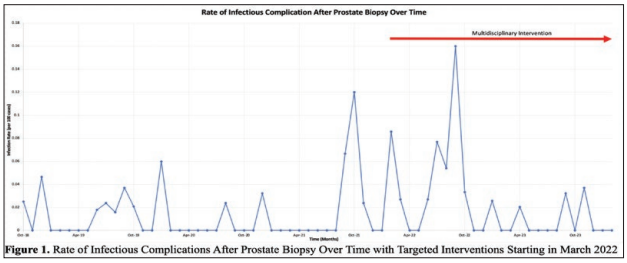


**Figure 1.** Rate of Infectious Complications After Prostate Biopsy Over Time with Targeted Interventions Starting in March 2022

## FRI-MP4-1520

**Case Report: Systemic Aspergillosis Diagnosed by Transperineal Prostate Aspiration**

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**Introduction and Objective:** Prostate abscess is a rare clinical finding without clear management guidelines. In those that require procedural intervention, such as transurethral unroofing, prostate abscess aspiration is rarely performed prior to further intervention. Here, we present a patient with immunosuppression due to prior liver transplant and Hodgkin lymphoma, who presented with neutropenic fever with unclear etiology. His urine culture was negative. CT abdominal pelvis was notable only for several prostate abscesses (largest 2 cm) for which urology was consulted.

**Methods:** Given his immunosuppression and risk of post-operative complications, we elected to perform a transperineal aspiration of the prostate abscesses under sedation. A BK ultrasound and Precision Point device were used to target the lesion with an 18G needle and the aspirate was sent for analysis.

**Results:** The abscess aspirate grew aspergillus. Further scanning showed disseminated aspergillosis with lung involvement. He was treated with systemic dual antifungal therapy then taken to the OR for a transurethral resection of the prostate. He discharged in stable condition on post-operative day 3 with systemic antifungal therapy. One month after surgery, his CT pelvis has not shown recurrent aspergillosis and he has had excellent urinary flow.

**Conclusions:** To our knowledge this is the first case of systemic aspergillosis diagnosed by transperineally. This case highlights several important points 1) the viability of trans-perineal aspiration for targeted treatment in the immunocompromised patient; 2) the importance of trans-urethral resection and unroofing for source control of the immunocompromised patient; 3) the unique diagnosis of invasive Aspergillus infection from the prostate with primary lung source. Additionally, we hope to shed light on the importance of culture directed treatment of prostatic abscess in the immunocompromised host as common microbes may not be covered with empiric treatment. Transperineal prostate abscess aspiration may be a safe and valuable diagnostic tool for those with prostate abscesses and immunosuppression.

## FRI-MP4-1525

**Lightning Striking Twice: Bilateral Spontaneous Retroperitoneal Hematomas Separated in Time and Space**

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**Introduction and Objective:** Spontaneous retroperitoneal hematomas (SRH) are poorly understood and mainly discussed in case reports. Non-traumatic causes can be iatrogenic or without an identifiable cause. We report a patient who experienced two separate SRH, one while on warfarin, but the other with no obvious cause. Most risk factors of SRH remain vastly unknown.

**Methods:** We present a case of a 60-year-old male with end stage kidney disease with a functional renal transplant. Baseline creatinine was 3 mg/dL following transplant with non-nephrotic proteinuria. Medical history includes hypertension, obesity, and deep vein thrombosis with a negative hypercoagulability workup. In July 2022, he had a left-sided SRH while on warfarin. One month later, he experienced a right-sided retroperitoneal bleed despite holding anticoagulants. He has been on enoxaparin without any further incidences.

**Results:** Initial CT demonstrated a left-sided SRH without identifiable etiology and without otherwise concerning pathology. The second CT one month later showed right-sided retroperitoneal hemorrhage related to a right subcapsular renal hematoma. MRI obtained three months later showed no enhancing lesions and resolving hematomas.

**Conclusions:** This is a unique case of bilateral SRH occurring one month apart; one while on warfarin, and the other while holding anticoagulation. This could be Wunderlich syndrome, which is associated with renal neoplasms, vascular disease, infections, and cysts. Potential risk factors for SRH here include renal cysts, warfarin, obesity, and cardiovascular disease. This case highlights the need for further understanding of the risk factors of SRH.

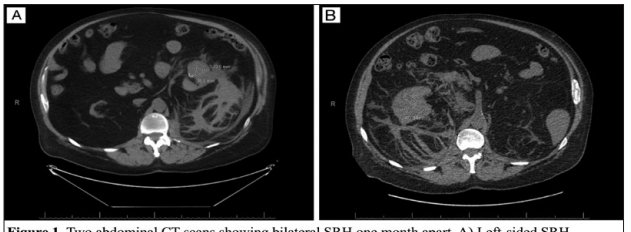


**Figure 1.** Two abdominal CT scans showing bilateral SRH one month apart. A) Left-sided SRH. B) Right-sided SRH one month later.

## FRI-MP4-1535

**Trends Regarding Incidence of Renal Stones within Inpatients Based on Age, Gender, and Ethnicity from 2000-2015**

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**Introduction and Objective:** Longitudinal studies have demonstrated an increasing prevalence of renal stones, posing significant health, social, and economic burdens on patients. Evolving stone demographics within hospitalized patients remain unreported. This study aims to evaluate the shifting incidences of renal stones within inpatients.

**Methods:** Utilizing the National Inpatient Sample (NIS) Database spanning 2000-2015, demographic data including age, race, and gender were extracted for patients diagnosed with renal stones. Temporal trends were analyzed using linear regression and t-test.

**Results:** Between 2000 and 2015, 1,106,920 hospitalized patients received a renal stone diagnosis (Table 1). Male patients comprised approximately 48.34%, while female patients accounted for 51.66%. Notably, the proportion of female patients increased significantly from 46.5% in 2000 to 52.4% in 2015 (ptrend = 0.0001). Within subdivided periods, hospitalized females surpassed males in prevalence during both 2005-2009 ($p < 0.05$) and 2010-2015 ($p < 0.05$). Additionally, white patients constituted 80.2% of renal stone cases in 2000, decreasing to 73.8% in 2015 ($p < 0.001$), while black patients' proportion increased from 6.3% to 9.3% ($p < 0.001$). Furthermore, the average age of patients diagnosed with renal stones rose from 50.6 in 2000 to 57.5 in 2015 ($p < 0.001$).

**Conclusions:** The findings reveal significant demographic shifts in renal stone inpatient populations, including increasing female prevalence, ethnic diversity, and patient age. These shifts underscore the need for adaptation in healthcare strategies, research focus, and public health initiatives to improve patient care and enhance global health equity. These changes may be due to shifts in population age and racial demographics, stone complexity, practice patterns, and socioeconomic factors. Additional studies are necessary to determine the causation of these trends, facilitating targeted interventions and improved outcomes for patients worldwide.

Table 1. Demographics of All Inpatients with Renal Stones from 2000-2015

| | n | Cumulative | 2000-2004 | 2005-2009 | 2010-2015 |
|---|---|---|---|---|---|
| Age (yrs) | 1106920 | 53.88 | 51.05 | 53.11 | 56.09 |
| | | | | | |
| Male | 534859 | 48.34% | 50.84% | 47.65% | 47.34% |
| Female | 571583 | 51.66% | 49.16% | 52.35% | 52.66% |
| | | | | | |
| White | 701903 | 75.68% | 77.96% | 75.66% | 74.64% |
| Black | 73685 | 7.94% | 7.08% | 7.36% | 8.69% |
| Hispanic | 102735 | 11.08% | 10.35% | 11.33% | 11.27% |
| Asian or Pacific Islander | 18502 | 1.99% | 1.87% | 1.95% | 2.08% |
| Native American | 4156 | 0.45% | 0.30% | 0.52% | 0.48% |
| Other | 26464 | 2.85% | 2.44% | 3.19% | 2.85% |

## FRI-MP4-1545

**Ambulatory, Tubeless Percutaneous Nephrolithotomy as a Safe, Cost-effective Treatment Option for Patients with Large Renal Stones Regardless of Total Stone Burden, Comorbidities, and Anticoagulation Status**

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**Introduction and Objective:** Percutaneous nephrolithotomy (PCNL) is the standard of care for renal stone burden >2cm and lower pole stone burden >1cm. The most common postoperative course for patients includes hospitalization and placement of a nephrostomy tube. Prior studies on ambulatory, tubeless PCNL had strict inclusion criteria or 24-hour observation. We report on outcomes of our single-institution cohort who underwent tubeless PCNL with same-day discharge regardless of stone burden, number of dilation tracts, comorbidities, or anticoagulation use.

**Methods:** We retrospectively reviewed ambulatory tubeless PCNLs at our institution in a 26-month period by a single surgeon. Patient characteristics, operative characteristics, and complications were recorded.

**Results:** Ambulatory, tubeless PCNL was performed in 59 patients. The average age was 58.7 and average BMI was 30.7. Nineteen (32.2%) patients had an American Society of Anesthesiology (ASA) ≥ 3. Ten (16.9%) patients were on anticoagulation. Only 7 (11.9%) patients required readmission. Postoperative complications occurred in 7 (11.9%) patients, of which there were 2 (28.9%) Clavien I, 2 (28.9%) Clavien II and 3 (42.9%) Clavien III. Over half (67.8%) of patients had a stone burden ≥2cm. Forty-eight (81.4%) patients had complete stone clearance while 11 (18.6%) required ureteroscopy for residual stones.

**Conclusions:** The outpatient discharge model for PCNLs has grown in favor as a safe, cost-effective treatment option in select patients. Tubeless PCNL allows patients a more comfortable recovery. To date, many studies possess stringent inclusion criteria such as stone size <2cm, ASA ≤ 2, non-anticoagulated, and low BMI. Our study shows promising data that outpatient, tubeless PCNL is safe for a broader cohort of patients than previously described and should be included in the armamentarium of treatment options.

| Patient/ Operative Characteristics | Average, n (%) |
|---|---|
| Age | 58.7 |
| BMI | 30.7 |
| Sex | |
| Female | 33 (55.9%) |
| Male | 26 (44.1%) |
| On Antiplatelet or Anticoagulation | |
| ASA ≤ 2 | 40 (67.8%) |
| ASA ≥ 3 | 19 (32.2%) |
| Pre-Existing Nephrostomy Tube | 8 (13.6%) |
| Multiple Access Sites | 11 (18.6%) |
| Stone Burden ≥2cm | 40 (67.8%) |
| Pre-Stented | 13 (22.0%) |
| Endoscopic Guided Access | 32 (54.2%) |
| Postoperative Complication | 7 (11.9%) |
| Additional Ureteroscopy Needed | 11 (18.6%) |
| Readmission | 7 (11.9%) |

## FRI-MP4-1550

**Comparing Stone-Free Rates Between Percutaneous Nephrolithotripsy and Robotic Pyelolithotomy in Obese Patients**

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**Introduction and Objective:** Treatment of renal calculus disease in obese patients presents unique challenges. Skin-to-stone distances and prone positioning can make percutaneous nephrolithotripsy (PCNL) difficult in regards to achieving stone-free status from a single procedure. Our group sought to examine whether stone-free rates were improved in obese patients who underwent robotic pyelolithotomy (RPL) compared to PCNL.

**Methods:** We compiled all instances of RPL performed at our institution from 2017 through 2023. We identified obese patients in this cohort and compared the stone-free rates following RPL to obese patients who underwent PCNL. Obesity was defined as a body mass index (BMI) of greater than 30.0 kg/m$^2$. Stone-free rate was defined as lack of observable stone fragments noted at completion of procedure and on postoperative imaging. We compared the two cohorts based on age, sex, average BMI, stone-burden, skin-to-stone distance, and length of hospital stay.

**Results:** 17 patients who underwent RPL and 23 patients who underwent PCNL were included. There was no statistically significant difference in mean age (52.8 years in RPL versus 52.7 years in PCNL, p=0.183), sex (p=0.794), stone burden (34.0 mm in RPL versus 24.7 mm in PCNL, p=0.320), skin-to-stone distance (131.6 mm in RPL versus 112.7 mm in PCNL, p=0.072), and length of hospital stay (1.82 days in RPL versus 2.3 days in PCNL, p=0.370). There was a statistically significant difference in mean BMI (RPL was 31.9 versus 35.5 in PCNL, p=0.003). Stone-free rates were statistically significantly lower in the RPL cohort compared to the PCNL cohort (p=0.025).

**Conclusions:** Our study indicates that RPL is a reasonable alternative to PCNL for management of renal calculus disease in obese patients and offers a significant improvement in postoperative stone-free rates. Further studies are necessary to corroborate our results and to further characterize the role of RPL in the treatment of obese patients with renal calculus disease.

## FRI-MP4-1555

**Factors Associated with Patient Initiated After Hour Phone Calls After Endourologic Surgery**

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**Introduction and Objective:** After-hour and clinic advice lines help address postoperative concerns, however patient factors associated with postoperative calls are unknown. Characterization of patient concerns may help guide perioperative counseling. We aim to characterize after hour phone calls by patients following same-day endourologic procedures.

**Methods:** Consecutive patients from 9/1/22-3/31/23 who underwent endourologic procedures with same-day discharge at a single institution were included. Patients who had non-urologic primary procedures or were admitted overnight were excluded. Primary outcome was patient-initiated communications within 30 days of procedure. Patients were characterized as after-hour callers, clinic-callers, or non-callers. Analysis was performed using Fisher exact test, Chi-squared test or Kruskal-Wallis rank sum tests.

**Results:** Over the study period, 231 encounters met inclusion criteria. Twenty-two (9.5%) patients initiated an after-hours call, 50 (21.6%) called the clinic, and 159 (68.8%) were non-callers. There was no difference in age, sex, insurance status, or median household income between groups (Table 1). Among the 82 patients discharged with a catheter, 38 (46%) contacted a provider. After-hours callers were more likely to have a catheter (50%) compared to non-callers (27.8%, p=0.001). Ureteral stent status also differed significantly between groups (p=0.024). Callers were more likely to visit the ED within 30-days post-op (31.8%) vs. non-callers (9.4%, p=0.0024). The most common after-hours concern was pain, followed by catheter-related issues.

**Conclusions:** Patients discharged with foley catheter or ureteral stent were more likely to use after-hour services. Patients who previously underwent urologic surgery were no more or less likely to call, suggesting that familiarity with urologic procedures may not predict caller status. Further work will examine incorporation of improved postoperative instructions to reduce the number of after-hour calls.

| | Overall | After-hours callers | Clinic-callers | Non-callers | p value |
|---|---|---|---|---|---|
| n | 231 | 22 | 50 | 159 | |
| Age (median [IQR]) | 63.0 [51.0, 71.8] | 69.5 [63.0, 72.5] | 63.5 [52.5, 69.8] | 62.5 [49.0, 72.0] | 0.399 |
| Sex = Male (%) | 151 (65.4) | 18 (81.8) | 37 (74.0) | 96 (60.4) | 0.049 |
| Insurance Status = Private (%) | 151 (65.4) | 10 (45.5) | 34 (68.0) | 107 (67.3) | 0.118 |
| Median Household Income* (%) | | | | | 0.397 |
| 10-50K | 13 (5.7) | 0 (0.0) | 1 (2.0) | 12 (7.6) | |
| 50-99K | 67 (29.3) | 7 (33.3) | 18 (36.0) | 42 (26.6) | |
| 100K+ | 149 (65.1) | 14 (66.7) | 31 (62.0) | 104 (65.8) | |
| Race (%) | | | | | 0.164 |
| African American | 77 (33.8) | 3 (13.6) | 17 (34.7) | 57 (36.3) | |
| Asian | 8 (3.5) | 0 (0.0) | 0 (0.0) | 8 (5.1) | |
| Other | 17 (7.5) | 2 (9.1) | 3 (6.1) | 12 (7.6) | |
| White | 126 (55.3) | 17 (77.3) | 29 (59.2) | 80 (51.0) | |
| Hispanic | 10 (4.4) | 2 (9.1) | 4 (8.2) | 4 (2.5) | 0.065 |
| Relationship Status (%) | | | | | 0.085 |
| Divorced | 12 (5.2) | 3 (14.3) | 1 (2.0) | 8 (5.0) | |
| Married | 130 (56.5) | 11 (52.4) | 27 (54.0) | 92 (57.9) | |
| Single | 74 (32.2) | 4 (19.0) | 17 (34.0) | 53 (33.3) | |
| Widowed | 14 (6.1) | 3 (14.3) | 5 (10.0) | 6 (3.8) | |
| Chronic catheter (%) | 22 (9.7) | 2 (9.5) | 6 (12.2) | 14 (8.9) | 0.767 |
| Prior urologic surgery (%) | 190 (83.7) | 20 (90.9) | 40 (81.6) | 130 (83.3) | 0.660 |
| Foley at discharge (%) | 82 (35.7) | 11 (50.0) | 27 (54.0) | 44 (27.8) | **0.001** |
| Stent (%) | | | | | **0.024** |
| No | 127 (55.2) | 11 (50.0) | 35 (70.0) | 81 (51.3) | |
| Yes, NOT on a dangler | 98 (42.6) | 9 (40.9) | 14 (28.0) | 75 (47.5) | |
| Yes, on a dangler | 5 (2.2) | 2 (9.1) | 1 (2.0) | 2 (1.3) | |
| Discharged with narcotic (%) | 27 (11.7) | 1 (4.5) | 5 (10.0) | 21 (13.2) | 0.580 |
| Post-op ED Visit within 30 days | 34 (14.7) | 7 (31.8) | 12 (24.0) | 15 (9.4) | **0.002** |

Summary statistics included frequency (%) for categorical variables and mean(SD)/ median[IQR] for continuous variables.

Fisher exact test, Chi-squared test or Kruskal-Wallis rank sum test were performed to compare differences among groups

*Based on the 2021 Census Bureau income statistics for United States Zip Codes

## FRI-MP4-1600

**Improvement in YouTube Patient Education for Kidney Stone Dietary Therapy**

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**Introduction and Objective:** As kidney stone disease (KSD) prevalence doubled this century, there is increasing public attention to dietary intervention for prevention and treatment. 3/4 Americans modify behavior due to online health information, and KSD queries have rapidly increased. Unfortunately, past studies indicate low accuracy and utility of health information on social media. YouTube, the second-most accessed website, recently made changes to elevate trustworthy information. We performed the first-ever analysis of KSD diet content on YouTube.

**Methods:** We queried YouTube using keywords and captured all unique results. Duplicate, non-English, and off-topic videos were excluded. Variables of interest included creator demographics, video length, engagement, and dietary recommendation. Three independent reviewers assessed accuracy using AUA guidelines, popularity using Video Power Index (VPI), and quality via the following validated formulae: PEMAT Understandability, PEMAT Actionability, Global Quality Scale, and JAMA Benchmark.

**Results:** 46 videos were included. 39 (84.8%) were produced by a healthcare account. Average length was 467sec±686sec, and median engagement metrics included 144,500 subscribers, 25,689 views, 447 likes, and 52 comments. Top dietary recommendations included citrus (24), no oxalate (15), no animal protein (11), and no salt (5). All videos were considered accurate. VPI was 140%. Quality scores were unanimously low across formulae (Table 1).

**Conclusions:** YouTube content covering KSD dietary therapy is accurate but lacks actionability and utility. Most videos, even from healthcare creators, lack clarity and implementable advice. YouTube has made commendable strides in reducing misinformation, as seen with high accuracy and prominent healthcare accounts. Physician creators must match this effort to improve real-world utility of their educational content. Expert guidelines and formal training on the production of useful, accessible online patient-facing content is warranted, especially given the popularity of these resources.

| Quality Formula | Score |
|---|---|
| PEMAT Understandability (%) | 70.04 |
| PEMAT Actionability (%) | 68.02 |
| Global Quality Scale (range: 1-5) | 2.78 |
| JAMA Benchmark (range: 1-4) | 1.82 |

## FRI-MP4-1605 – video

**Mini PCNL with Retrograde Renal Access, Thulium Laser and Suction Stone Evacuation**

W. Terry
*Urology Associates of Mobile, Mobile, AL, USA*

## FRI-MP4-1610 – video

**Single-Port Pyelolithotomy: A Feasible Treatment Modality for Large Renal Pelvic Stones**

R. Clearie[1], E. Jones[1], M. Meadvin[2], Y. Son[1], J. Krishnan[1]
*[1]Jefferson New Jersey, Stratford, NJ, USA; [2]Temple University, Philadelphia, PA, USA*

## FRI-MP4-1615 – video

**Suprapubic Catheter Placement Using the Lowsley Retractor**

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## FRI-MP5-1630

**Gender Disparity in Kidney Cancer: Complications, Outcomes, and Risk Factors**

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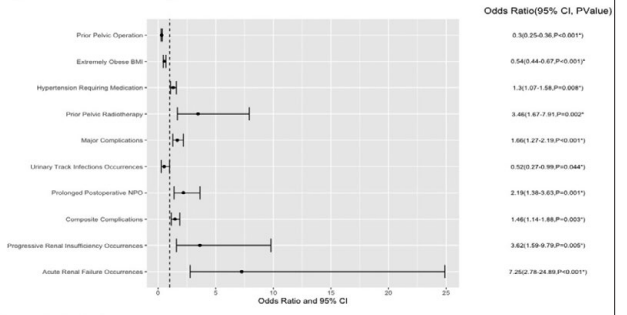
**Introduction and Objective:** Gender-related differences in renal malignancy exist in incidence, management, and outcomes. Men are twice as likely as women to develop kidney cancer, presenting with larger tumors and a higher grade and stage of disease. This study aims to identify new factors and confirm previously identified factors that influence the gender disparity in kidney cancer.

**Methods:** The American College of Surgeons National Surgical Quality Improvement Project (ACS NSQIP) 2019-2020 data set was utilized for this retrospective study. Patients with kidney cancer undergoing either partial or radical nephrectomy were included. The patients were divided into self-reported male and female. Descriptive analysis was completed between the two groups and a multivariate logistic regression was performed.

**Results:** A total of 2,183 patients met inclusion criteria with 64.5% of the cohort being male and 35.5% female. The composite and major complication rate was higher in males compared to females (P=0.02, P= 0.001, respectively) (Table). On adjusted analysis, males were more likely to have a major complication (OR 1.66, 1.27-2.19), prolonged NGT use (OR 2.19, 1.38-3.63), and acute renal failure (OR 7.25, 2.78 – 24.9). Female patients were more likely to have concomitant procedures (OR 1.28, 1.02-1.61) and have prior pelvic radiotherapy (OR 3.47, 1.67-7.91) (Figure).

**Conclusions:** Male patients undergoing either partial or radical nephrectomy for kidney cancer are at higher risk for complications compared to their female counterparts. Male patients are at the highest odds of having acute renal failure and major/composite complications after intervention.

Figure. Forest Plot of Independent Variables Associated with Male Gender




*Denotes P<0.05

Table. Complication Summary Between Male and Female Cohort

| SUMMARY OF COMPLICATIONS | Male (N= 1408) | Female (N= 775) | Total Cohort (N= 2183) | p-value |
|---|---|---|---|---|
| ***Major Complications*** | 241 (17.1%) | 93 (12.0%) | 334 (15.3%) | **0.00184** |
| ***Minor Complications*** | 44 (3.1%) | 32 (4.1%) | 76 (3.5%) | 0.27 |
| ***Composite Complications*** | 261 (18.5%) | 113 (14.6%) | 374 (17.1%) | **0.0221** |
| | | | | |
| **C. diff Occurrence** | 1 (0.1%) | 1 (0.1%) | 2 (0.1%) | 1 |
| **Drains** | 564 (40.1%) | 325 (41.9%) | 889 (40.7%) | 0.418 |
| **Lymphocele, Lymphatic Leak** | 45 (3.2%) | 19 (2.5%) | 64 (2.9%) | 0.393 |
| **Urinary Leak/Fistula** | 23 (1.6%) | 10 (1.3%) | 33 (1.5%) | 0.656 |
| **Ureteral Obstruction Ocurred** | 5 (0.4%) | 3 (0.4%) | 8 (0.4%) | 1 |
| **Rectal Injury Ocurred** | 5 (0.4%) | 2 (0.3%) | 7 (0.3%) | 1 |
| **Superficial Incisional SSI** | 23 (1.6%) | 11 (1.4%) | 34 (1.6%) | 0.837 |
| **Deep Incisional SSI** | 2 (0.1%) | 1 (0.1%) | 3 (0.1%) | 1 |
| **Organ/Space SSI** | 26 (1.8%) | 9 (1.2%) | 35 (1.6%) | 0.298 |
| **Wound Disruption** | 7 (0.5%) | 1 (0.1%) | 8 (0.4%) | 0.321 |
| **Pneumonia** | 29 (2.1%) | 14 (1.8%) | 43 (2.0%) | 0.805 |
| **Pulmonary Embolism** | 16 (1.1%) | 7 (0.9%) | 23 (1.1%) | 0.771 |
| **On Ventilator > 48 Hours** | 18 (1.3%) | 3 (0.4%) | 21 (1.0%) | 0.0699 |
| **Progressive Renal Insufficiency** | 37 (2.6%) | 6 (0.8%) | 43 (2.0%) | **0.00478** |
| **Acute Renal Failure** | 33 (2.3%) | 4 (0.5%) | 37 (1.7%) | **0.00277** |
| **Urinary Tract Infection** | 21 (1.5%) | 22 (2.8%) | 43 (2.0%) | **0.0448** |
| **Stroke/CVA** | 3 (0.2%) | 2 (0.3%) | 5 (0.2%) | 1 |
| **Cardiac Arrest Requiring CPR** | 7 (0.5%) | 1 (0.1%) | 8 (0.4%) | 0.321 |
| **Myocardial Infarction** | 15 (1.1%) | 7 (0.9%) | 22 (1.0%) | 0.889 |
| **Bleeding Transfusion** | 296 (21.0%) | 177 (22.8%) | 473 (21.7%) | 0.352 |
| **DVT/Thrombophlebitis** | 22 (1.6%) | 11 (1.4%) | 33 (1.5%) | 0.937 |
| **Sepsis** | 14 (1.0%) | 8 (1.0%) | 22 (1.0%) | 1 |
| **Number of Septic Shock Occurrences** | 15 (1.1%) | 2 (0.3%) | 17 (0.8%) | 0.072 |
| **Death** | 12 (0.9%) | 4 (0.5%) | 16 (0.7%) | 0.536 |

## FRI-MP5-1635

**Racial Differences in Genetic Testing Patterns Among Men who Underwent Prostatectomy Within the Pennsylvania Urologic Regional Collaborative (PURC)**

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**Introduction and Objective:** Somatic genetic testing helps refine prostate cancer risk classification and can aid in decisions to both enroll in active surveillance and pursue treatment after radical prostatectomy (RP) [1,2]. Utilization of these tests has risen over recent years, though it is unclear how these are used in practice [3]. The objective of this study was to evaluate utilization of somatic genetic testing in the Pennsylvania Urologic Regional Collaborative.

**Methods:** A prospectively-maintained regional collaborative database of academic East Coast urology practices from 2015-2023 was queried. Demographics, biopsies, genetic testing, and pathologic data were collected. Descriptive statistics were reported. Univariable analysis with chi-squared, Fisher's exact, and analysis of variance (ANOVA) tests was performed as appropriate. Multivariable analysis with logistic regression assessed predictors of somatic genetic test utilization.

**Results:** Overall genetic testing rates were low (726/7252, 9.6%). Post-RP DecipherTM was most common. Black race (OR 0.68, p = 0.009), no current partner (OR 0.78, p = 0.048), and higher biopsy grade (OR 0.57, p = 0.004) were independent predictors of decreased genetic testing. Higher pT stage (pT3b OR 2.47, p < 0.001) and RP after AS (OR 2.50, p < 0.001) were independent predictors of undergoing genetic testing.

**Conclusions:** Black patients were less likely to have somatic genetic testing. Patients with GG1 and 2 on biopsy likely use genetic testing for surveillance candidacy. Patients with high pT stage and RP after AS were most likely to obtain testing, suggesting genetic testing is most often used for prognostication after RP, and may drive decisions regarding adjuvant treatment.

Table 1B: Genetic Testing by Race

| | White | Black | Other | Total | p-value |
|---|---|---|---|---|---|
| N | 5619 (74.5%) | 1,423 (18.9%) | 497 (6.6%) | 7,539 (100.0%) | |
| Genetic Test | | | | | |
| No | 5018 (89.3%) | 1,332 (93.6%) | 460 (92.6%) | 6,810 (90.3%) | <0.001 |
| Yes | 601 (10.7%) | 91 (6.4%) | 37 (7.4%) | 729 (9.7%) | |

Table 2: Predictors of Genetic Testing

| | Odds ratio | 95% Confidence Interval | | p-value |
|---|---|---|---|---|
| Race | | | | |
| Black | 0.69 | 0.52 | 0.91 | 0.009 |
| Other | 0.77 | 0.50 | 1.20 | 0.25 |
| Age | | | | |
| 49 or under | 0.81 | 0.25 | 2.62 | 0.722 |
| 50-59 | 0.49 | 0.23 | 1.02 | 0.056 |
| 70-79 | 1.01 | 0.74 | 1.38 | 0.962 |
| 80+ | 1.01 | 0.48 | 2.15 | 0.973 |
| Marital Status | | | | |
| Not currently partnered | 0.79 | 0.62 | 1.00 | 0.048 |
| Insurance Type | | | | |
| Medicare/Medicaid | 0.94 | 0.73 | 1.19 | 0.593 |
| Other/Unknown | 0.95 | 0.73 | 1.22 | 0.676 |
| Ethnicity | | | | |
| Hispanic | 0.52 | 0.28 | 0.99 | 0.048 |
| Unknown/Refused | 0.50 | 0.21 | 1.18 | 0.114 |
| Family History | | | | |
| First Degree Relative | 1.13 | 0.91 | 1.40 | 0.282 |
| Positive Other | 1.04 | 0.70 | 1.53 | 0.862 |
| Unknown | 0.65 | 0.41 | 1.03 | 0.069 |
| BMI | 0.97 | 0.96 | 0.99 | 0.011 |
| Charlson Comorbidity Index | | | | |
| 0-1 | 1.50 | 0.68 | 3.30 | 0.313 |
| 3 | 1.01 | 0.74 | 1.38 | 0.942 |
| 4+ | 0.92 | 0.66 | 1.28 | 0.614 |
| RP after AS | 2.50 | 1.70 | 3.70 | <0.001 |
| Biopsy Grade Group | | | | |
| 1 | 1.69 | 1.30 | 2.19 | <0.001 |
| 3 | 0.68 | 0.52 | 0.89 | 0.005 |
| 4 | 0.68 | 0.51 | 0.91 | 0.01 |
| 5 | 0.58 | 0.40 | 0.84 | 0.004 |
| pT Stage | | | | |
| pT4 | REF | REF | REF | REF |
| pT3a | 2.62 | 2.13 | 3.23 | 0 |
| pT3b | 2.48 | 1.82 | 3.38 | 0 |
| pN Stage | | | | |
| N1 | 0.89 | 0.58 | 1.39 | 0.618 |
| Nx | 0.53 | 0.35 | 0.80 | 0.003 |

Table 1A: Demographics

| | Race | | | | |
|---|---|---|---|---|---|
| | White | Black | Other | Total | p-value |
| N | 5,619 (74.5%) | 1,423 (18.9%) | 497 (6.6%) | 7,539 (100.0%) | |
| Age Range | | | | | |
| 49 or under | 38 (0.7%) | 23 (1.6%) | 1 (0.2%) | 62 (0.8%) | <0.001 |
| 50-59 | 656 (11.7%) | 275 (19.3%) | 68 (13.7%) | 999 (13.3%) | |
| 60-69 | 2,610 (46.4%) | 693 (48.7%) | 219 (44.1%) | 3,522 (46.7%) | |
| 70-79 | 2,158 (38.4%) | 402 (28.3%) | 185 (37.2%) | 2,745 (36.4%) | |
| 80+ | 157 (2.8%) | 30 (2.1%) | 24 (4.8%) | 211 (2.8%) | |
| Education | | | | | |
| sHigh school diploma | 147 (2.6%) | 45 (3.2%) | 14 (2.8%) | 206 (2.7%) | 0.324 |
| Some college degree | 19 (0.3%) | 10 (0.7%) | 3 (0.6%) | 32 (0.4%) | |
| A college degree | 49 (0.9%) | 11 (0.8%) | 7 (1.4%) | 67 (0.9%) | |
| Some post-college or a graduate degree | 58 (1.0%) | 9 (0.6%) | 6 (1.2%) | 73 (1.0%) | |
| Unknown | 5,346 (95.1%) | 1,348 (94.7%) | 467 (94.0%) | 7,161 (95.0%) | |
| Marital Status | | | | | |
| Married or Partnered | 3,245 (80.8%) | 561 (59.3%) | 265 (73.6%) | 4,071 (76.5%) | <0.001 |
| Not currently partnered | 770 (19.2%) | 385 (40.7%) | 95 (26.4%) | 1,250 (23.5%) | |
| Primary Payer | | | | | |
| Private | 1,914 (34.1%) | 424 (29.8%) | 152 (30.6%) | 2,490 (33.0%) | <0.001 |
| Medicare/Medicaid | 1,695 (30.2%) | 407 (28.6%) | 168 (33.8%) | 2,270 (30.1%) | |
| Other/Unknown | 2,010 (35.8%) | 592 (41.6%) | 177 (35.6%) | 2,779 (36.9%) | |
| Ethnicity | | | | | |
| Non-Hispanic | 5,399 (96.2%) | 1,373 (96.5%) | 331 (66.6%) | 7,103 (94.3%) | <0.001 |
| Hispanic | 158 (2.8%) | 24 (1.7%) | 90 (18.1%) | 272 (3.6%) | |
| Unknown/Refused | 58 (1.0%) | 26 (1.8%) | 76 (15.3%) | 160 (2.1%) | |
| Family History | | | | | |
| First Degree Relative | 1,350 (24.0%) | 330 (23.2%) | 89 (17.9%) | 1,769 (23.5%) | 0.022 |
| Positive Other | 354 (6.3%) | 94 (6.6%) | 26 (5.2%) | 474 (6.3%) | |
| None | 3,386 (60.3%) | 871 (61.2%) | 320 (64.4%) | 4,577 (60.7%) | |
| Unknown | 529 (9.4%) | 128 (9.0%) | 62 (12.5%) | 719 (9.5%) | |
| BMI | 29.324 (5.516) | 29.664 (6.599) | 28.740 (13.472) | 29.353 (6.527) | 0.026 |
| Charlson Score | | | | | |
| 0-1 | 588 (10.5%) | 215 (15.1%) | 56 (11.3%) | 859 (11.4%) | <0.001 |
| 2 | 1,977 (35.2%) | 482 (33.9%) | 178 (35.8%) | 2,637 (35.0%) | |
| 3 | 1,878 (33.4%) | 414 (29.1%) | 163 (32.8%) | 2,455 (32.6%) | |
| 4+ | 1,176 (20.9%) | 312 (21.9%) | 100 (20.1%) | 1,588 (21.1%) | |
| Secondary Radical Prostatectomy after AS | | | | | |
| Primary RP | 5,379 (95.7%) | 1,366 (96.0%) | 479 (96.4%) | 7,224 (95.8%) | 0.736 |
| RP after AS | 240 (4.3%) | 57 (4.0%) | 18 (3.6%) | 315 (4.2%) | |
| Biopsy Grade Group | | | | | |
| 1 | 1,062 (19.0%) | 213 (15.0%) | 85 (17.1%) | 1,360 (18.1%) | 0.003 |
| 2 | 2,059 (36.9%) | 527 (37.1%) | 181 (36.5%) | 2,766 (36.9%) | |
| 3 | 1,120 (20.1%) | 329 (23.2%) | 95 (19.2%) | 1,544 (20.6%) | |
| 4 | 878 (15.7%) | 209 (14.7%) | 92 (18.5%) | 1,179 (15.7%) | |
| 5 | 462 (8.3%) | 141 (9.9%) | 43 (8.7%) | 646 (8.6%) | |
| Pathologic T-stage | | | | | |
| pT2x | 3,353 (61.2%) | 866 (62.6%) | 266 (54.7%) | 4,485 (61.0%) | <0.001 |
| pT3a | 1,520 (27.7%) | 288 (20.8%) | 147 (30.2%) | 1,955 (26.6%) | |
| pT3b | 597 (10.9%) | 228 (16.5%) | 73 (15.0%) | 898 (12.2%) | |
| pT4 | 8 (0.1%) | 1 (0.1%) | 0 (0.0%) | 9 (0.1%) | |
| Pathologic N-stage | | | | | |
| N0 | 4,798 (87.4%) | 1,219 (88.0%) | 411 (84.6%) | 6,428 (87.3%) | <0.001 |
| N1 | 245 (4.5%) | 81 (5.8%) | 45 (9.3%) | 371 (5.0%) | |
| Nx | 445 (8.1%) | 85 (6.1%) | 30 (6.2%) | 560 (7.6%) | |
| Genetic Test | | | | | |
| No | 5,018 (89.3%) | 1,332 (93.6%) | 460 (92.6%) | 6,810 (90.3%) | <0.001 |
| Yes | 601 (10.7%) | 91 (6.4%) | 37 (7.4%) | 729 (9.7%) | |

Table 1C: Genetic Testing by Grade Group

| | Biopsy Grade Group | | | | | | |
|---|---|---|---|---|---|---|---|
| | 1 | 2 | 3 | 4 | 5 | Total | p-value |
| N | 1,366 (18.2%) | 2,778 (36.9%) | 1,546 (20.5%) | 1,189 (15.8%) | 646 (8.6%) | 7,525 (100.0%) | |
| Genetic Test | | | | | | | |
| No | 1,208 (88.4%) | 2,504 (90.1%) | 1,413 (91.4%) | 1,087 (91.4%) | 587 (90.9%) | 6,799 (90.4%) | 0.048 |
| Yes | 158 (11.6%) | 274 (9.9%) | 133 (8.6%) | 102 (8.6%) | 59 (9.1%) | 726 (9.6%) | |
| | | | | | | | |
| Oncotype Dx | 62 | 37 | 5 | 5 | 0 | 109 (14.4%) | |
| Decipher Biopsy | 20 | 28 | 12 | 6 | 2 | 68 (9.0%) | |
| Decipher Prostatectomy | 38 | 131 | 89 | 72 | 47 | 377 (49.9%) | |
| Prolaris | 32 | 72 | 23 | 12 | 6 | 145 (19.2%) | |
| Confirm MDX | 2 | 2 | 1 | 1 | 1 | 7 (0.9%) | |
| Select MDX | 2 | 1 | 0 | 0 | 0 | 3 (0.4%) | |
| Other genetic test | 8 | 10 | 4 | 8 | 5 | 35 (4.6%) | |
| ExoDX | 0 | 4 | 4 | 3 | 1 | 12 (1.6%) | |
| Total | 164 | 285 | 138 | 107 | 62 | 756 | |

## FRI-MP5-1640

**Diagnosis of Prostate Cancer in Incarcerated Individuals: Results from a Large Institutional Database**

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**Introduction and Objective:** Incarcerated Individuals face many barriers to care which may impact the workup and management of conditions such as certain cancers. The relationship between incarcerated status and the diagnosis and treatment of genitourinary malignancies has not been previously been described. The purpose of this study was to examine how incarcerated status impacts the diagnosis and initial treatment of prostate cancer at a single institution.

**Methods:** An institutional database of 1,235 incarcerated individuals was used to identify 119 patients presenting with a new diagnosis of elevated PSA from the years 2012-2020. These patients were matched with 119 randomly-selected age and race-matched non-incarcerated individuals with a new diagnosis of elevated PSA. Clinical data was extracted retrospectively from the medical record. Statistical analysis was performed using paired T-tests and Chi-square tests.

**Results:** There was no significant difference in mean age, race, and initial PSA between groups. Rates of prostate biopsy were similar between groups. Incarcerated patients were more likely to undergo MRI as part of initial workup (80% vs. 55%, p<0.0001). Mean time from consult to MRI and biopsy did not differ significantly between groups. Incarcerated and non-incarcerated individuals were diagnosed with prostate cancer at similar rates. However, incarcerated individuals were more likely to present with high or very-high risk disease per NCCN staging (41% vs. 22%, p=0.039). Incarcerated individuals were also more likely to be treated for prostate cancer with surgery (41% vs. 19%, p=0.018) or radiation (48% vs. 29%, p=0.03).

**Conclusions:** When controlling for age and race, incarcerated individuals present to a urology clinic with similar PSA levels and rates of prostate cancer detection than non-incarcerated individuals. However, they are more likely to present with high-risk or very high-risk disease, suggesting that incarcerated status may serve as a risk factor for higher risk prostate cancer on presentation.

## FRI-MP5-1650

**Financial Toxicity Among Patients with Bladder Cancer**

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**Introduction and Objective:** Financial toxicity (FT) in the context of bladder cancer treatment is a significant concern within private healthcare settings. Our goal is to analyze the FT associated with managing bladder cancer, recognizing its influence on treatment decisions. We aim to explore the prevalence of FT among patients with bladder cancer, recognizing mounting evidence indicating its potential impact on care-seeking behaviors and overall quality of life.

**Methods:** A cross-sectional assessment of FT in patients being treated for bladder cancer was performed using The Comprehensive Score for Financial Toxicity - Functional Assessment of Chronic Illness Therapy (COST-FACIT-2). All patients at Urology of Virginia from September to October 2022 were given the FACIT-2 survey with their intake paperwork. The questionnaire has 12 items with 11 scorable categories for a total range of 0-44. FT grade 0-3 was calculated with a higher score indicating a lower grade of FT.

**Results:** A total of 43 patients with bladder cancer were evaluated with an average FT score of 26.8 +/- 4.2. Of the participants, 11 (25.6%) endorsed having moderate to severe FT. Additionally, statistical significance was seen in 1) patients younger than 65 (p=0.009); 2) female versus male counterpart (p=0.001); and 3) Black versus white counterpart (p=0.004). Conversely, no statistical significance was observed between clinical stages, number of transurethral resection of bladder tumors (TURBT), the length of time since initial diagnosis, or the number of total urologic diagnoses.

**Conclusions:** This study underscores significant financial distress in managing care within a private practice with insured patients. Our results unveil distinct variations in the FT faced by bladder cancer patients, with heightened susceptibility among those younger than 65, female, and/or Black. Those experiencing FT are prone to care delays and diminished health-related quality of life, emphasizing the necessity of factoring treatment costs into medical decision-making processes.

## FRI-MP5-1645

**Financial Toxicity Associated with Frequently Treated Urologic Conditions**

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**Introduction and Objective:** Financial toxicity (FT) is a nonspecific term used to characterize the self-reported economic consequences resulting from a medical problem. We aim to characterize the FT associated with urologic care in the setting of a private practice. Physician specific recommendation remains one of the largest decision influencers of treatment choice, there is growing evidence that the degree of FT may be impacting this decision.

**Methods:** A cross-sectional assessment of FT in all urologic patients was performed using The Comprehensive Score for Financial Toxicity - Functional Assessment of Chronic Illness Therapy (COST-FACIT-2). All patients at Urology of Virginia from September to October 2022 were given the FACIT-2 survey with their intake paperwork. The questionnaire has 12 items with 11 scorable categories for a total range of 0-44. FT grade 0-3 was calculated with a higher score indicating a lower grade of FT. Individual patients were sorted based on presenting diagnosis.

**Results:** A total of 1010 patients being treated for common urologic conditions completed the survey. Grade 2-3 financial toxicities for various urologic conditions are as follows: 82% of nephrolithiasis patients, 28% of patients with BPH, 33% with erectile dysfunction, 23% of patients with prostate cancer, 41% with urethral stricture disease, 26% with bladder cancer, 30% with hypogonadism, 23% with male incontinence, and 35% with female incontinence reported a least moderately to severe financial toxicity.

**Conclusions:** This study identifies that in the setting of a private practice with insured patients, there remains significant financial distress in the management of their care. Despite a heterogenous population and patient cohort there are standouts of significantly higher financial toxicity in both stones and stricture disease. Our current data supports that there are discrepancies in the FT associated with various urologic conditions with current data suggesting that stone patients have the highest FT.

## FRI-MP5-1655

**The Impact of Telehealth on Treatment Decision-Making in Prostate Cancer**

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**Introduction and Objective:** Telehealth utilization has increased since the COVID-19 pandemic. Studies show patients are satisfied with the use of telehealth in the treatment of prostate cancer (CaP); however, data is limited on how telehealth may impact treatment decision-making. This study investigates the impact of telehealth on treatment selection for CaP, specifically the selection of active surveillance (AS) versus curative therapy.

**Methods:** This is a retrospective analysis of the treatment selected by patients with CaP seen at an urban, academic, Multidisciplinary Genitourinary Oncology Center between March 18, 2020, and December 31, 2022. Populations were compared using chi-square and t-tests; logistic regression identified variables impacting AS selection.

**Results:** 968 CaP patients were evaluated—290 via telehealth and 678 in-person. Overall, patients seen via telehealth were more likely to select AS (30.4% vs. 19.1%, p<0.001). However, there was no statistical difference in AS selection between appointment types for patients selecting initial treatment of Gleason 6 (66.7% vs. 62.5%, p=0.72; OR=0.90, p=0.86) or 3+4=7 disease (20% vs. 13.3%, p=0.26; OR=2.37, p=0.09) (Table 1).

**Conclusions:** Telehealth provides an opportunity to expand patient access to CaP care. We demonstrate that appointment type used for initial evaluation of low and low-intermediate risk CaP did not significantly impact decision-making. For all CaP patients, there was a significant difference in selection of AS vs. curative intervention. It is necessary to consider that factors unaccounted for by this study (e.g., comorbidities) may impact this difference. It is important for physicians using telehealth to consider any associated implications.

| | | Appointment Type | | | | P-Value |
|---|---|---|---|---|---|---|
| | | In-person visit | | Telehealth visit | | |
| | | Count | % | Count | % | |
| Mean AGE (SD) | | 67.8 (8.0) | | 67.8 (8.3) | 67.8 (7.2) | 0.904 |
| Age | Under 65 | 241 | 35.5% | 103 | 35.5% | 0.427 |
| | 65 - 75 | 317 | 46.8% | 145 | 50.0% | |
| | Over 75 | 120 | 17.7% | 42 | 14.5% | |
| | Total | 678 | 100.0% | 290 | 100.0% | |
| Race | Caucasian | 385 | 57.1% | 197 | 68.6% | <.001 |
| | Non-Caucasian | 289 | 42.9% | 90 | 31.4% | |
| Location | Non-Philadelphia | 308 | 45.4% | 183 | 63.1% | <0.001 |
| | Philadelphia | 370 | 54.6% | 107 | 36.9% | |
| Gleason score | 6 | 64 | 9.8% | 42 | 15.1% | 0.059 |
| | 3+4=7 | 240 | 36.7% | 84 | 30.2% | |
| | 4+3=7 | 154 | 23.5% | 70 | 25.2% | |
| | 8+ | 196 | 30.0% | 82 | 29.5% | |
| Time period | March 2020-Dec2020 | 92 | 13.6% | 121 | 41.7% | <0.001 |
| | Jan 2021-Dec2021 | 282 | 41.6% | 136 | 46.9% | |
| | Jan 2022-Dec2022 | 304 | 44.8% | 33 | 11.4% | |
| Treatment Type | Initial Treatment | 481 | 70.9% | 153 | 52.8% | <0.001 |
| | Adjuvant Treatment | 83 | 12.2% | 62 | 21.4% | |
| | Recurrent Treatment | 114 | 16.8% | 75 | 25.9% | |
| Treatment Selected | Surveillance | 116 | 17.4% | 80 | 28.2% | 0.011 |
| | Surgery | 133 | 20.0% | 48 | 16.9% | |
| | Radiation | 125 | 18.8% | 47 | 16.5% | |
| | Hormone Therapy | 38 | 5.7% | 18 | 6.3% | |
| | Hormone and Radiation | 182 | 27.3% | 64 | 22.5% | |
| | No treatment selected | 72 | 10.8% | 27 | 9.5% | |
| Treatment Selected (Grouped) | Surveillance | 116 | 19.1% | 80 | 30.4% | <0.001 |
| | Therapeutic Intervention | 490 | 80.9% | 183 | 69.6% | |
| Gleason 6 Initial Treatment Only | | | | | | |
| Treatment Selected (Grouped) | Surveillance | 30 | 62.5% | 18 | 66.7% | 0.718 |
| | Therapeutic Intervention | 18 | 37.5% | 9 | 33.3% | |
| | Total | 48 | 100.0% | 27 | 100.0% | |
| Gleason 3+4=7 Initial Treatment Only | | | | | | |
| Treatment Selected (Grouped) | Surveillance | 23 | 13.3% | 9 | 20.0% | 0.258 |
| | Therapeutic Intervention | 150 | 86.7% | 36 | 80.0% | |
| | Total | 173 | 100.0% | 45 | 100.0% | |

## FRI-MP5-1700

**Evolving Trends in the Use of Telemedicine in the Post Radical Prostatectomy Patient Population**

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**Introduction and Objective:** Telemedicine is an essential part of modern healthcare. Selecting the correct patient and pathology is crucial as telemedicine is not universally appropriate. Prostate cancer surveillance following prostatectomy involves checking serum PSA and theoretically is well suited for telemedicine follow-up. We compare patient demographic and clinical traits of patients undergoing in person vs telemedicine surveillance post prostatectomy.

**Methods:** A retrospective review of radical prostatectomy patients for a single surgeon with clinic visits occurring between January 2021 – April 2024 was performed. For data entry and analysis, the most recent visit for each unique patient was used even if multiple visits occurred during study period. Patient distance from hospital was calculated CDXGeoData API software. For statistical analysis, Wilcoxon Rank Sum test was used for continuous variables. Chi-square test was used for categorical variables.

**Results:** 353 patients were included for analysis. 217 (62%) of these visits were in person and 136 (38%) were telemedicine. There was a statistically significant difference in distance between in person and telemedicine visit types (p = 0.004) with patients utilizing telemedicine living at a further distance. There was a significant association with race when looking at visit type (p = 0.04), with white people being more likely to utilize telemedicine. There was no significant association with erectile dysfunction, stress urinary incontinence, marital status, pathologic stage, PSA nadir, or cancer recurrence on visit type.

**Conclusions:** Telemedicine offers an effective and patient centric method of surveillance after radical prostatectomy with distance and race appearing to factor into the decision making on visit type.

| Analysis Variable: Distance from Hospital (miles) | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Clinic visit type | N | Mean | Std Dev | Lower 95% CL for Mean | Upper 95% CL for Mean | Median | Quartile Range | Minimum | Maximum |
| In Person | 217 | 38.78 | 134.01 | 20.85 | 56.71 | 18.94 | 24.26 | 0 | 1710.06 |
| Tele | 136 | 35.6 | 37.92 | 29.17 | 42.03 | 25 | 30.12 | 3.11 | 336.11 |
| test | p-value | | | | | | | | |
| Wilcoxon Rank Sum test | 0.004 | | | | | | | | |

Table 1: Continuous Variable Analysis. Distance from hospital was statistically significant between in person and telemedicine cohorts.

| Analysis Variable: Race | | | | Analysis Variable: Marital Status | | | | Analysis Variable: Surgical Pathology | | | | Analysis Variable: SUI | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Visit Type | | | | Visit Type | | | | Visit Type | | | | Visit Type | | |
| Race | In Person | Tele | Total | Marital Status | In Person | Tele | Total | T stage | In Person | Tele | Total | SUI | In Person | Tele | Total |
| White | 176 | 121 | 297 | Single | 27 | 20 | 47 | spT2 | 99 | 59 | 158 | Yes | 78 | 54 | 132 |
| Other | 40 | 14 | 54 | Married | 173 | 99 | 272 | spT3 | 118 | 77 | 195 | Yes + refer for surgery | 10 | 8 | 18 |
| Total | 216 | 135 | 351 | Divorced | 11 | 14 | 25 | Total | 217 | 136 | 353 | No | 128 | 74 | 202 |
| test | p-value | | | Other | 5 | 3 | 8 | test | p-value | | | Total | 216 | 136 | 352 |
| Asymptotic | 0.04 | | | Total | 216 | 136 | 352 | Asymptotic | 0.68 | | | test | p-value | | |
| | | | | test | p-value | | | | | | | Asymptotic | 0.642 | | |
| | | | | Exact | 0.276 | | | | | | | | | | |

| Analysis Variable: ED | | | | Analysis Variable: PSA Nadir | | | | Analysis Variable: Cancer Recurrence | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Visit Type | | | | Visit Type | | | | Visit Type | | |
| ED | In Person | Tele | Total | Nadir | In Person | Tele | Total | | In Person | Tele | Total |
| Yes | 175 | 116 | 291 | Undetectable | 196 | 128 | 324 | Yes | 58 | 29 | 87 |
| Yes + refer for surgery | 17 | 11 | 28 | Detectable | 21 | 8 | 29 | No | 159 | 107 | 266 |
| No | 24 | 9 | 33 | Total | 217 | 136 | 353 | Total | 217 | 136 | 353 |
| Total | 216 | 136 | 352 | test | p-value | | | test | p-value | | |
| test | p-value | | | Asymptotic | 0.206 | | | Asymptotic | 0.252 | | |
| Asymptotic | 0.37 | | | | | | | | | | |

Table 2: Categorical Variable Analysis. Race was statistically significant between in person and telemedicine patient cohorts. Marital Status, Surgical Pathology, SUI, ED, PSA Nadir, and Cancer Recurrence were not statistically significant.

## FRI-MP5-1705

**Survey of the SUO Describing the Use of VTE Prophylaxis in Major Oncologic Surgeries**

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**Introduction and Objective:** Extended VTE prophylaxis (EP) after Radical Cystectomy (RC) is well established to reduce rates of VTE. In a 2019 survey of the Society of Urologic Oncology (SUO), 80% of respondents reported using EP, usually enoxaparin, though many cited financial concerns, poor compliance and administration difficulty as barriers. We hypothesize that practice patterns may have changed since the adoption of apixaban for EP, and aim to describe current practices for RC and other oncologic surgeries as well as compare barriers to both forms of EP.

**Methods:** Members of the SUO were emailed a survey with responses collected between August-September 2023. The survey collected demographic information about providers, their prophylaxis use after several oncologic surgeries, and perceived barriers to use.

**Results:** Of the 62 members who completed the survey, 95% endorsed some use of EP after RC, but the most reported response for all other procedures was "usually no" use of EP (Table 1). Of EP users, 70% utilize apixaban and 44% enoxaparin. For enoxaparin, 30% of respondents endorsed patient dislike as a barrier, but only 13% endorsed financial concern. Contrastingly, for apixaban only 2% reported patient dislike while 25% reported financial difficulties.

**Conclusions:** While this survey may be subject to self-selection bias, results do suggest that EP prescription after RC has grown since 2019 but is less common for other procedures not included in the previous survey. Additionally, apixaban, also not included previously, has emerged as a potentially more popular form of EP after RC, possibly due to lower patient dislike. This updated data can guide shared decision making for providers as well as inform guidelines on EP after RC and other major oncologic surgeries.

**Table 1**

| | | | |
|---|---|---|---|
| Respondent EP Use | | N = 62/1079 (6%) | |
| Use of EP after RC | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 60 (95.2)<br>0<br>1 (1.6)<br>1 (1.6) | |
| Use of EP after RALP with PLND | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 11 (17.7)<br>7 (11.3)<br>36 (58.1)<br>8 (12.9) | |
| Use of EP after robotic or laproscopic partial nephrectomy | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 2 (3.2)<br>1 (1.6)<br>51 (82.3)<br>8 (12.9) | |
| Use of EP after robotic or laproscopic radical nephrectomy | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 5 (8.1)<br>3 (4.8)<br>46 (74.2)<br>8 (12.9) | |
| Use of EP after open radical nephrectomy | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 5 (8.1)<br>13 (21)<br>37 (59.7)<br>7 (11.3) | |
| Use of EP after RPLND | Usually Yes<br>Sometimes Yes<br>Usually No<br>N/A; I do not routinely perform this | 6 (9.7)<br>12 (19.4)<br>28 (45.2)<br>15 (24.2) | |
| Medication used for EP** | Enoxaparin<br>Apixaban<br>Other | 28 (44.4)<br>44 (69.8)<br>4 (6.3) | |
| Barriers to specific EP agents** | | Apixaban | Enoxaparin |
| | Insurance does not cover it<br>Patient cannot afford it<br>Patient does not like taking it<br>Patient struggles to be compliant with it<br>Other | 16 (25.4)<br>16 (25.4)<br>1 (1.6)<br>2 (3.2)<br>8 (12.7) | 5 (7.9)<br>8 (12.7)<br>19 (30.2)<br>10 (15.9)<br>4 (6.3) |
| | ** Respondents were able to select multiple options. Percents will not total 100 | | |

## FRI-MP5-1710

**The Role of Artificial Intelligence in Urologic Oncology Patient Education**

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*Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA, USA*

**Introduction and Objective:** Patients often seek support from online resources when facing a complex urologic oncology diagnosis. Many official resources exceed the recommended 8th grade reading level, creating confusion and pushing patients towards unregulated platforms such as social media or artificial intelligence (AI) chatbots. As AI gains popularity, we evaluated the readability and quality of patient education from ChatGPT, Epic MyChart, and Urology Care Foundation (UCF).

**Methods:** We analyzed all genitourinary cancer content from UCF, Epic, Epic Easy-to-Read, ChatGPT, and ChatGPT-a (adjusted response generated using AI prompts to meet the recommended level). Topics included symptoms, diagnostics, treatment, and prognosis. Blinded reviewers completed descriptive textual analysis, readability analysis via six validated formulas, and quality analysis via DISCERN, PEMAT, and Likert scales. Statistical analysis included ANOVA and Wilcoxon matched pairs tests.

**Results:** Epic met the recommended grade level, while UCF and ChatGPT exceeded it (5.81 vs 8.44 vs 12.16, $p<0.001$) across topics. ChatGPT text was longer and included more complex wording ($p<0.001$). DISCERN quality was fair for Epic, good for UCF, and excellent for ChatGPT (49.5 vs 61.67 vs 64.33). PEMAT understandability was high for all resources. PEMAT actionability was only low (37%) for Epic. On qualitative analysis, all resources had excellent accuracy, but Epic was not comprehensive (1.67 vs. 4.5 vs. 4.67). When adjusted for user education level (ChatGPT-a and Epic Easy to Read), readability improved (7.50 and 3.53), but only ChatGPT-a retained high quality.

**Conclusions:** Online urologic oncology patient materials from the AUA largely surpass the layperson's education level. While Epic text is readable, it lacks utility. Our ChatGPT-a model indicates that AI technology can readily improve accessibility while retaining accuracy and usefulness. Physicians may use AI to improve existing self-written content. With development, a new healthcare-oriented AI program may help providers create content that meets patient-specific needs to improve equity and shared decision-making in urology.

## FRI-MP5-1715

**Artificial Intelligence Can Facilitate Application of Risk Stratification Algorithms to Bladder Cancer Patient Case Scenarios**

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**Introduction and Objective:** Chat Generative Pre-Trained Transformer (ChatGPT) has previously been shown to accurately predict colon cancer screening intervals when provided clinical data and context in the form of guidelines. The American Urologic Association (AUA) guideline on non-muscle invasive bladder cancer (NMIBC) includes criteria for risk stratification into low-, intermediate-, and high-risk groups based on patient and disease characteristics. We evaluate the ability of ChatGPT to apply the AUA guidelines to risk stratify theoretical patient scenarios related to NMIBC.

**Methods:** Thirty-six patient scenarios related to NMIBC were created and submitted to GPT-3.5 and GPT-4. First, both models were prompted to risk stratify patients without any additional context provided. Custom instructions were then provided as textual context using the written versions of the NMIBC AUA guidelines, followed by repeat risk stratification. Finally, GPT-4 was provided with an image of the NMIBC risk groups, and the risk stratification was again performed.

**Results:** GPT-3.5 correctly risk stratified 75% (27/36) of scenarios without context, slightly decreasing to 69% (25/36) with textual context. Using GPT-4, the model had accuracy of 83% (30/36) without context, reaching 100% (36/36) with textual context. GPT-4 with image context maintained similar accuracy to GPT-4 without context, with accuracy 78% (28/36) (Figure 1). When risk stratification was incorrect, the majority of responses were overestimations of risk (Figure 2).

**Conclusions:** GPT-4 can accurately risk stratify patients with respect to NMIBC when provided context containing guidelines. Overestimation of risk is more common than underestimation. With further validation, GPT-4 can become a tool for risk stratification of NMIBC clinical practice.

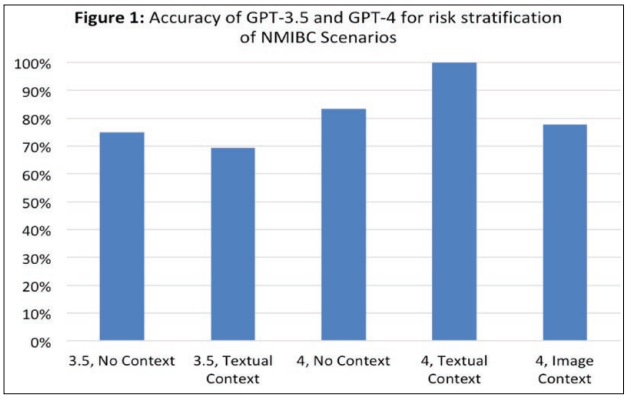


**Figure 2:** Percentage of scenarios in which ChatGPT incorrectly assigned NMIBC risk

| | GPT-3.5 | | GPT-4 | | |
|---|---|---|---|---|---|
| Context | None | Text | None | Text | Image |
| Overestimation | 22% | 17% | 17% | 0% | 22% |
| Underestimation | 3% | 14% | 0% | 0% | 0% |

## FRI-MP5-1720

**Online Presence and Accessibility of Urology Residency Parental Leave Policies**

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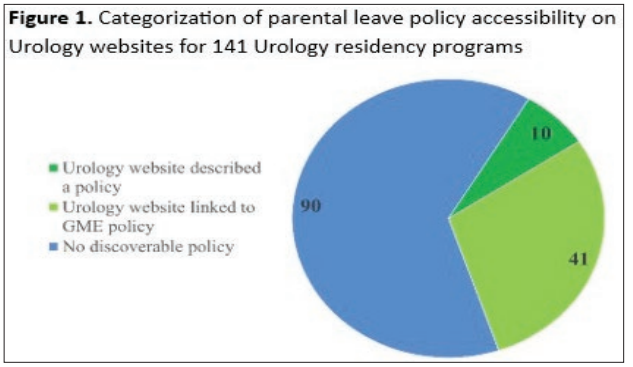
**Introduction and Objective:** While the American Board of Urology formally suggests six weeks of parental leave for Urology residents, policies at the level of individual programs are more impactful for trainees and residency applicants considering parenthood. Prior descriptions of variation in program leave policies have been conducted by program director surveys, which are subject to low response rates and bias. The objective of this study is to describe parental leave policies through direct query to assess their accessibility to current and prospective residents.

**Methods:** The American Urologic Association and American Medical Association websites were cross-referenced to define a list of non-military Urology residencies in the United States. Each website was manually searched with intent to find a leave policy for Urology residents at that institution.

**Results:** Figure 1 shows the results of online query of 141 Urology residency program websites. Of the 10 available policies, the number of paid weeks described ranged from 4 to 12 (median 6). 5 programs required trainees to use vacation and sick leave as part or all of parental leave. None specified how call would be handled in conjunction with leave. Only 1 included information about lactation support.

**Conclusions:** The majority of urology residency programs fail to make an institutional parental leave policy accessible on their webpage and only 10 programs present a Urology-specific proposal. This review may fail to capture policies that are robust but not available via public internet. Still, including a parental leave policy on the program website is a relevant metric; it signals commitment to a policy that is realistic and specific to Urology residents and allows applicants to obtain the information discretely.



## FRI-MP5-1725

**Pregnant Healthcare Workers Can Perform Their Job With Safe Levels of Fetal Radiation Exposure**

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**Introduction and Objective:** Ionizing radiation to a fetus has known teratogenic effects including increased risk of miscarriage, fetal growth restriction, malformations, and childhood cancers. During a single gestational period, the United States Nuclear Regulation Commission exposure recommends fetal exposure be limited to 500 mrem. We aimed to assess total radiation exposure to fetuses of pregnant health care workers at three institutions by analyzing available fetal dosimeter data.

**Methods:** We performed a multi-institutional (University of Wisconsin, West Virginia University (WVU Wheeling and WVU Morgantown)) retrospective review of recorded radiation exposure from fetal dosimeters from January 2020 to July 2023. We included participants who declared a pregnancy and wore a fetal dosimeter for more than one month. Total recorded fetal doses during individual pregnancies were assessed. Predicted fetal doses were calculated assuming a 9-month pregnancy, as individuals wore fetal dosimeters for varying lengths during their pregnancies.

**Results:** Over a three and a half year period, there were 196 pregnancies from 178 individuals. The majority of pregnancies (138 pregnancies, 70.4%) had 0 mrem recorded exposure. Only 4 pregnancies had radiation doses above 100 mrem (2.04%). No pregnancy exceeded the exposure limit of 500 mrem (figure 1), even when corrected for a 9-month dosimeter period (figure 2).

**Conclusions:** All 196 pregnancies were below recommended cumulative exposure limits for fetal safety. Pregnant healthcare workers can perform their jobs with safe levels of fetal radiation exposure.

Figure 1. Recorded Fetal Dosimeter Rates for Individual Pregnancies

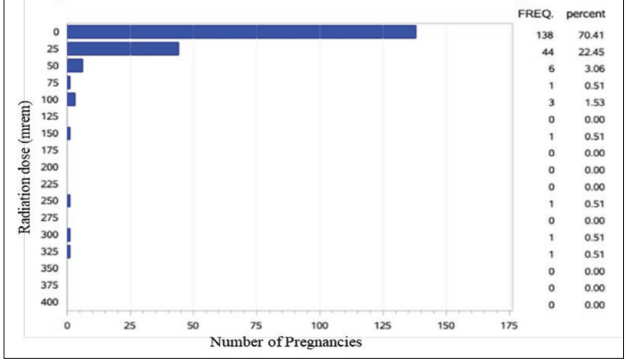
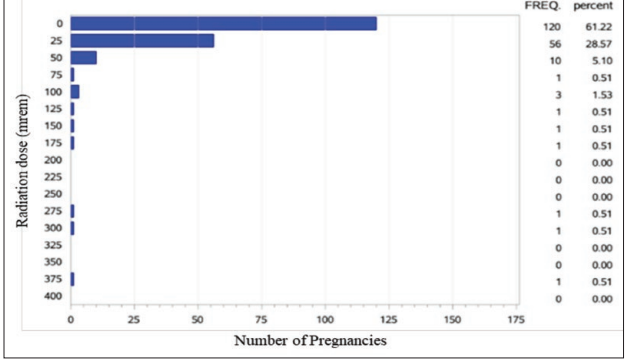



Figure 2. Calculated Fetal Dosimeter Rates for a 9-month Pregnancy




## FRI-MP5-1730

**Reducing Operating Room Turnover Time**

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**Introduction and Objective:** The average operating room (OR) turnover time (TOT) for fiscal year 2022 (FY22) at our institution was 59 minutes, with only 14% of cases having TOT ≤35 min. A multidisciplinary task force led by Urology faculty initiated a pilot to reduce TOT with two literature-driven goals: decreasing average TOT to 45 min and increasing the percentage of TOTs ≤35 min to 30%.

**Methods:** The central tenets of the TOT reduction initiative were 1) increase feedback and individual accountability, and 2) streamline workflows using parallel process mapping. To that end, workflow diagrams were distributed promoting parallel work, reasons for TOTs >45 min were documented in real time in the electronic health record, and daily emails were sent to staff with their TOTs. Staff were surveyed in March 2023.

**Results:** During FY23, average TOT decreased to nadir 46.8 min in April 2023 and then plateaued to 50.0 min (Figure 1). Similarly, cases with TOT ≤35 min rose to 24% in April 2023 but with final quarter average of 19% (Figure 2). 93% of surveyed OR staff (n=117) said ≤40 min was ideal for TOT in March 2023, and 63% perceived a decrease in TOT since the beginning of the project.

**Conclusions:** TOT can be reduced by as much as 24% and expedited TOTs can be increased by as much as 71%, even in a large and complex health system, but sustained attention is necessary to ensure durability. The concordance of staff responses with the task force goals conveys a successful culture-shift in prioritizing faster TOT.

Figure 1. Change in average TOT in minutes for participating vs non-participating surgeons over time

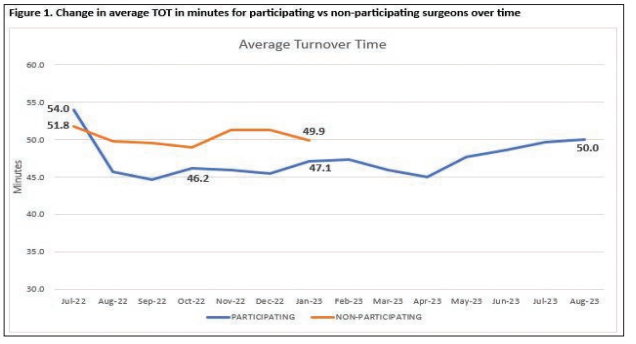
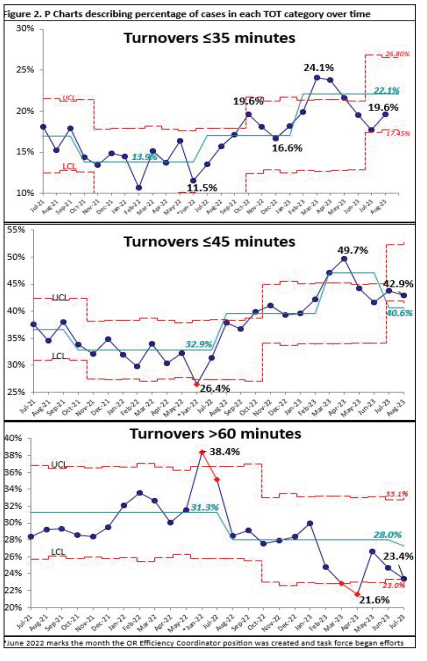



Figure 2. P Charts describing percentage of cases in each TOT category over time



## FRI-MP5-1735

**Association of Abdominal Insufflation Pressure With Intraocular Pressure During RARP**

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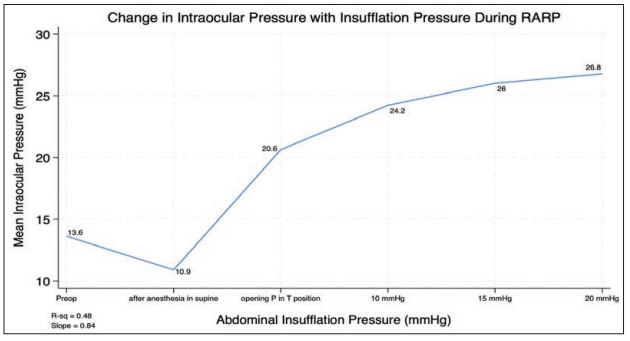
**Introduction and Objective:** Increased intraocular pressure (IOP) during robotic-assisted radical prostatectomy (RARP) is known to occur and may cause in rare cases anterior ischemic optic neuropathy. Herein we evaluate the impact of abdominal inflation on IOP during RARP.

**Methods:** Patients undergoing RARP from Jan 2019 to Oct 2022 were recruited and completed this IRB-approved study at the UMMC. IOP was measured for both eyes using a Tonopen (Reichert, Buffalo, NY). IOP time points were preoperative, in supine position without insufflation, opening pressure at Trendelenburg (T) position (30 degrees) with no insufflation (T1), T position, and abdominal insufflation at 10mmHg, 15mmHg, and 20mmHg. A mixed effects model, validated by Shapiro-Wilk test (p-value=0.821), was employed to analyze IOP changes with changes in intra-abdominal pressure, while controlling for age, BMI, and systolic blood pressure.

**Results:** A total of 28 patients were included in the analysis. The mean age, BMI and systolic blood pressure of the patients were 61.2 years, ± 7.4 (SD) years, 29.0 ± 4.6 kg/m$^2$, and 128.1 mmHg ± 17.0 mmHg respectively. The mean IOPs at six different points are shown in Figure 1. A change in 1 mmHg of abdominal insufflation pressure was associated with a 0.35 mmHg increase in IOP (95% CI= 0.29-0.4, p-value<0.001) holding all other variables constant. Furthermore, a 1 mmHg change in systolic blood pressure was associated with a 0.06 mmHg increase in IOP (95% CI= 0.03-0.09, p-value<0.001). Contrary to earlier studies, age and BMI were statistically not associated with IOP.

**Conclusions:** In conclusion, our findings suggest that intra-abdominal insufflation pressure and systolic blood pressure are significantly associated with IOP after accounting for the correlation of the repeated measures within each patient and controlling for age, and BMI.




## FRI-MP5-1740

**Economics of the Sterile Single-Use Sheath System for Cystoscopy**

Z. Wu, M. El-Miniawi, B. Fulmer
*Geisinger Medical Center, Danville, PA, USA*

**Introduction and Objective:** Office-based cystoscopy is one of the most performed procedures by urologists. As such, the costs associated with the procedure directly impact the profitability of every urology practice. Previous studies have compared the costs of single-use cystoscopes to reusable cystoscopes which require reprocessing. The EndoSheath™ is a single-use sterile barrier for reusable cystoscopes that obviates the need for high-level disinfection. Our urology clinic utilizes this system to reduce turnover times and to simplify workflow. We performed a cost analysis of cystoscopy using single-use sheaths and compared it to the projected costs of single-use cystoscopes.

**Methods:** Cystoscopy procedures at a hospital-based urology clinic in the fiscal year 2023 using single-use sheaths were retrospectively reviewed. The costs of capital acquisition, single-use supply, maintenance, and labor were assessed. Per-procedure costs were calculated using five-year amortized values of all reusable equipment. Cystoscope turnover and total encounter time were used to calculate labor costs.

**Results:** 1748 cystoscopies were performed in 2023 using single-use sheaths with 583 cases per cystoscope. The average appointment time was 39 minutes with 4 minutes dedicated to scope cleaning. The annual capital acquisition, single-use, maintenance, and labor costs were $23,631, $122,133, $13,545, $23,860 respectively. The per-procedure cost of cystoscopy was $125. This compares to a projected per-procedure cost of $218 for the same clinic equipped with single-use cystoscopes. Procedure costs using a single-use sheath system decrease with increasing volume. The volume at which the cost of the single-use sheath system is equivalent to single-use cystoscope was 108 procedures per cystoscope.

**Conclusions:** The cost-effectiveness flexible cystoscopy is dependent on procedure volume. The use of single-use barrier for reusable cystoscopes can represent significant cost and time saving at a low procedure volume.

## FRI-MP5-1745

**Mapping the Lineage of Focal Therapy Medical Device Predicates Approved in the United States**

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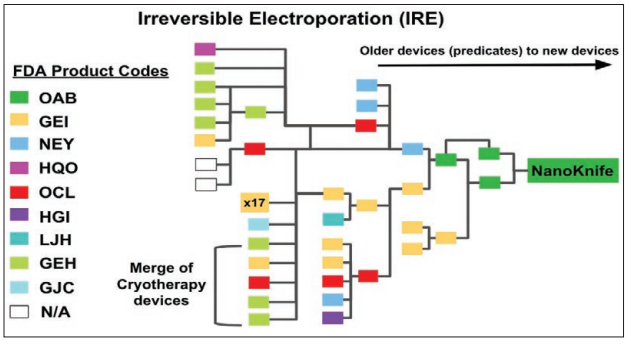
**Introduction and Objective:** Medical devices are reviewed by the U.S. Food and Drug Administration (FDA) for safety and efficacy. Class II devices can obtain 510(k) clearance if "substantial equivalence" to a pre-existing "predicate" device exists. This process can be repeated iteratively, leading to a lineage of predicates for newly cleared devices. Thus, an evaluation of predicate devices is beneficial for increasing transparency among patients and knowledge among physicians.

**Methods:** Four focal therapy medical devices were studied: high-intensity focused ultrasound (HIFU), focused laser ablation (FLA), irreversible electroporation (IRE), and cryotherapy. Device information and predicate networks were collected through the U.S. FDA 510(k) Premarket Notification database. Product classification codes, assigned based on device technological characteristics and intended use, were determined from the device summary page.

**Results:** The predicate trees demonstrate a branching pattern of devices. Figure 1 illustrates the complexity of interlinked predicates that laid the foundation of the current IRE "NanoKnife" device which can be traced to 71 predicates. Similarly, HIFU devices contain upwards of 4 predicates, FLA contains 9 predicates, and cryotherapy contains 14 predicates. Some original predicates have initial indications for use quite distinct from the current-day application, with IRE predicates indicated for cardiac and ophthalmic use and cryotherapy predicates indicated for neurologic use. There is also evidence of an absorption of cryotherapy devices into the IRE predicate tree, demonstrating the merging of predicates and increased complexity of new devices.

**Conclusions:** Newer focal therapy devices are shown to have developed from a branched network of various predicates which in some cases have initial indications quite distinct from the current day use. The mapping of predicates enables a better understanding of the ancestry of focal therapy products currently in the market.




## FRI-MP5-1750

**Content Analysis and 1-Year Impact of the AUANews Medical Student Column**

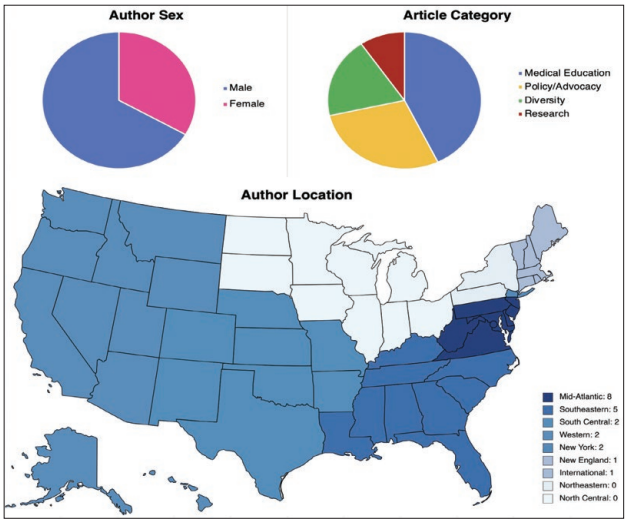
Y. Shah[1], M. Antony[2], J. Drobner[3], J. Regala[4], S. Tanaka[5]
*[1]Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA, USA; [2]University of Connecticut School of Medicine, Farmington, CT, USA; [3]Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA; [4]American Urological Association, Linthicum, MD, USA; [5]University of Alabama at Birmingham, Birmingham, AL, USA*

**Introduction and Objective:** The AUANews Medical Student Column (MSC) was introduced as a new platform for trainee engagement and debuted at MA-AUA 2023. The MSC aims to develop translatable science communication and research skills via a collaborative peer-review process. We evaluated the MSC's impact in its first year using author demographics and thematic content analyses.

**Methods:** All 21 articles accepted for publication in 2023 were included. Author demographics, including graduation year, sex, and location, were self-reported. Articles were qualitatively categorized by primary focus, and quantitative thematic content analysis of full texts was completed. Article text was preprocessed to eliminate stop-words using the NLTK library (Python v.3.12.0), and the frequency of most used terms per article was determined. Following this analysis, three reviewers categorized distinct words into themes.

**Results:** Figure 1 displays author characteristics and article themes. Of 36 total co-authors, 24 (67%) were male. Author affiliations represented a wide geographic range, covering 6/8 AUA sections, though the Mid-Atlantic (8) and Southeastern (5) sections were overrepresented (13/21, 62%). Of the articles, 9 focused on Medical Education, 6 on Policy/Advocacy, 4 on Diversity, and 2 on Research. A total of 22,498 words were analyzed, leading to the identification of 700 distinct frequent terms. These terms were categorized into four themes: Healthcare/Health Technology (242 occurrences), Education (251 occurrences), Academic/Research (151 occurrences), and Diversity/Representation (56 occurrences).

**Conclusions:** Engaging trainees with AUA Publications can increase interest in urology. The AUANews MSC reflects the current priorities of students, as authors emphasized diversity, educational initiatives, reflections on patient care, research advances, new technologies, and social issues. Trainees offer a valuable perspective on contemporary issues to facilitate progress of the specialty at large.



## SAT-MP6-0900

**Environmental Exposures in Men Pursuing Semen Analysis Testing**

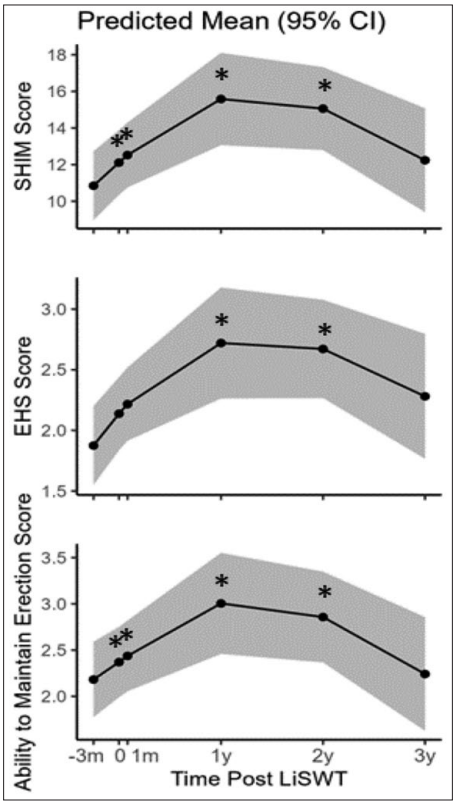
T. Maloney[1], T. Spitzer[1,2], D. Nolte[3], S. Kenfield[3,4], D. Civello[3], A. Belarmino[3,5], J. Smith[3,4], D. Hawksworth[1,2]
*[1]Walter Reed National Military Medical Center, Bethesda, MD, USA; [2]Uniformed Services University of Health Sciences, Bethesda, MD, USA; [3]Fellow Health, San Leandro, CA, USA; [4]University of California, San Francisco, San Francisco, CA, USA; [5]University of California, Los Angeles, Los Angeles, CA, USA*

**Introduction and Objective:** Numerous environmental exposures negatively influence spermatogenesis in vitro. However, the extent of their effects on semen analysis (SA) parameters and male fertility have not been fully elucidated. This study describes environmental exposure history as reported by men who underwent SAs for purposes of fertility testing and vasectomy status confirmation.

**Methods:** This study included men utilizing a mail-in SA test system developed by Fellow Health, Inc. Men performing a semen analysis were asked to complete a questionnaire on their occupation and environmental exposures within the past year. Patients who completed the questionnaire were included, provided they consented to research and were 18 years or older. Descriptive statistics were reported and chi-squared and t-tests were used to determine statistical significance at the 0.05 alpha level.

**Results:** 8090 patients were included in this analysis. 2486 individuals completed full SAs for purposes of either fertility testing or cryopreservation and compared to 5604 presumed fertile male controls who underwent post vasectomy SAs. Average patient age was 36.6 years (range: 18-74 years). Most frequently reported exposures included paint (21.3%), adhesives (19.2%) and degreasers (15.4%). Ethylene (0.6%), mercury (0.9%) and radioactivity (1.1%) were least frequently reported. While both study groups were homogenous for most exposures, higher percentages of men in the fertile control group reported exposure to anesthesia (7.0% versus 3.9%, p<0.001) and nitrous oxide (4.9% versus 2.0%, p<0.001).

**Conclusions:** This study provides a comprehensive, novel report of common environmental agents and their exposure frequencies in men of reproductive age. These results are vital to further research in the relationship between environmental effects and SA parameters and may be the cornerstone to understanding potential impacts on male fertility.




## SAT-MP6-0905

**Is Low-intensity Shockwave Therapy for Erectile Dysfunction a Durable Treatment Option? Outcomes of Long-term Follow-up**

A. Kazeem[1], M. Lange[1], D. Charles[1], C. Lyons[1], F. Sun[1], M. Jones[1], S. Ghosal[1], S. Krzastek[2], D. Rapp[1], N. Ortiz[1], R. Smith[1]
*[1]University of Virginia, Charlottesville, VA, USA; [2]Virginia Commonwealth University, Richmond, VA, USA*

**Introduction and Objective:** Low-intensity shockwave therapy (LiSWT) is a non-invasive therapy for ED with demonstrated efficacy. However, few studies have evaluated long-term durability. This was a 2-armed stratified, randomized controlled clinical trial assessing sustainability of improved erectile function after LiSWT.

**Methods:** Thirty patients with baseline ED were randomized to LiSWT or sham. Patients in the sham group crossed over at 1 month. Patients were treated twice weekly for 3 consecutive weeks (6 treatments) with a Storz® Duolith™ device delivering 3000 shockwaves at 0.1 mJ/mm2 to the crura, base, and distal penis. Primary outcomes were changes in SHIM and EHS up to 36 months post-treatment and patient satisfaction (EDITS Index). SHIM and EHS were evaluated using linear mixed-effects models.

**Results:** The median follow-up was 30.0 (25.5-33.0) months. The mean SHIM score immediately after treatment was 12.4 (±1.0), an improvement over baseline (p=0.025). At 1, 12, 24, and 36-month assessment, the mean SHIM score was 12.8 (p=0.011), 15.9 (p<0.001), 15.3 (p<0.001), and 12.5 (p=0.305) respectively. The mean EHS score after treatment was 2.09 (± 0.17), compared to the pre-treatment baseline (p=0.013). At 1, 12, 24, and 36 months assessment, the mean EHS score was 2.17 (p=0.006), 2.68 (p<0.001), 2.63 (p<0.001), and 2.24 (p=0.113) respectively. The median EDITS score was 48.9 (22.7-74.4).

**Conclusions:** Our analysis demonstrates sustained improvement in erectile function (EF) after LiSWT for a heterogeneous cohort. While limited by population size, the results suggest durable improvement in EF. Treatment effect appears to wain between 2-3 years, however, EF remained above baseline for at least 2 years follow-up.

Table 1. Patient Characteristics and Demographics

| **Characteristics** | **N = 30** |
|---|---|
| Age | 69 (63-72) |
| **Comorbidities** | |
| Diabetes | 6 (20%) |
| Coronary Artery Disease | 3 (10%) |
| Hypertension | 14 (47%) |
| Hyperlipidemia | 13 (43%) |
| Low Testosterone | 5 (17%) |
| Smoking | 7 (23%) |
| Response to Prior TRT | 8 (30%) |
| No previous Conditions | 8 (27%) |
| **Indications for LiSWT** | |
| ED defined by IIEF | 19 (63%) |
| Post-prostate cancer treatment | 10 (33%) |
| Planning to undergo treatment for Prostate Cancer | 1 (3.3%) |
| **Prostate Cancer Treatment** | **N = 12** |
| Active Surveillance | 3 (25%) |
| External Beam Radiation | 4 (33%) |
| Surgical | 5 (42%) |

TRT = testosterone replacement therapy
IIEF = International Index of Erectile Function

## SAT-MP6-0915

**A Single-Institution Experience with Vaginal Sparing Masculinization Surgeries**

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**Introduction and Objective:** Gender dysphoria is a condition with a spectrum of manifestation and experience. Some trans and non-binary patients who seek masculinizing surgery – including metoidioplasty and phalloplasty -- prefer to have their vagina spared, often due to risk aversion, the desire to engage in receptive intercourse, or because the vagina is not the source of dysphoria. Outcomes of patients undergoing vaginal sparing (VS) gender affirming (GA) surgeries has not been well studied. In this study, we describe our experience with patients who had VS GA surgeries.

**Methods:** We performed a retrospective chart review of 43 patients who received either metoidioplasty or phalloplasty at a single institution since 2016. These patients were then disaggregated by whether they had VS procedures and whether those procedures involved urethral lengthening (UL). Outcomes and complication rates were analyzed.

**Results:** Out of the 43 total GA surgeries, 8 were VS. Of these, 5 involved UL. One patient had distal urethral dehiscence without fistula and 3 had urethrovaginal fistula, with all 4 patients requiring reoperation. In total, we describe 60% fistula rate and 80% re-operation rate among patients receiving VS with UL. To date, no patients have required subsequent vaginectomy. Follow-up for these patients ranged from 1-19 months, with an average of 6.8 months. In comparison, out of the 35 GA surgeries that were not VS, 5.7% (n=2) had dehiscence, 14.3% (5) developed fistula, and 34.3% (12) developed urethral stricture, with a 42.3% re-operation rate among the non-VS group.

**Conclusions:** While there is a high rate of reoperations in GA surgeries, there is no increased stricture rate in those undergoing VS surgeries. Though urethrovaginal fistula has a higher likelihood of occurring in VS surgeries, these patients can be managed surgically without vaginectomy. This should be taken into consideration in patient counseling, patient selection, and surgical approach.

## SAT-MP6-0920

**Does the Absence of Preoperative Cystourethroscopy Affect Success Rates of Post-Prostatectomy Incontinence Procedures?**

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*[1]Eastern Virginia Medical School, Norfolk, VA, USA; [2]Urology of Virginia, Virginia Beach, VA, USA*

**Introduction and Objective:** The AUA recommends preoperative cystourethroscopy prior to surgical management for post-prostatectomy incontinence (PPI) to rule out potential urethral pathology that could affect outcomes of these procedures. Limited data exists on whether these potential findings affect the success of PPI procedures, or whether patients who undergo pre-operative cystourethroscopy have better outcomes compared to those who do not. This review investigates if the absence of preoperative cystourethroscopy affects the success of male slings and artificial urinary sphincters (AUS).

**Methods:** In this retrospective review, patients with PPI who underwent male sling placement and AUS placement between January 2013 and January 2022 were investigated. Open, laparoscopic, and robotic approaches to prostatectomy were included. Success of the procedure was defined as 0 – 1 pad per day between 1 – 2 years of follow-up. Patients were excluded if prostate cancer was primarily treated with radiotherapy and if there was no follow-up data between 1 – 2 years. Patients who received a sling prior to AUS were excluded from the AUS group.

**Results:** 44 patients underwent sling placement, and 60 patients underwent AUS placement. Of those undergoing sling placement, 27 patients underwent preoperative cystourethroscopy. Successful sling outcomes were achieved in 16 patients (59%) who underwent preoperative cystourethroscopy and in 11 patients (65%) that did not. There was no statistically significant difference in success between these two groups (p value = 0.76). Of those undergoing AUS placement, 33 patients underwent preoperative cystourethroscopy. Successful AUS outcomes were achieved in 18 patients (54.5%) who underwent preoperative cystourethroscopy and in 12 patients (55.6%) that did not. There was no statistically significant difference in success between these two groups (p value = 0.1).

**Conclusions:** Preoperative cystourethroscopy may not be necessary in the evaluation of men with PPI who wish to undergo male sling or AUS placement as success rates were similar at 1-2 years.

## SAT-MP6-0925

**Androgen Deprivation Therapy Does Not Increase Rates for Reintervention, Complication, or Infection in Penile Implant or Artificial Urinary Sphincter Surgery**

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**Introduction and Objective:** Prostate cancer treatment is associated with erectile dysfunction and stress urinary incontinence. Possible treatments include inflatable penile prosthesis (IPP) or artificial urinary sphincter (AUS). Given the association with androgens and penile/urethral health, we aim to compare outcomes for patients on androgen deprivation therapy (ADT) undergoing IPP or AUS.

**Methods:** We queried TriNetX for patients with IPP or AUS separated based on receipt of ADT 3-months before, or any time after, surgery against those not receiving ADT. ADT medications were leuprolide, bicalutamide, flutamide, nilutamide, apalutamide, relugolix, degarelix, abiraterone, and darolutamide. We performed sub-analyses for leuprolide and bicalutamide, the most common ADT medications. Propensity score matching (PSM) was performed to reduce confounding. Outcomes include rates of re-intervention (revision, removal, or replacement surgery), infection, and complication. Results are reported in terms of Risk Ratios with 95% Confidence Intervals.

**Results:** After PSM, patients on ADT had lower rates of IPP complication (12.7% vs 18.5%, RR = 0.68 [0.49-0.95]) and reintervention (7.2% vs 12%, RR = 0.60 [0.39-0.92]). After PSM, patients on Leuprolide had lower rates of IPP complication (12.2% vs 19.3%, RR = 0.63 [0.43-0.91]). After PSM, patients on bicalutamide had lower rates of IPP reintervention (<5.2% vs 10.8%, RR 0.48 [0.23-0.99]). The remainder of analyses showed no significant differences.

**Conclusions:** Patients with IPP or AUS had non-inferior or superior outcomes on ADT. It is not readily apparent why patients on ADT would have superior outcomes. Further evaluation into the duration of ADT or patient behavior may provide clinical context, but based on these results, ADT should not limit implant surgery.

| Inflatable Penile Prosthesis | | | | | |
|---|---|---|---|---|---|
| | N before PSM | N after PSM | % Reintervention (CPT codes 54406, 54408, 54410, 54411, 54400, 54415, 54416, 54417), RR [95% CI] | % Complication (ICD codes T83), RR [95% CI] | % Infection (ICD code T83.6), RR [95% CI] |
| + ADT<br>- ADT | 465<br>12967 | 464<br>464 | 7.2%<br>12%<br>RR =0.60 [0.39, 0.92] | 12.7%<br>18.5%<br>RR =0.68 [0.49, 0.95] | 2.9%<br>4.5%<br>RR =0.63 [0.32, 1.3] |
| + Bicalutamide<br>- ADT | 214<br>12967 | 213<br>213 | 5.2%*<br>10.8%<br>RR=0.48 [0.23, 0.99] | 9.8%<br>13.6%<br>RR=0.73 [0.41, 1.3] | 4.9%*<br>4.7%*<br>RR=1.0 [0.44, 2.4] |
| + Leuprolide<br>- ADT | 356<br>12967 | 355<br>355 | 7.6%<br>12.1%<br>RR=0.63 [0.39, 1.0] | 12.2%<br>19.3%<br>RR=0.63 [0.43, 0.91] | 2.9%*<br>4.8%<br>RR=0.61 [0.28, 1.3] |
| **Artificial Urinary Sphincter** | | | | | |
| | N before PSM | N after PSM | % Reintervention (CPT codes 53444, 53446, 53447,53448, 53449) RR [95% CI] | % Complication (ICD codes T83), RR [95% CI] | % Infection (ICD code T83.5), RR [95% CI] |
| + ADT<br>- ADT | 743<br>4933 | 743<br>743 | 19.4%<br>23.0%<br>RR =0.85 [0.69, 1.0] | 22.0%<br>24.5%<br>RR =0.90 [0.73, 1.1] | 5.5%<br>7.6%<br>RR =0.72 [0.49, 1.1] |
| + Bicalutamide<br>- ADT | 290<br>4933 | 288<br>288 | 20.8%<br>22.1%<br>RR =0.94 [0.68, 1.3] | 21.9%<br>24.0%<br>RR =0.91 [0.66, 1.3] | 6.3%<br>8.2%<br>RR =0.77 [0.42, 1.4] |
| + Leuprolide<br>- ADT | 591<br>4933 | 590<br>590 | 19.3%<br>23.0%<br>RR=0.84 [0.67, 1.1] | 23.3%<br>24.2%<br>RR=0.97 [0.77, 1.2] | 6.1%<br>7.5%<br>RR=0.82 [0.53, 1.3] |

## SAT-MP6-0930

**Urologic Trauma Related to Gun Violence in Washington DC**

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*[1]Georgetown University School of Medicine, Washington, DC, USA; [2]MedStar Washington Hospital Center, Washington, DC, USA*

**Introduction and Objective:** Gun violence in Washington D.C. has increased over the past decade. While urologic injury secondary to trauma is rare, most genitourinary (GU) injuries are secondary to penetrating trauma such as gunshot wounds (GSWs). We hypothesize that the increase in gun violence correlates with an increase in urologic injury secondary to GSW in Washington DC.

**Methods:** Patients seen for GU trauma at a level one trauma center in Washington D.C. from January 2016 to December 2022 were identified. We analyzed the mechanism and location of injury for each patient. Washington D.C. Metropolitan Police Department annual reports were used to collect data on homicides by firearm rates.

**Results:** Three-hundred twenty-six patients were identified with GU trauma with 32 patients experiencing injury to multiple GU structures. 110 injuries were related to GSWs. Over the study period, the percent of GSW-related urologic injuries increased from 32% in 2016 to 38% in 2022. In 2021, GSW-related injuries accounted for approximately 47% of urologic trauma seen at our institution. There was an increase in homicide rate by firearm over the study period from 15 to 25 deaths per 100,000 with a peak in 2021.

**Conclusions:** From 2016 to 2022, there was an increase in homicide rates by firearm in Washington D.C with a synchronous increase in urologic injuries related to gun violence. The highest percent of GSW-related urologic injury occurred in 2021, which was also the year with the highest homicide by firearm rate; indicating that as overall gun violence rates increase, GSW-related GU trauma rates may follow. Further studies will investigate management and outcomes of patients with GSW-related GU trauma.

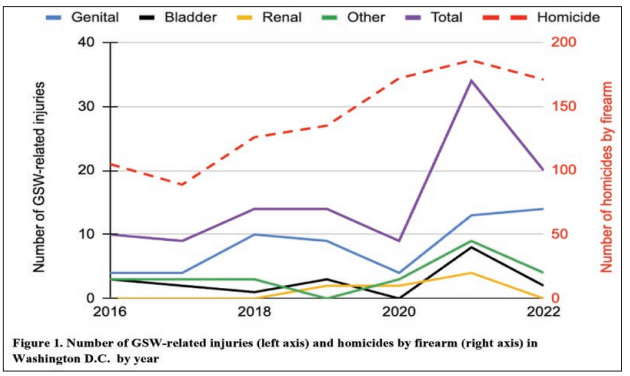


**Figure 1. Number of GSW-related injuries (left axis) and homicides by firearm (right axis) in Washington D.C. by year**

| | A | Multivariate OR (95% CI) | p-value | B | Multivariate OR (95% CI) | p-value |
|---|---|---|---|---|---|---|
| Single-port robotic surgery | | 0.47 (0.11-1.92) | 0.29 | | 2.19 (0.61-7.84) | 0.23 |
| Age | | 0.97 (0.94-1.00) | 0.10 | | 1.00 (0.98-1.03) | 0.76 |
| BMI | | 1.00 (0.91-1.01) | 0.998 | | 1.02 (0.93-1.11) | 0.72 |
| ASA | | 1.08 (0.38-3.06) | 0.88 | | 0.648 (0.23-1.85) | 0.42 |
| History of prior abdominal or pelvic surgery | | 2.47 (0.77-7.90) | 0.13 | | 1.28 (0.42-3.85) | 0.66 |
| Operative time | | 1.00 (0.99-1.01) | 0.163 | | 0.99 (0.98-0.98) | 0.004 |

Table 2. Multivariate analysis of potential predictive factors for (A) 90- day readmission and (B) successful surgical outcome following upper urinary tract reconstruction

## SAT-MP6-0935

**Singe-port Versus Multi-port Robot-assisted Surgery: Analysis of Surgical Outcomes for Upper Urinary Tract Reconstruction**

L. Khizir, S. Reddi, R. Kadakia, S. Chapman, B. Lichtbroun, J. Pfail, A. Kaldany, K. Chua, R. Passerelli, S. Elsamra
*Rutgers Robert Wood Johnson Medical School, Piscataway, NJ, USA*

**Introduction and Objective:** Single-port (SP) robotic surgery has enabled advancements in the surgical repair of upper urinary tract disease. We aim to evaluate differences in perioperative experiences and successful surgical outcomes of SP robotic upper urinary tract reconstruction in comparison to the traditional multi-port (MP) approach.

**Methods:** We retrospectively reviewed patients at a single institution undergoing robotic upper urinary tract reconstruction. Patient characteristics, perioperative factors, pre- and post-operative renal function, 90-day readmission, and pathologic outcomes were recorded. Data was analyzed using chi-squared test, Mann-Whitney U test, and multivariate analysis. An unsuccessful surgical outcome was defined as t1/2 greater than 20 minutes on postoperative renal scan, need for repeat surgical intervention, or post-operative leakage.

**Results:** In total, 111 patients underwent SP (n=30) and MP (n=81) robotic ureteral reconstruction. A larger number of MP patients had a history of pelvic or abdominal surgery (54.34%, p=0.039) and were undergoing repeated ureteral repair (16%, p=0.018) in comparison to SP patients. Median post-operative stent duration was shorter in SP patients at 30 days, in comparison to 41 days in MP patients (p=0.008). There was no difference in post-operative leakage, required repeat surgical intervention, 90-day readmission, post-operative complications, or successful outcomes between the SP and MP approach (Table 2). On multivariate analysis, SP surgery was not significantly associated with 90-day readmission (Table 2).

**Conclusions:** SP robotic repair is a safe, feasible, and efficacious approach to upper urinary tract reconstruction. The SP platform confers a potential benefit of shorter post-operative stent duration and is non-inferior to MP repair in terms of surgical outcomes.

| | Multi-port N=81 | Single-port N=30 | Total N=111 | p-value |
|---|---|---|---|---|
| Median age (years), range | 37.0 [14.0-59.0] | 46.5 [24.2-67.2] | 37.0 [16.0-59.0] | 0.130 |
| Median BMI, range | 23.1 [18.1-27.7] | 26.5 [23.5-30.8] | 24.4 [19.0-28.8] | 0.012 |
| Sex, male, n (%) | 41 (50.6%) | 13 (43.3%) | 54 (48.6%) | 0.64 |
| ASA, n (%) | | | | 0.193 |
| I | 9 (11.1%) | 1 (3.33%) | 10 (9.01%) | |
| II | 52 (64.2%) | 17 (56.7%) | 69 (62.2%) | |
| III | 20 (24.7%) | 12 (40.0%) | 32 (28.8%) | |
| Risk Factors | | | | |
| DM, n (%) | | | | 0.262 |
| No | 72 (88.9%) | 29 (96.7%) | 101 (91.0%) | |
| Yes | 9 (11.1%) | 1 (3.33%) | 10 (9.01%) | |
| Smoking history, n (%) | | | | 0.383 |
| current | 7 (8.64%) | 3 (10.0%) | 10 (9.01%) | |
| former | 7 (8.64%) | 5 (16.7%) | 12 (10.8%) | |
| never | 67 (82.7%) | 22 (73.3%) | 89 (80.2%) | |
| History of pelvic or abdominal radiation, n (%) | | | | 1 |
| No | 77 (95.1%) | 29 (96.7%) | 106 (95.5%) | |
| Yes | 4 (4.94%) | 1 (3.33%) | 5 (4.50%) | |
| History of pelvic or abdominal surgery, n (%) | | | | 0.039 |
| No | 37 (45.7%) | 21 (70.0%) | 58 (52.3%) | |
| Yes | 44 (54.3%) | 9 (30.0%) | 53 (47.7%) | |
| Repeat surgery, n (%) | | | | 0.018 |
| No | 68 (84.0%) | 30 (100%) | 98 (88.3%) | |
| Yes | 13 (16.0%) | 0 (0.00%) | 13 (11.7%) | |
| Stricture location, n (%) | | | | 0.004 |
| Proximal | 50 (61.7%) | 14 (46.7%) | 64 (57.7%) | |
| Mid-ureteral | 10 (12.3%) | 12 (40.0%) | 22 (19.8%) | |
| Distal | 21 (25.9%) | 4 (13.3%) | 25 (22.5%) | |
| Stricture etiology, n (%) | | | | |
| | 32 (39.5%) | 5 (16.7%) | 37 (33.3%) | 0.02 |
| congenital | 18 (22.2%) | 6 (20.0%) | 24 (21.6%) | |
| iatrogenic | 7 (8.64%) | 8 (26.7%) | 15 (13.5%) | |
| impacted stone | 10 (12.3%) | 4 (13.3%) | 14 (12.6%) | |
| malignancy | 4 (4.94%) | 0 (0.00%) | 4 (3.60%) | |
| other | 4 (4.94%) | 0 (0.00%) | 4 (3.60%) | |
| radiation | 1 (1.23%) | 2 (6.67%) | 3 (2.70%) | |
| re-implantation | 2 (2.47%) | 1 (3.33%) | 3 (2.70%) | |
| retroperitoneal fibrosis | 3 (3.70%) | 4 (13.3%) | 7 (6.31%) | |
| Pre-operative percutaneous nephrostomy, n (%) | | | | |
| No | 53 (65.4%) | 16 (53.3%) | 69 (62.2%) | 0.344 |
| Yes | 28 (34.6%) | 14 (46.7%) | 42 (37.8%) | |
| Pre-operative stent placement, n (%) | | | | |
| No | 73 (90.1%) | 30 (100%) | 103 (92.8%) | 0.105 |
| Yes | 8 (9.88%) | 0 (0.00%) | 8 (7.21%) | |
| Augmentative repair performed, n (%) | | | | |
| Buccal mucosa graft | 12 (14.8%) | 3 (10.0%) | 15 (13.5%) | 0.557 |
| Ileal ureter repair | 1 (1.23%) | 1 (3.33%) | 2 (1.80%) | |
| Not performed | 68 (84.0%) | 26 (86.7%) | 94 (84.7%) | |
| Use of flap intra-operative, n (%) | | | | |
| | 2 (2.47%) | 2 (6.67%) | 4 (3.60%) | 0.607 |
| No | 58 (71.6%) | 21 (70.0%) | 79 (71.2%) | |
| Yes | 21 (25.9%) | 7 (23.3%) | 28 (25.2%) | |
| Median operative time (minutes), range | 258 [196-299] | 246 [206-326] | 258 [198-301] | 0.611 |
| Intra-operative stent placement, n (%) | | | | 1 |
| No | 5 (6.17%) | 1 (3.33%) | 6 (5.41%) | |
| Yes | 76 (93.8%) | 29 (96.7%) | 105 (94.6%) | |
| Median post-operative stent duration (days), range | 41.0 [30.0-49.0] | 30.0 [25.0-41.0] | 38.0 [29.8-45.0] | 0.008 |
| Post-operative leak, n (%) | | | | 0.188 |
| No | 75 (92.6%) | 30 (100%) | 105 (94.6%) | |
| Yes | 6 (7.41%) | 0 (0.00%) | 6 (5.41%) | |
| Repeat surgical intervention required, n (%) | | | | 1 |
| No | 69 (85.2%) | 26 (86.7%) | 95 (85.6%) | |
| Yes | 12 (14.8%) | 4 (13.3%) | 16 (14.4%) | |
| Readmission within 90 days, n (%) | | | | 0.289 |
| No | 64 (79.0%) | 27 (90.0%) | 91 (82.0%) | |
| Yes | 17 (21.0%) | 3 (10.0%) | 20 (18.0%) | |
| Successful outcome, n (%) | | | | 0.706 |
| No | 18 (22.2%) | 5 (16.7%) | 23 (20.7%) | |
| Yes | 63 (77.8%) | 25 (83.3%) | 88 (79.3%) | |
| Post-operative complications, n (%) | | | | 0.207 |
| | 0 (0.00%) | 2 (6.67%) | 2 (1.80%) | |
| none | 61 (75.3%) | 22 (73.3%) | 83 (74.8%) | |
| other | 5 (6.17%) | 1 (3.33%) | 6 (5.41%) | |
| post-operative leak | 4 (4.94%) | 0 (0.00%) | 4 (3.60%) | |
| surgical site infection/dehiscence | 1 (1.23%) | 1 (3.33%) | 2 (1.80%) | |
| UTI/sepsis | 10 (12.3%) | 4 (13.3%) | 14 (12.6%) | |

Table 1. Summary of demographic information, baseline and perioperative characteristics, and surgical outcomes

## SAT-MP6-0940

**A Quantitative Analysis of Renal Function and Drainage after Robotic Ureteral Reconstruction for Proximal and Middle Ureteral Strictures**

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**Introduction and Objective:** Limited quantitative evidence exists to evaluate outcomes after robotic ureteral reconstruction (RUR) in patients with ureteral strictures. We investigate the effects on renal function and drainage in patients who underwent RUR for surgical management of proximal and middle ureteral strictures.

**Methods:** We retrospectively reviewed our single-institution, RUR database to identify all consecutive patients undergoing RUR for management of proximal and middle ureteral strictures between 1/2017 and 6/2023. All patients who obtained a pre and postoperative nuclear medicine renal scan with Lasix were included for analysis. Primary outcomes included median difference in preoperative and postoperative renal split function and clearance half time. A descriptive analysis was performed on primary and secondary outcomes.

**Results:** Overall, 46 patients met inclusion criteria (Table 1). Median time to obtain a renal scan was 5.1 (IQR 4.0-7.1) months after the index surgery. There was a median improvement of 8.8 (IQR 0-15.9) minutes in clearance half time and a negligible improvement of 0.4% (IQR -2.6-5.0) in renal split function on the affected renal unit. Among this cohort, there were 15 (32.6%) patients who underwent RUR for management of flank pain (Table 2). There was a median improvement of 10.0 (IQR 0.8-15.7) minutes in clearance half time and a negligible improvement of 0.4% (IQR -0.7-1.4) in renal split function within this subgroup. One (6.7%) patient had recurrent flank pain postoperatively and had worsening clearance half time and renal split function after RUR.

**Conclusions:** Renal scans may be employed to evaluate surgical success following RUR. Overall, there was an improvement in median clearance half time in patients who undergo RUR for surgical management of proximal and middle ureteral strictures.

Table 1: Effects on renal function and drainage after ureteroplasty for proximal and middle ureteral strictures

| Variables | |
|---|---|
| Number of patients (%) | 46 (100.0) |
| Preoperative median creatinine (IQR) | 0.96 (0.8-1.1) |
| Postoperative median creatinine (IQR) | 0.95 (0.8-1.3) |
| Preoperative median estimated glomerular filtration rate (IQR) | 60.0 (60.0-60.0) |
| Postoperative median estimated glomerular filtration rate (IQR) | 60.0 (56.0-79.0) |
| Median timing of renal scan (months) (IQR) | 5.1 (4.0-7.1) |
| Median improvement in renal split function on affected side (%) (IQR) | 0.4 (-2.6-5.0) |
| Percent with improvement in renal split function (%) | 52.2 |
| Median improvement in T1/2 on affected side (minutes) (IQR) | 8.8 (0-15.9) |
| Percent with improvement in T1/2 on affected side (%) | 71.7 |

Table 2: Effects on renal function and drainage after ureteroplasty in subgroup with flank pain

| Variables | |
|---|---|
| Number of patients with flank pain (%) | 15 (32.6) |
| Median improvement in renal split function on affected side (%) (IQR) | 0.4 (-0.7-1.4) |
| Percent with improvement in renal split function (%) | 66.7 |
| Median improvement in T1/2 on affected side (minutes) (IQR) | 10.0 (0.8-15.7) |
| Percent with improvement in T1/2 on affected side (%) | 80.0 |

## SAT-MP6-0945

**Recurrent Stenosis After Robotic Ureteral Reconstruction – A Single-Institution Descriptive Series**

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**Introduction and Objective:** Ureteral strictures are increasingly managed robotically with excellent short- and intermediate-term outcomes. However, little is known regarding recurrent stenosis after robotic ureteral reconstruction (RUR). We characterized our institutional series following RUR.

**Methods:** We performed a retrospective review of patients from 05/2012 to 04/2024 undergoing RUR at a single institution. Inclusion criteria were (1) postoperative imaging suggestive of recurrent obstruction or (2) additional procedures for recurrent obstruction, such as hardware replacement or additional reconstructive surgeries. Follow-up included 3–6-month post-operative nuclear medicine renal scans (NMRS) after ureteral stent removal.

**Results:** Of 450 total RUR procedures performed between 05/2012 and 04/2024, 37 patients (8.2%) with median follow-up of 19.0 months (IQR: 9.0-63.0) met inclusion criteria. Strictures were found to be iatrogenic in 12 patients (32.4%), 4 (10.8%) received prior abdominopelvic radiation, and 22 (59.5%) had prior attempted repair via endoscopic, open, or robotic procedures. 34 patients (91.8%) underwent a hardware-free NMRS at a median of 3.0 months (IQR: 2.6-5.1) postoperatively. Chi-squared analysis showed no significance between the presence of obstruction on initial postoperative NMRS and flank pain (p=.37). 5 patients (13.8%) failed RUR based on imaging or pain (definition 1) alone at a median of 2.0 months (IQR:1.0-6.0). 32 patients (88.9%) failed RUR based on the need for additional intervention at a median of 3.0 months (IQR: 1.0-7.5) such as balloon dilation/ureterotomy (22, 59.5%), hardware (8, 21.6%), repeat RUR (18, 48.6%), and nephrectomy (4, 10.8%). At last follow-up, 17 patients (45.9%) kept their renal unit with a patent ureter.

**Conclusions:** In our series, failure following RUR was typically diagnosed within one year of surgery. Although most patients required additional intervention for recurrent stenosis, RUR remains an effective treatment option.

| | | Failure (def. 1) | Failure (def. 2) | All Failures |
|---|---|---|---|---|
| Age (IQR) | | 28 (27-42) | 57.5 (36.25-65) | 54 (28-63) |
| BMI (IQR) | | 36.0 (31.8-44.8) | 28.6 (24.2-32.4) | 29.6 (24.6-34.1) |
| Smoking | | 2 (40.0%) | 10 (40.6%) | 15 (40.5%) |
| Diabetes | | 0 (0%) | 7 (21.9%) | 7 (18.9%) |
| Prior ureteral stricture intervention | | | | |
| | Endoscopic | 4 (80.0%) | 13 (40.6%) | 17 (45.9%) |
| | Reconstructive | 1 (20.0%) | 5 (15.6%) | 5 (13.5%) |
| Prior abdominopelvic radiation | | 0 (0.0%) | 4 (12.5%) | 4 (10.8%) |
| Procedure | | | | |
| | Pyeloplasty | 0 (0%) | 15 (46.9%) | 15 (40.5%) |
| | Buccal ureteroplasty | 2 (40%) | 7 (21.9%) | 9 (24.3%) |
| | Ureteroneocystotomy | 1 (20%) | 2 (6.3%) | 3 (8.1%) |
| | Side-to-side reimplant | 1 (20%) | 1 (3.1%) | 2 (5.4%) |
| | Ureterolysis | 0 (0%) | 2 (6.3%) | 2 (5.4%) |
| | Ureteroureterostomy | 1 (20%) | 2 (6.3%) | 3 (8.1%) |
| | Apendiceal bypass | 0 (0%) | 2 (6.3%) | 2 (5.4%) |
| Stricture etiology | | | | |
| | Iatrogenic | 1 (20.0%) | 11 (34.4%) | 12 (32.4%) |
| | Urolithiasis | 4 (80.0%) | 1 (3.1%) | 5 (13.5%) |
| | Crossing vessel | 0 (0.0%) | 5 (15.6%) | 5 (13.5%) |
| | Congenital | 0 (0.0%) | 10 (31.3) | 10 (27.0%) |
| | Retroperitoneal fibrosis | 0 (0.0%) | 2 (6.3%) | 2 (2.7%) |
| | Malignancy | 0 (0.0%) | 1 (3.1%) | 1 (10.8%) |
| Obstruction on post-op hardware free NMRS | | 3 (60%) | 13 (40.6%) | 21 (56.8%) |
| Additional interventions | | | | |
| | Balloon dilation / ureterotomy | 0 (0.0%) | 22 (68.8%) | 22 (59.5%) |
| | Chronic hardware | 0 (0.0%) | 7 (21.9%) | 8 (21.6%) |
| | Repeat reconstruction | 0 (0.0%) | 4 (56.3%) | 18 (48.6%) |
| | Nephrectomy | 0 (0.0%) | 4 (12.5%) | 4 (10.8%) |
| Patent repair at last follow-up | | 4 (80.0%) | 13 (40.6%) | 17 (45.9%) |

## SAT-MP6-0950

**The Relationship Between Hypertrophic Scarring, Ureteral Strictures, and Upper Tract Reconstruction Failure**

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**Introduction and Objective:** Ureteral strictures can lead to renal dysfunction or significant infections including urosepsis. Upper urinary tract reconstruction including pyeloplasty, ureteral reimplantation, and ureteroureterostomy can reestablish proper drainage. Whether patients with abnormal scarring pathology are at increased risk of developing ureteral strictures or failing upper tract reconstruction is unknown.

**Methods:** We queried the TriNetX database for patients undergoing various ureteroscopy procedures (defined by Current Procedural Terminology codes) separated into cohorts based on whether they have abnormal scarring pathology (defined by International Classification of Disease (ICD) code L91.0). Our primary outcome was development of ureteral stricture (ICD N13.1 or N13.5). We performed propensity score matching using age, body mass index, diabetes mellitus, ischemic heart disease, history of nicotine dependence, and history of radiation. We also investigated upper tract reconstruction (ureteroureterostomy, pyeloplasty, ureteral reimplant) failure, defined as need for second procedure. We did not perform matching for this analysis due to sample size limitations. Results are reported in terms of Risk Ratio with 95% confidence interval (CI). Statistical significance was considered when 95%CI did not include 1.0.

**Results:** Patients with hypertrophic scarring were similarly likely to develop ureteral strictures following ureteroscopy (3.7% vs. 3.5%, RR 1.04 (0.71-1.55), Table 1). After reconstruction, patients with hypertrophic scarring were more likely to need a second procedure (14.6% vs. 8.9%, RR 1.64 (0.97-2.8)) although not at a level of statistical significance.

**Conclusions:** Patients undergoing ureteroscopy show similar risk of developing ureteral stricture. However, when undergoing ureteral reconstruction, they are associated with increased repair failure at a level near statistical significance. Given how relatively uncommon this scenario is, it is possible with greater sample size this analysis would be significant.

| | N | Ureteral Stricture | RR 95% CI | Repair Failure | RR 95% CI |
|---|---|---|---|---|---|
| Scarring Disorder URS<br>URS | 1485<br>1485 (after PSM) | 3.7%<br>3.5% | 1.04<br>0.71-1.55 | X | X |
| Scarring Disorder Upper Tract Repair<br>Upper Tract Repair | 89<br>25705 | X | X | 14.6%<br>8.9% | 1.64<br>0.97-2.8 |

## SAT-MP6-0955

**Reduction in Healthcare Utilization Following Upper Urinary Tract Reconstruction in Patients with Ureteral Strictures**

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**Introduction and Objective:** Patients with ureteral strictures are often managed with ureteral stents or nephrostomy tubes (PCNs) until definitive surgery. While PCNs relieve ureteral obstruction and provide ureteral rest, they often remain in place for weeks leading up to surgery. PCNs require regular maintenance, exchanges, and frequently dislodge, leading to increased healthcare utilization. Prompt upper urinary tract (UUT) reconstruction may decrease healthcare visits in patients with ureteral strictures. We seek to evaluate healthcare utilization before and after UUT reconstruction in patients managed with PCNs.

**Methods:** We retrospectively reviewed all patients from our institution who underwent robotic UUT reconstruction for ureteral stricture with pre-operative PCN management from 2016-2023. Internal and external medical records were accessed through Epic and Care Everywhere, respectively. All admissions, urologic and sepsis-related emergency department (ED) visits, procedures, clinic visits, ureteral stent removals, and PCN management visits within one-year before and after UUT reconstruction surgery were included. Quantity of visits within each healthcare category and overall were compared using paired T-tests.

**Results:** Of 42 patients identified, the average healthcare utilization for urologic needs decreased from 7.2 times before surgery to 4.5 times following surgery (p= .023). Differences in hospital admissions, ED visits, and PCN management visits were statistically significant (Table 1, p= .013, .020, .010 respectively). Differences in clinic, procedure, and stent removal visits were not statistically significant. The median healthcare visits overall was reduced, demonstrating 5 visits (IQR: 3, 8) before surgery and 3 visits (IQR: 2, 6) after surgery (Table 1).

**Conclusions:** UUT reconstruction surgery reduces the number of healthcare visits overall. Clinicians may consider prompt surgery when managing ureteral stricture in order to reduce the burden of healthcare visits on the patient and healthcare system.

Table 1: Average Healthcare Visits Before and After Surgery

**Average Healthcare Visits Before and After Surgery (n=42)**

| | Pre-Surgery | Post-Surgery | p-value |
|---|---|---|---|
| **Median (IQR)** | **5 (3, 8)** | **3 (2, 6)** | |
| **Total** | **7.2** | **4.5** | **.023** |
| Admission | .40 (5.56%) | .12 (2.67%) | .013 |
| ED | .64 (8.89%) | .24 (5.33%) | .020 |
| Procedure | .38 (5.28%) | .26 (5.78%) | .430 |
| Clinic | 4.2 (58.3%) | 2.7 (60.0%) | .232 |
| Stent | .52 (7.22%) | .81 (18.0%) | .154 |
| Nephrostomy | 1.1 (15.3%) | .33 (7.33%) | .010 |

## SAT-MP6-1000

**Robotic Non-transecting Ureteral Reimplantation: An Update**

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**Introduction and Objective:** Robotic non-transecting ureteroneocystostomy (reimplantation) is an efficacious alternative to conventional reimplantation for mid- to distal ureteral strictures. We sought to update our multi-institutional experience with this technique.

**Methods:** We retrospectively reviewed a multi-institutional database of robotic ureteral reconstruction (CORRUS: Collaborative of Reconstructive Robotic Ureteral Surgery) for patients undergoing robotic non-transecting reimplantation. Demographic, perioperative, and postoperative data were captured and reported using descriptive statistics. The primary outcome of interest was freedom from recurrent ureteral stenosis, defined as the absence of additional intervention or indwelling hardware.

**Results:** We identified 77 cases of robotic non-transecting ureteroneocystostomy between 2016 and 2023. Demographic information is shown in Table 1 and perioperative data and surgical outcomes are shown in Table 2. Median stricture length was 2.0 cm (IQR 0.75–4). 24 cases (31%) had a history of radiation and 43 (56%) had prior abdominal or pelvic surgeries. 23 cases (30%) failed endoscopic stricture management, and four (5%) failed prior open or robotic reconstructive attempts. Over a median follow-up of 14.1 months (3.1–27.6), 74 patients (96%) remained free from recurrent stricture disease. Three patients (4%) did not meet the definition of surgical success: one required a ureteral stent placed for obstruction that was later removed, one required chronic ureteral stenting, and another had a chronic percutaneous nephrostomy.

**Conclusions:** Our study reaffirms the safety and efficacy of robotic non-transecting ureteral reimplantation. Despite many patients with complex stricture disease, reimplantation was accomplished with minimal complications and satisfactory freedom from recurrent ureteral stenosis.

**Table 1. Patient Characteristics (n = 77)**

| | |
|---|---|
| **Age (years)** | 60 (48 – 69.5) |
| **Sex** | |
| Male | 37 (48) |
| Female | 40 (52) |
| **Body mass index (kg/m²)** | 26.3 (23.4 – 30.9) |
| **Stricture length (cm)** | 2.0 (0.75 – 4) |
| **Active Diabetes** | 11 (14) |
| **History of abdominopelvic surgery** | 43 (56) |
| **History of abdominopelvic radiation** | 24 (31) |
| **Stricture etiology** | |
| Iatrogenic | 41 (53) |
| Radiation | 15 (20) |
| Endometriosis | 4 (5) |
| Complications from malignancy | 2 (3) |
| Impacted stone | 7 (9) |
| Idiopathic/Unknown | 8 (10) |
| **Prior operative management** | |
| None | 47 (61) |
| Endoscopic only | 23 (30) |
| Open/robotic only | 4 (5) |
| Both endoscopic and open/robotic | 3 (4) |
| **Time from diagnosis to surgery (months)** | 5 (3 – 11.5) |

Values are presented as median (IQR) or number (%). Percentages are rounded to the nearest integer.

**Table 2. Perioperative Data and Surgical Outcomes (n = 77)**

| | |
|---|---|
| **Operative time (minutes)** | 180 (133 – 226) |
| **Estimated blood loss (mL)** | 50 (20 – 100) |
| **Length of stay (days)** | 1 (0 – 1.5) |
| **Adjunctive procedure for mobility** | |
| None | 53 (69) |
| Psoas Hitch | 8 (10) |
| Boari Flap | 12 (16) |
| Other | 4 (5) |
| **ICG use** | |
| None | 49 (64) |
| Intraureteral | 6 (8) |
| Intravenous | 22 (29) |
| **Intraoperative complication** | 1 (1) |
| **Postoperative complication†** | 2 (3) |
| **Follow up (months)** | 14.1 (3.1 – 27.6) |
| **Surgical success⋆** | 74 (96) |

Values are presented as median (IQR) or number (%). Percentages are rounded to the nearest integer.
†Any complication within 30 days of Clavien-Dindo Grade 3 or higher
⋆ Freedom from recurrent ureteral stenosis

## SAT-MP6-1005

**Trends in Surgical Management of Urethral Strictures**

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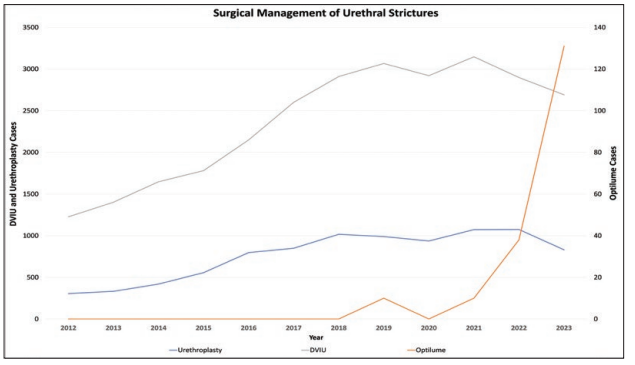
**Introduction and Objective:** Urethral strictures can be managed by treatments ranging from short endoscopic procedures (Direct vision internal urethrotomy (DVIU)/dilation) up to open reconstruction (urethroplasty). A recent clinical trial demonstrated that a novel endoscopic balloon (Optilume) for dilation is safe and has superior outcomes to DVIU. This study aims to examine the distribution of surgical management of urethral stricture with the introduction of a novel treatment.

**Methods:** The TriNetX database was queried using current procedural terminology (CPT) codes for urethral stricture (N35, N99.1, Q64.32, 598.0 and 598.01) in patients 18 years or older undergoing urethroplasty (1008429, 1008424, 53400, 53405, 53410, 53415, 53420, 53425, 53430, 53450, 236273003, 27801008), DVIU (79181001, 52275, 52276, 52281, 52282, 52283), or Optilume balloon dilation (0499T). Data was collected for each treatment from 2012 to 2023 and the number of cases performed for each procedure was calculated.

**Results:** A total of 43731 urethral stricture cases undergoing either urethroplasty, DVIU, or Optilume dilation were identified. The majority of patients were treated with either DVIU or urethroplasty. Between 2021 and 2023, there was an 1210% increase in Optilume dilation coinciding with a 14.49% and 22.65% decrease in management using DVIU and urethroplasty respectively (Figure 1). As of 2023, the majority of cases performed for the management of urethral stricture disease were a DVIU even though there was an increase in the use of Optilume dilation.

**Conclusions:** Despite Optilume being superior for management of urethral strictures, DVIU still remains the most common methods to treat urethral strictures.



## SAT-MP6-1010

**The Optilume® Drug Coated Balloon for Recurrent Anterior Urethral Strictures: ROBUST III Study 4-year Interim Results**

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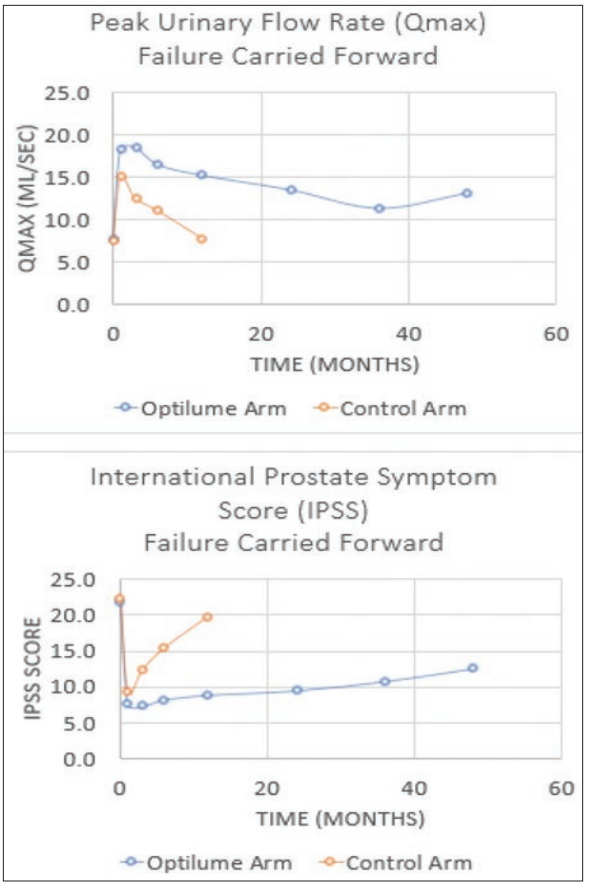
**Introduction and Objective:** The ROBUST III study is a randomized controlled trial comparing the Optilume Drug Coated Balloon (DCB) against standard of care direct visual internal urethrotomy (DVIU) or dilation. The Optilume DCB is a dilation balloon with a paclitaxel coating that combines mechanical dilation for immediate symptomatic relief with local drug delivery to maintain urethral patency. Outcomes after 4-year follow-up are presented here.

**Methods:** 127 subjects were randomized in a 2:1 fashion at 23 sites. Seventy-nine were treated with the DCB and 48 were treated with DVIU or dilation. Follow-up past 1 year was limited to those treated with the DCB. Eligibility criteria included adult males with anterior strictures with ≥2 prior treatments, urethral lumen ≤12F and stricture length ≤3cm. Long-term endpoints included freedom from repeat treatment, International Prostate Symptom Score (IPSS), and peak urinary flow rate (Qmax). Patients were followed at regular intervals.

**Results:** Subjects randomized to receive the DCB had an average of 3.2 prior treatments and an average stricture length of 1.6cm (46% ≥2cm), with 8/79 (10.1%) having penile strictures and 9/79 (11.4%) having received prior pelvic radiation. IPSS significantly improved from 21.9 at baseline to 12.6 at 4 years, which showed slight deterioration from the 3 year (11.3), 2 year (10.1) and 1 year (9.0) results. Qmax significantly improved from a baseline of 7.7 mL/sec to 13.2 mL/sec at 4 years, which is in line with the 3 year (12.0) and 2 year (13.9) data. Freedom from repeat intervention for DCB subjects was estimated to be 71%. No late-onset treatment related adverse events were observed.

**Conclusions:** The Optilume® DCB continues to achieve significant improvements in symptoms, flow, and reintervention rates through 4 years post treatment.




## SAT-MP6-1015

**Early Results of Optilume® Drug Eluting Balloon Dilation for the Treatment of Posterior Urethral Stenosis**

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**Introduction and Objective:** Posterior urethral stenosis encompasses post-prostatectomy vesicourethral anastomotic stenosis (VUAS) and radiation-induced bulbomembranous strictures. This condition poses a significant challenge for management and treatment can cause significant morbidity. With approval for anterior strictures, Optilume ® drug coated balloon offers a novel minimally invasive option with durable three-year outcomes. The role of Optilume ® for posterior stenosis has not been evaluated.

**Methods:** We retrospectively reviewed 12 patients that underwent primary 30 French Optilume® without pre-dilation for posterior urethral stenosis from April 2023 to March 2024. Preoperative variables included etiology, IPSS and Q max. Endpoints included IPSS/Qmax at 6-weeks, 3 and 6-months. Success was assessed as the ability to pass a cystoscope on 6-month cystoscopy and by patient satisfaction.

**Results:** A total of 83.3% (10/12) patients reported a history of prostate cancer (16.7% prostatectomy only, 25% radiation only, 41.7% both). All patients underwent prior endoscopic interventions and five patients were catheter dependent. Of the three patients with BNC treated with Optilume®, one had gross evidence of radionecrosis. Average preoperative Qmax was 8.1 (2.6 – 12.5 cc/sec) vs. 9.7 (1.9 – 22.0 cc/s; p=0.76) at 6 weeks and 12.8 (9.1 – 15.2 cc/s; p=0.12) at 3 months, postoperatively. Average preoperative IPPS was 17.1 (10 – 28) vs. 13.6 (11-17; p=0.43) at 6-months post-surgery. 6-month cystoscopy data was available on six patients, with 50% success rate. Of the three failures, one is planned for repeat endoscopic treatment, another for robotic reconstruction, and the last was satisfied with their voiding and managed conservatively. Quality of life was able to be assessed in 10 of 12 patients, of which 70% were satisfied.

**Conclusions:** Optilume® offers a promising treatment alternative that is quick and minimally morbid. Our current study had a 50% cystoscopic success and 70% patient satisfaction but did not demonstrate any statistically significant improvement in IPSS or Qmax.

## SAT-MP6-1020

**Complications of Ureteral Stenting Following Urinary Diversion**
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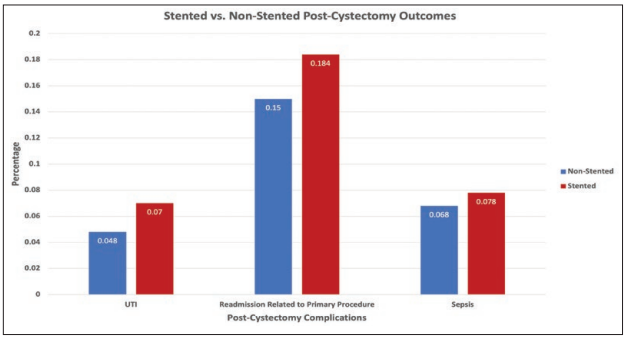
**Introduction and Objective:** Ureteral stents are commonly placed in order to stabilize the ureteral anastomosis following cystectomy. In recent years, some studies have shown a possible increased risk of complications in stented populations or the absence of significant benefit. Herein we aim to assess complication rate following intraoperative ureteral stent during cystectomy in a national cohort.

**Methods:** The National Surgical Quality Improvement Program (NSQIP) database was reviewed from 2016 to 2021 to identify patients under CPT code 51590 and 51595. The chi square function was utilized to compare proportions of UTI occurrence and readmission related to the primary procedure between two groups (stent or no stent). Chi-square functions and Mann-Whitney tests were used to analyze demographic distributions of sex, age, and pre-operative creatinine between the groups. Significance was set at p-value ≤ 0.05.

**Results:** 13,312 patients were included in the final analysis, 12,576 in the stented group and 735 in the non-stented group. The chi-squared yielded significant results in 2 of 3 measures of post-cystectomy complication. The stented population had a significant increase in occurrence of UTI (7% vs. 4.8%, p=0.018) and readmission related to primary procedure (18.4% vs. 15%, p=0.018). The higher occurrence of sepsis was not significant in the stented population (7.8% vs. 6.8%). The stented group was older (71 vs. 70), but not significantly. Stented patients had a statistically significant higher pre-operation Creatinine value (1.08 vs. 1.03, p=.023) and were more likely female (6.3% vs. 5.3%, p=.032). On multivariate analysissta, staistically significant increased odds of UTI (p=0.009) and readmission related to primary obstruction (p=0.044) in stented patients were observed.

**Conclusions:** Intraoperative ureteral stenting is associated with higher instances of UTI and readmissions related to primary procedure post-cystectomy.




## SAT-MP6-1025

**SAT-MP6-1025 – video**

**Robotic Bladder Neck Reconstruction**
D. Boyd, T. Lulla, R. Krasnow, N. Shaw
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## THU-EP1

**Comparing the UroNav MRI Fusion Biopsy System with ExactVu Micro-Ultrasound MRI Fusion Biopsy System**
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**Introduction and Objective:** The fusion of MR imaging (MRI-F) of the prostate with real-time ultrasound (US) has allowed for accurate targeting of suspicious lesions. Micro-ultrasound (mUS) is a promising technology that utilizes 29 MHz US, providing improved spatial resolution compared to traditional 7.5 MHz. Starting April of 2022, an APP was trained to perform MRI-Fusion prostate biopsies using the UroNav fusion platform with standard US (sUS). In September 2023, the APP transitioned to the ExactVu system that utilizes mUS technology. This study sought to evaluate differences in cancer detection rates between the two platforms.

**Methods:** All individuals presenting from April 1, 2022 to March 1, 2024 for prostate biopsy by the APP were included. The APP initially performed biopsies using UroNav technology from April 2022 to June 2023. In September 2023 he transitioned to the ExactVu mUS platform. We assessed the ability to detect clinically significant prostate cancer, grouping GS 3+4 and above against benign and 3+3 disease. We further stratified cancer detection rates based upon PI-RADS score 3, 4, and 5. No distinction was made with regards to which platform was used other than time of biopsy, minimizing confounding factors.

**Results:** The APP performed 674 UroNav biopsies and 231 ExactVu biopsies. We utilized Fisher exact tests to assess for differences. When stratifying for clinically significant cancer vs. benign and GS 3+3 disease, we observed a UroNav acquired positivity of 27.9% (67/240) vs. 33.8% (27/80) with ExactVu for PI-RADS 3 (p=0.32), 65.7% (203/309) vs. 73.8% (79/107) for PI-RADS 4 (p=0.15), and 88.0% (110/125) vs. 85.7% (36/42) for PI-RADS 5 (p=0.79).

**Conclusions:** Our study demonstrates no difference in prostate cancer detection rates for MRI-F biopsy using UroNav verse ExactVu biopsy platforms. This study suggests that mUS is a feasible, promising alternative. Prospective studies will be needed to confirm these results and assess for benefits of mUS.

## THU-EP2

**Let Your Conscience Be Your Guide: The Utility of MRI Prior to Confirmatory Biopsy in Patients on Active Surveillance for Low-Risk Prostate Cancer**
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**Introduction and Objective:** The natural history of low-risk prostate cancer has led to increased use of active surveillance (AS) over recent years. AS protocols suggest confirmatory biopsy and mpMRI no more often than every 12 months. However, data is lacking regarding upstaging of patients on AS following non-fusion prostate biopsy when MRI is utilized as part of AS. Thus, we sought to review our biopsy database to delineate the role of MRI in AS.

**Methods:** 573 patients were reviewed from January 2018-June 2022. We collected clinical, surgical, and pathologic characteristics of patients including age, race, BMI, prior biopsy, use of AS, PSA, MRI characteristics, PSA density, biopsy characteristics, clinical stage, voiding history, complications, and ultimate treatment. We characterized the subset of patients who were on AS and underwent repeat prostate biopsy +/- MRI.

**Results:** Of 573 patients, 65 were on AS and 100% had confirmatory biopsy. All received MRI before confirmatory biopsy. Mean age was 67, PSA 8.4 ng/mL, and PSA density 0.20. 54 patients (83%) had PIRADS 3+ lesions on MRI. A majority (39; 72%) were in the peripheral zone, and 18 (33.3%) were anterior. 39 (72%) patients were upstaged to GG2+ on repeat biopsy. Ten (18.5%) had targeted biopsies demonstrating more aggressive pathology than that detected systematically, 11 (20%) demonstrated more aggressive pathology systematically. PIRADS 3+ lesion on MRI was positively associated with upstaging (GG2+) on MRI fusion biopsy in AS patients (p=0.02).

**Conclusions:** We demonstrated a high rate (72%) of upstaging on repeat prostate biopsy in patients on AS for low-risk prostate cancer when augmented with MRI. This reinforces the use of upfront MRI in the setting of elevated PSA. MRI should be offered to all patients who underwent initial systematic biopsy prior to enrolling in an AS protocol prior, and should be considered at the time of confirmatory biopsy in all patients.

## THU-EP3

**Can Repeat Biopsy be Deferred in Patients Diagnosed with Atypical Small Acinar Proliferation (ASAP) and Multifocal High-Grade Prostatic Intraepithelial Neoplasia (mHGPIN) with Negative Prostate Multiparametric MRI (mpMRI)?**

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**Introduction and Objective:** Atypical Small Acinar Proliferation (ASAP) and multifocal High-Grade Prostatic Intraepithelial Neoplasia (mHGPIN) are lesions found on prostate biopsy that may increase the risk for diagnosing clinically significant prostate cancer (CSPC) on repeat biopsy. Though current AUA guidelines recommend additional testing in patients diagnosed with ASAP and mHGPIN, incidence of clinically significant prostate cancer (CSPC) after additional testing modalities such as multiparametric MRI (mpMRI) remain unclear. This study's objective was to investigate whether mpMRI can obviate the need for repeat prostate biopsy in those diagnosed with ASAP or mHGPIN.

**Methods:** An institutional retrospective review was performed from 2014 to 2022 to identify those with a first-time diagnosis of either ASAP or mHGPIN and who obtained an mpMRI within 3 months of repeat biopsy. Rates of CSPC diagnosis were assessed relative to mpMRI findings.

**Results:** Of the 61 patients identified, 40 were diagnosed with ASAP, 6 with mHGPIN and 15 with both. MpMRI found PIRADS-3 or higher (≥P3) lesions in 25 patients and PIRADS-2 or lower (≤P2) lesions in 36 patients. The ≥P3 group had 10 of the 13 patients subsequently diagnosed with CSPC, with 70% of patients having had ASAP or ASAP with mHGPIN initially. All three patients with mHGPIN in the ≤P2 group had negative biopsies. 9% of patients initially with ASAP plus or minus mHGPIN and ≤P2 had CSPC.

**Conclusions:** 8.3% of our cohort with initial diagnosis of ASAP, mHGPIN or both had GG2 or higher disease in the setting of a ≤P2 lesion. 40% of this cohort had GG2 or higher disease in the setting of ≥P3 lesions. Findings suggest that repeat biopsy may be deferred in patients with initial diagnosis of mHGPIN or ASAP with a negative mpMRI.

## THU-EP5

**Real World Data: Identification and Utilization of Abiraterone in Men with Localized Very High-Risk Prostate Cancer**

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*[1]Philadelphia College of Osteopathic Medicine, Philadelphia, PA, USA; [2]Main Line Health Urology, Wynnewood, PA, USA*

**Introduction and Objective:** With a prostate cancer (PCa) diagnosis, metastasis-free survival is an important treatment goal. The addition of abiraterone and prednisone (ABI) to androgen deprivation (ADT) and radiation therapy improves metastasis-free and overall survival in men with high-risk PCa. We examined real-world data to evaluate the utilization of ABI in men with very high-risk PCa (VHR).

**Methods:** Data pulled from a large urology group spanning January 2022 to January 2024 was analyzed to identify VHR PCa patients. VHR was defined using the National Comprehensive Cancer Network risk classification system. Patients with VHR who opted for radiation as a primary treatment modality were included in the final analytic cohort. Chart review was performed to identify ABI administration, risk factors, comorbidities, and urologist characteristics.

**Results:** 82 patients were identified as having VHR treated with radiation and ADT. Of those, 27 (33%) received ABI. There was no difference between those who received ABI and those who did not in age, comorbidities, or urologist factors. Of those with only one VHR factor, 12 of 42 (28.5%) received ABI. Those with greater than four cores GG 4 or 5 had the highest rate of receiving ABI (31.0%) versus those with primary GG 5 (25.0%), and stage cT3b (0.0%). Those with 2 or more VHR features demonstrated higher rates of receiving ABI with 12 of 28 (42.9%) receiving ABI.

**Conclusions:** Preventing or delaying metastasis in localized PCa improves survival. Our real-world study found that less than half of eligible VHR patients were prescribed ABI. Further studies are needed to understand the barriers to the utilization of ABI in patients with VHR.

## THU-EP4

**Decipher Genomic Testing Can Stratify Risk of Extracapsular Extension in Prostate Cancer Patients with PI-RADS Lesions Scored 4 and Below**

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**Introduction and Objective:** Prostate Imaging-Reporting and Data System (PI-RADS) scores and genomic classifiers, like Decipher, are highly utilized in risk-stratifying prostate cancer. Extracapsular extension (ECE) is known to be a prognostic factor. While a lesion suspected of ECE on magnetic resonance imaging (MRI) is definitively PI-RADS 5, some PI-RADS <= 4 lesions may ultimately have ECE not discernable by MRI. The objective of this study was to determine if the Decipher test can risk-stratify for ECE in patients with PI-RADS <= 4 lesions.

**Methods:** This is a retrospective analysis of patients who underwent Decipher testing for prostate cancer. Two-sample t-tests were used to compare PI-RADS score and Decipher metrics among those with/without ECE. Decipher risk tiers and PI-RADS scores were also plotted in a contingency table and stratified by ECE.

**Results:** Of the 67 patients in the study, 55% (37) had ECE. Mean Decipher score for the ECE cohort was 0.65 compared to 0.53 for the cohort without ECE (p = 0.04). Among patients with PI-RADS scores <= 4, 20% had ECE in the low Decipher risk category, 33% in the intermediate-risk category, and 65% in the high-risk category (p = 0.03). Finally, no patients with PI-RADS scores <= 3 and a low Decipher risk had ECE.

**Conclusions:** Both PI-RADS and Decipher metrics significantly differ among patients with/without ECE. Decipher may serve utility in stratifying risk for patients with lower-suspicion PI-RADS scores. With more assessment, these techniques can serve a complementary role in the decision making of a disease with many routes of management.

| | With Extracapsular Extension (N=37) | Without Extracapsular Extension (N=30) | P-value |
|---|---|---|---|
| **Mean Age at RARP** | | | |
| Mean (SD) | 63 (± 6.1) | 58 (± 5.7) | 0.006 |
| **Race** | | | |
| Black or African American | 13 (35.1%) | 10 (33.3%) | 0.4 |
| White | 23 (62.2%) | 16 (53.3%) | |
| Asian | 0 (0%) | 2 (6.7%) | |
| Other | 1 (2.7%) | 1 (3.3%) | |
| Unknown | 0 (0%) | 1 (3.3%) | |
| **Family History of Prostate Cancer** | | | |
| No | 15 (60.0%) | 18 (69.2%) | 0.7 |
| Yes | 10 (40.0%) | 8 (30.8%) | |
| **Max PI-RADS Score** | | | |
| 0 | 0 (0%) | 1 (3.3%) | 0.03 |
| 1 | 0 (0%) | 0 (0%) | |
| 2 | 0 (0%) | 3 (10.0%) | |
| 3 | 3 (8.1%) | 4 (13.3%) | |
| 4 | 13 (35.1%) | 14 (46.7%) | |
| 5 | 21 (56.8%) | 8 (26.7%) | |
| **Average Decipher 5-year Metastasis Risk** | | | |
| Mean (SD) | 0.15 (± 0.14) | 0.078 (± 0.089) | 0.01 |
| **Average Decipher Score** | | | |
| Mean (SD) | 0.65 (± 0.21) | 0.53 (± 0.20) | 0.04 |

*Table 2: Patients with extracapsular extension (ECE), and all patients in parentheses as stratified by Decipher and PI-RADS*

| | | PI-RADS Scoring | | | |
|---|---|---|---|---|---|
| | | 3 and below | 4 | 5 | Totals |
| **Decipher Genomic Test Risk** | Low | 0% | 33% | 100% | 6 (18) |
| | Intermediate | 100% | 20% | 63% | 7 (14) |
| | High | 50% | 69% | 72% | 24 (35) |
| | **Totals** | 3 (11) | 13 (27) | 21 (29) | 37 (67) |

## THU-EP6

**Decreased Prostate Cancer Incidence in Patients Treated with 5a Reductase Inhibitors: A TriNetX Investigation**

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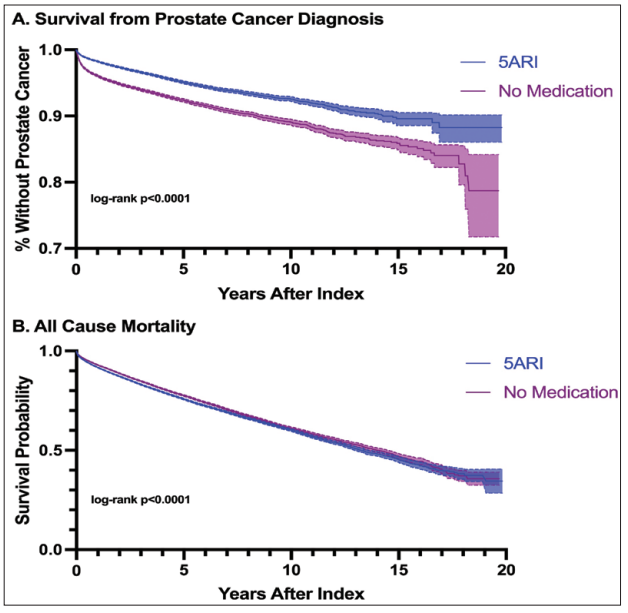
**Introduction and Objective:** Previous studies reported decreased incidence of prostate cancer (PCa) in patients treated with 5a reductase inhibitors (5ARIs). These studies also uncovered a sampling bias with biopsy that resulted in a higher incidence of high-grade PCa in 5ARI cohorts. We sought to investigate these findings using an international, multi-institutional database to confirm or contest the current literature.

**Methods:** We queried the TriNetX database for all adult (>=18 years) men taking 5ARIs, excluding patients taking a-blocking medications. We compared men on 5ARIs against men on no medications for benign prostatic hyperplasia (BPH). Outcomes included PCa, high-grade PCa (Gleason >=8), and all-cause mortality (ACM). Cohorts and outcomes were defined using International Classification of Diseases terms. Analyses were performed via TriNetX using Hazard Ratios (HR) with 95% Confidence Intervals. For ACM, we report median survival. We performed propensity score matching (PSM) using age, BMI, genetic predisposition, smoke exposure, and family history of breast or prostate cancer as covariates.

**Results:** PSM resulted in cohorts of 87,887 each. The 5ARI cohort had decreased PCa (HR=0.58 [0.55, 0.61]) and no increased risk of high-grade PCa (HR=0.97 [0.68, 1.39]) compared to the no BPH medication cohort. The 5ARI cohort had increased ACM (4,873 vs. 5,116 days, HR=1.09 [1.07, 1.11]).

**Conclusions:** Patients taking 5ARIs had lower risk of PCa, consistent with previous literature, but these data do not demonstrate any increased risk of high-risk PCa. Unexpectedly, men taking 5ARIs had a slightly increased ACM. ACM is heterogenous in nature and warrants further study in this cohort; however, our results support the conclusions of previous clinical trials demonstrating 5ARIs reduce the risk of subsequent PCa diagnosis. These data further undermine the concern about 5ARIs causing more high-risk PCa.




## THU-EP7

**Analysis of the Increased Incidence of Aggressive Prostate Cancer After Prior Testicular Cancer**

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*University of Maryland, Baltimore, MD, USA*

**Introduction and Objective:** Some recent studies have suggested that testicular cancer survivors are at increased risk of developing aggressive prostate cancer compared to the general population while others have not found this link. We used the Surveillance, Epidemiology, and End Results (SEER) database to access national cancer patient data from 1975-2020 and identify if patients with a history of testicular cancer have an earlier development of more aggressive secondary prostate cancer with higher mortality compared to those in the control group.

**Methods:** In this retrospective case-control study we utilized the SEER database to identify patients with prostate cancer who previously had either testicular cancer or a control group cancer greater than five years prior. Due to the high 5-year relative survival of testicular cancer, the control group included breast, bladder, cranial nerves and nervous system (excluding the brain), eye/orbital, oral cavity, skin, renal, thyroid cancers. Patient morbidity and mortality was assessed using Gleason scores, PSA, tumor stage, and survival time and stratified into low, moderate, and high risk accordingly.

**Results:** We identified that prostate cancer does occur globally more in patients with testicular cancer compared to controls. The mean age in years of prostate cancer diagnosis for the testicular cancer group was 61.62 +/- 7.88, while the control group was 66.66 +/- 8.8. By the age of 60, we found that 10.7% of patients in the testicular cancer group had developed prostate cancer, compared to 6.8% of the control group. Patients in the testicular cancer group saw a decreased survival time in months (105) compared to the control (136).

**Conclusions:** We determined that patients with a history of testicular cancer are at an increased risk of developing prostate cancer earlier, which is more aggressive, and with a higher mortality rate compared to other cancer survivors.

## THU-EP8

**Post-Screening Follow-Up Rates in the Men Take Ten Prostate Cancer Screening Program**

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**Introduction and Objective:** African American men experience higher rates of prostate cancer incidence yet often have lower follow-up rates post-diagnosis, undermining the effectiveness of early detection and intervention measures.
To explore the factors affecting follow-up rates among African American men with elevated PSA levels identified through the Men Take Ten Prostate Cancer Screening program at Howard University Cancer Center from 2009 to 2018.

**Methods:** A retrospective review was performed on 2,857 prostate screenings, with a focus on 192 men who had PSA levels over 4.0 ng/mL. Follow-up rates were examined, along with data from questionnaires that included questions about ethnicity, marital status, education level, healthcare access, employment in high-risk industries, personal and family cancer history, awareness of prostate screening, and health and lifestyle factors.

**Results:** Among the 192 men identified with PSA levels above 4.0 ng/mL, 76% were African American; however, only 6.7% of these men engaged in the recommended follow-up outlined by the urologist. 26% of men reported not having a primary care physician, and 21% did not have medical insurance.

**Conclusions:** The findings highlight a gap in follow-up engagement among African American men with elevated PSA levels post-screening. By developing targeted strategies that address identified barriers, such as healthcare accessibility, insurance coverage, and enhancing educational efforts on the importance of follow-up care, we can potentially improve health outcomes for at-risk populations.

## THU-EP9

**Descriptive Analysis of Patients on Active Surveillance Requiring Treatment for Prostate Cancer**

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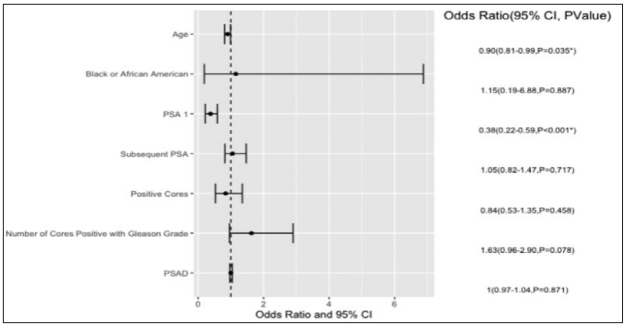
**Introduction and Objective:** It is known that 1 in 8 men will be diagnosed with prostate cancer in their lifetime but not all diagnosis of prostate cancer is clinically significant and active surveillance (AS) can be an option. There is a paucity of data to predict correlating factors within cohort. We aim to further characterize those patients that required escalation to treatment from AS.

**Methods:** A multicenter retrospective review was performed of patients that had biopsy proven prostate cancer that elected to undergo AS. The cohort was subdivided into those that progressed to treatment and those that continued AS. Patient demographics, prostate biopsy characteristics, PIRADS, and biomarker usage was analyzed between the two groups. Descriptive analysis was performed and a multivariate logistic regression was performed to predict progression

**Results:** A total of 158 patients were reviewed from 2021-2023. Among the cohort, 55 (34.2%) progressed to treatment while 106 (65.8%) remained on AS. The treated cohort were younger had lower initial PSA, lower % free PSA, and higher number of cores positive on biopsy. There was no difference in biomarker testing including Prolaris, Decipher, and Oncotype Dx between the treated and AS group (Table). On adjusted analysis, age and initial PSA were predictive covariates into treatment (Figure).

**Conclusions:** AS is an option for low risk/favorable prostate cancer. We show that there was no difference in Biomarkers, PIRADS, and PSAD between the treated and the AS group. Our analysis shows that younger patients and lower initial PSA were factors that were associated with escalation to treatment.

| | Total Cohort | | Active Surveillance | | Treated | | P value |
|---|---|---|---|---|---|---|---|
| | n = 161 | | n = 106 (65.83 %) | | n = 55 (34.16 %) | | |
| **Patient Characteristics** | | | | | | | |
| Mean Age (years) (SD) | 66.75 | (7.38) | 68.59 | (6.92) | 63.20 | (6.96) | **P < 0.001** |
| Black or African American (%) | 23 | (14.29 %) | 12 | (11.32 %) | 11 | (20.00 %) | P = 0.209 |
| **Past Medical History/Co-morbidities** | | | | | | | |
| Hypertension | 86 | (53.42 %) | 57 | (53.77 %) | 29 | (52.73 %) | P = 0.983 |
| Diabetes Mellitus | 25 | (15.53 %) | 16 | (15.09 %) | 9 | (16.36 %) | P = 1.000 |
| Congestive Heart Failure | 1 | (0.62 %) | 0 | (0.00 %) | 1 | (1.82 %) | P = 0.741 |
| COPD | 4 | (2.48 %) | 3 | (2.83 %) | 1 | (1.82 %) | P = 1.000 |
| Heart Stent, Catheterization, or Valve Replacement | 14 | (8.70 %) | 11 | (10.38 %) | 3 | (5.45 %) | P = 0.426 |
| Family History of Prostate Cancer | 30 | (18.63 %) | 17 | (16.04 %) | 13 | (23.64 %) | P = 0.351 |
| Family History of Genitourinary Cancer | 6 | (3.73 %) | 4 | (3.77 %) | 2 | (3.64 %) | P = 1.000 |
| **PSA Testing** | | | | | | | |
| PSA 1 | 3.62 | (2.65) | 4.66 | (2.17) | 1.61 | (2.31) | **P < 0.001** |
| PSA 2 | 3.60 | (2.75) | 4.58 | (2.46) | 1.63 | (2.21) | **P < 0.001** |
| Last % Free PSA | 17.06 | (10.89) | 20.55 | (9.87) | 10.52 | (9.76) | **P < 0.001** |
| **Prostate Biopsy and Characteristics** | | | | | | | |
| Number of Cores Taken | 13.32 | (2.91) | 13.46 | (2.98) | 13.08 | (2.81) | P = 0.451 |
| Positive Cores | 3.12 | (2.22) | 2.73 | (1.78) | 3.85 | (2.74) | **P = 0.008** |
| Number of cores positive with Gleason Grade | 2.45 | (1.91) | 2.08 | (1.57) | 3.18 | (2.29) | **P = 0.003** |
| PSAD | 54.51 | (28.39) | 57.67 | (29.77) | 48.43 | (24.67) | **P = 0.042** |
| Evidence of Extraprostatic Extension | 5 | (3.11 %) | 2 | (1.89 %) | 3 | (5.45 %) | P = 0.406 |
| **Biomarkers** | | | | | | | |
| Prolaris | 15 | (9.32 %) | 10 | (9.43 %) | 5 | (9.09 %) | P = 1.000 |
| Decipher | 38 | (23.60 %) | 24 | (22.64 %) | 14 | (25.45 %) | P = 0.839 |
| Oncotype Dx | 52 | (32.30 %) | 38 | (35.85 %) | 14 | (25.45 %) | P = 0.246 |
| Cumulative | 99 | (61.49 %) | 69 | (65.09 %) | 30 | (54.55 %) | P = 0.257 |
| **Most Recent Gleason Group** | | | | | | | **P = 0.006** |
| 6 (3+3) | 150 | (93.17 %) | 104 | (98.11 %) | 46 | (83.64 %) | |
| 7 (3+4) | 8 | (4.97 %) | 2 | (1.89 %) | 6 | (10.91 %) | |
| 7 (4+3) | 2 | (1.24 %) | 0 | (0.00 %) | 2 | (3.64 %) | |
| 8 (4+4) | 1 | (0.62 %) | 0 | (0.00 %) | 1 | (1.82 %) | |
| **PIRADS** | | | | | | | P = 0.352 |
| 1 | 4 | (2.48 %) | 3 | (2.83 %) | 1 | (1.82 %) | |
| 2 | 44 | (27.33 %) | 35 | (33.02 %) | 9 | (16.36 %) | |
| 3 | 12 | (7.45 %) | 7 | (6.60 %) | 5 | (9.09 %) | |
| 4 | 32 | (19.88 %) | 19 | (17.92 %) | 13 | (23.64 %) | |
| 5 | 6 | (3.73 %) | 4 | (3.77 %) | 2 | (3.64 %) | |
| **Treatment Received** | | | | | | | |
| Radical Prostatectomy | - | - | - | - | 34 | (61.82 %) | |
| Radiation Therapy | - | - | - | - | 13 | (23.64 %) | - |
| Hormone Therapy | - | - | - | - | 5 | (9.09 %) | - |
| **Grade Progression** | | | | | | | **P = 0.001** |
| No Change | 54 | (33.54 %) | 29 | (27.36 %) | 25 | (45.45 %) | |
| Decreased | 13 | (8.07 %) | 11 | (10.38 %) | 2 | (3.64 %) | |
| Increased | 22 | (13.66 %) | 5 | (4.72 %) | 17 | (30.91 %) | |
| **Volume Progression** | | | | | | | P = 0.668 |
| No Change | 20 | (12.42 %) | 12 | (11.32 %) | 8 | (14.55 %) | |
| Decreased | 18 | (11.18 %) | 11 | (10.38 %) | 7 | (12.73 %) | |
| Increased | 51 | (31.68 %) | 26 | (24.53 %) | 25 | (45.45 %) | |




## THU-EP10

**Micro-ultrasound for Index Lesion Detection and Intraoperative Cryoablation of Prostate Cancer: A Pictorial Essay**

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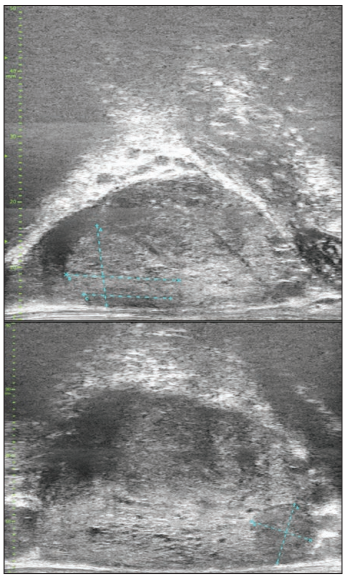
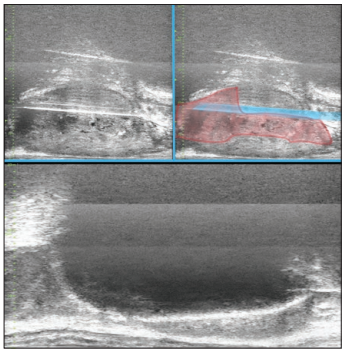
**Introduction and Objective:** Prostate cancer treatment relies heavily on imaging for index lesion (IL) identification and biopsy for subsequent risk stratification. Initially performed without imaging guidance, significant post-operative complications made cryoablation less efficacious. Technological advancement in multiparametric magnetic resonance imaging (mpMRI) has greatly improved cryotherapy precision, revitalizing cryoablation as a great alternative therapy for clinically significant prostate cancer (csPC). However, this technology is both expensive and requires a second patient visit for fusion overlay.
The introduction of high-frequency, high-resolution ultrasound poses an inexpensive alternative with real-time imaging for biopsy, and recent literature continually proves to highlight the non-inferiority of micro-ultrasound (mUS) relative to mpMRI for prostate cancer detection.

**Methods:** Micro-ultrasound IL and intraoperative images will be provided through the pictorial essay.

**Results:** This pictorial essay aims to offer sonographic illustrations with descriptive insight of mUS utilization from biopsy to intraoperative cryoablation of csPC. Improved visualization allows identification of important anatomical structures that can be avoided with "freeze-ball" expansion.

**Conclusions:** High-frequency mUS offers a resolution that is 300% better than that of standard ultrasound. As a cost-effective alternative to multiparametric MRI (mpMRI), it eliminates the need for contrast and provides real-time imaging, thereby obviating the necessity for a second appointment to perform fusion overlay.





## THU-EP11

**Cost-Effectiveness of Open and Robotic Retroperitoneal Lymph Node Dissection as First-Line Treatment of Clinical Stage II Seminoma**

Z. Su[1], S. Lee[1], J. Campbell[1], L. Galansky[1], M. Huang[2], H. Patel[2], M. Kates[1], P. Pierorazio[3], J. Townsend[4,5], N. Singla[1], S. Patel[1]
*[1]Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Northwestern University Feinberg School of Medicine, Chicago, IL, USA; [3]Penn Medicine, University of Pennsylvania Health System, Philadelphia, PA, USA; [4]Yale School of Public Health, New Haven, CT, USA; [5]Yale University, New Haven, CT, USA*

**Introduction and Objective:** In patients with clinical stage (CS) IIA-B seminoma with retroperitoneal lymphadenopathy ≤3cm, multi-agent cisplatin-based chemotherapy and radiotherapy are established first-line treatment options but associated with long-term toxicities. Recently, retroperitoneal lymph node dissection (RPLND) has emerged as an alternative first-line treatment, supported by prospective evidence demonstrating significant recurrence-free survival to avoid chemotherapy for majority of patients, and low long-term morbidity. Furthermore, compared to traditional open RPLND (O-RPLND), robotic RPLND (R-RPLND) offers advantages including reduced perioperative morbidity and accelerated recovery. We aimed to evaluate the cost-effectiveness of these competing first-line treatment options for CSIIA-B seminoma.

**Methods:** We performed microsimulations to estimate the costs and health utilities of treating a hypothetical cohort of 50,000 patients with CSIIA-B seminoma using chemotherapy, radiotherapy, O-RPLND, or R-RPLND. Direct medical costs incurred over 5 years, inflation-adjusted to 2023 U.S. dollars, were assessed from a U.S. healthcare payer perspective. Health utilities were measured in quality-adjusted life years (QALYs). Incremental cost-effectiveness ratios (ICERs) were evaluated against a willingness-to-pay threshold of $100,000/QALY.

**Results:** Chemotherapy was the least costly and effective (i.e. lowest QALYs) option. O-RPLND, R-RPLND, and radiotherapy were all cost-effective versus chemotherapy. Overall, R-RPLND was the most cost-effective option, with an ICER of $21,473/QALY versus chemotherapy (Table). R-RPLND was less costly and more effective than O-RPLND (i.e. dominant), driven by lower length of hospital stay and perioperative morbidities resulting in cost-savings and health utility gains. Radiotherapy was dominated by R-RPLND and O-RPLND. Results were robust in probabilistic sensitivity analysis. At WTP thresholds between $25,000–$285,000/QALY, R-RPLND provided the highest probability of being the optimal option.

**Conclusions:** Microsimulation modeling suggested that R-RPLND is the most cost-effective first-line treatment option for CSIIA-B seminoma.

**Table.** Estimated 5-year economic and health utility outcomes and incremental cost-effectiveness results for competing first-line treatment options for a simulated cohort of 50,000 patients with clinical stage IIA or IIB seminoma with retroperitoneal lymphadenopathy ≤3cm

| Measure | Chemotherapy | Radiotherapy | O-RPLND | R-RPLND |
|---|---|---|---|---|
| *Average per-patient direct medical costs (SD) incurred over 5 years by category of resource use, $* | | | | |
| Surveillance | 5,998 (478) | 5,956 (419) | 6,136 (621) | 6,136 (621) |
| Initial Treatment | 6,518 (0) | 24,659 (0) | 18,011 (0) | 16,894 (0) |
| Salvage treatment | 3,284 (12,179) | 334 (2,798) | 2,792 (7,805) | 2,792 (7,805) |
| Short-term treatment complications | 882 (3,003) | 131 (481) | 2,746 (4,804) | 1,667 (3,195) |
| Long-term treatment complications | 8,933 (13,784) | 5,820 (11,959) | 1,974 (5,139) | 1,974 (5,139) |
| Total costs | 25,616 (18,807) | 36,899 (12,427) | 31,659 (11,869) | 29,463 (11,314) |
| *Average per-patient QALYs gained (SD) over 5 years by health state* | | | | |
| Seminoma surveillance | 4.515 (0.311) | 4.515 (0.311) | 4.515 (0.311) | 4.515 (0.311) |
| Cancer recurrence/relapse | -0.007 (0.027) | -0.002 (0.016) | -0.020 (0.041) | -0.020 (0.041) |
| Short-term treatment complications | -0.005 (0.008) | -0.003 (0.005) | -0.031 (0.048) | -0.022 (0.038) |
| Long-term treatment complications | -0.328 (0.425) | -0.175 (0.270) | -0.118 (0.233) | -0.118 (0.233) |
| Total QALYs | 4.176 (0.510) | 4.334 (0.401) | 4.346 (0.389) | 4.355 (0.388) |
| *Incremental cost-effectiveness results over 5 years* | | | | |
| Incremental costs (vs. chemotherapy), $ | 0 | 11,283 | 6,043 | 3,847 |
| Incremental QALYs (vs. chemotherapy) | 0 | 0.158 | 0.170 | 0.179 |
| ICER (vs. chemotherapy), $/QALY | Reference | 71,236 | 35,458 | 21,473 |
| Incremental analysis | Reference | Dominated by O- and R-RPLND | Dominated by R-RPLND | ICER $21,473/QALY vs. chemotherapy |

*Abbreviations:* O-RPLND, open retroperitoneal lymph node dissection; R-RPLND, retroperitoneal lymph node dissection; SD, standard deviation; QALY, quality-adjusted life year; ICER, incremental cost-effectiveness ratio.

## THU-EP12

**Neoadjuvant Chemotherapy is not Associated With an Increased Risk of Venous Thrombosis After Radical Cystectomy**

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**Introduction and Objective:** Venous thromboembolism (VTE) is a common and morbid complication following radical cystectomy (RC). Both malignancy and RC are known risk factors for VTE independently. Cisplatin-based neoadjuvant chemotherapy (NAC) further increases this population's risk, as it is known to increase VTE risk in the metastatic bladder cancer population. Current literature in the localized bladder cancer setting yields conflicting findings from mostly small sample sizes. This study aimed to determine the incidence of DVT/PE following RC and identify potential risk factors for VTE using a large surgical cohort.

**Methods:** Patients who underwent RC for bladder cancer were identified from the 2019-2020 National Surgical Quality Improvement Program database. VTE events were defined as developing DVT or PE within 30 days of surgery. Only patients who received both mechanical and pharmacologic methods to prevent VTE were included. Additional covariates are listed in Table 1.

**Results:** Of the included 2854 patients, risk of any VTE within 30 days of surgery was 2.6%. Among the 75 patients who developed a VTE, 39 (1.4%) patients had a DVT, 26 (0.9%) patients had a PE, and 10 patients (0.4%) had both. Multivariable logistic regression revealed black race, obesity, current smoking and increasing age were significantly associated with increased odds of VTE. Notably, neoadjuvant chemotherapy was not associated with higher odds of VTE.

**Conclusions:** Our findings do not support a significant association between NAC and VTE in the 30-day period following RC, but do suggest that other factors increase VTE. Notably, data on lymph node dissection execution or extent was not available for this analysis, but warrants further exploration, as does broader study of the interaction between cisplatin and VTE risk throughout bladder cancer treatment.

**Table 1. Multivariate logistic regression analysis of factors associated with 30-day VTE risk following radical cystectomy**

| | Adjusted Odds Ratio (95% CI) | P value |
|---|---|---|
| Receipt of NAC | 0.90 (0.55-1.46) | 0.662 |
| **Age (every 1-year increase)** | **1.04 (1.01-1.07)** | **0.016** |
| Sex (female vs. male) | 0.79 (0.45-1.37) | 0.392 |
| BMI | | |
| <25 | ref | |
| 25-29.9 | 1.22 (0.64-2.34) | 0.539 |
| **>=30** | **1.91** | **0.045** |
| Number of comorbidities | | |
| 0 | ref | |
| 1 | 0.85 (0.48-1.50) | 0.582 |
| 2 | 0.74 (0.38-1.47) | 0.398 |
| >=3 | 0.69 (0.25-1.91) | 0.477 |
| Race | | |
| White | ref | |
| **Black** | **2.85 (1.23-6.61)** | **0.014** |
| Other/unknown | 0.76 (0.38-1.52) | 0.437 |
| **Smoking – current smoker** | **1.86 (1.06-3.28)** | **0.031** |
| Diversion (neobladder/continent vs conduit) | 0.68 (0.32-1.46) | 0.321 |
| Approach (robot vs. open) | 0.68 (0.38-1.21) | 0.193 |

## THU-EP13

**Outcomes of Patients with Non-Muscle Invasive Bladder Cancer Treated with Bacillus Calmette-Guérin in a Rural Healthcare System**

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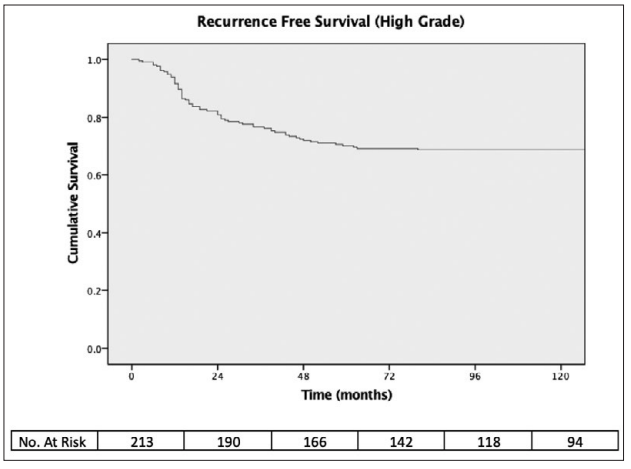
**Introduction and Objective:** Non-muscle invasive bladder cancer (NMIBC) accounts for 75% of new bladder cancer diagnoses in the United States. Although the survival rate for patients with NMIBC is favorable, disease recurrence and progression pose significant challenges. Bacillus Calmette-Guérin (BCG) is the mainstay treatment with proven benefit. However, patient outcomes depend on treatment administration and surveillance, which are time and resource intensive. These challenges are magnified in rural settings. We present a "real-world" cohort of patients with NMIBC treated with intravesical BCG at a community-based, rural, integrated health system.

**Methods:** Patients who were diagnosed with NMIBC and treated with adequate BCG at a community-based, rural, integrated health system from July of 2006 to May of 2022 were retrospectively evaluated. Univariate analysis was completed using the Pearson chi-square test. High grade recurrence-free survival, progression-free survival, cystectomy-free survival, and overall survival were estimated using Kaplan-Meier survival analysis.

**Results:** A total of 214 NMIBC patients received adequate intravesical BCG and followed for a median of 40 months. 172 (80.4%) patients had American Urological Association high risk disease and carcinoma in situ was present in 53 (24.8%) patients. High-grade recurrence-free survival at 1, 3, and 5 years were 91%, 76%, and 70%, respectively. Progression to muscle-invasive or metastatic disease occurred in 5% of patients, all within 6 years of treatment. 201 (94%) patients preserved their bladders at last followup and the 5-year overall survival was estimated to be 87% with log-rank test.

**Conclusions:** Patients with NMIBC treated with BCG in a rural, community-based system experienced outcomes similar to patients treated at large academic centers. Innovative strategies are needed in rural settings to ensure patients can receive, and benefit from, adequate BCG therapy.




## THU-EP14

**Long-Term Follow-Up of Heavily Pretreated NMIBC Patients receiving Gemcitabine/Docetaxel Intravesical Therapy**

A. Caruso, D. Roberson, G. Lin, B. Malkowicz
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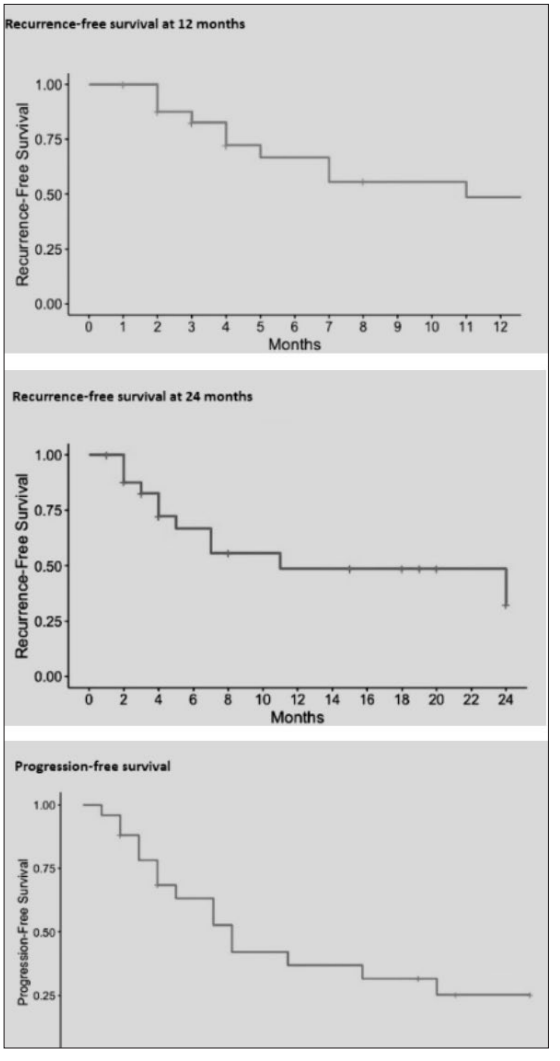
**Introduction and Objective:** Gemcitabine and docetaxel intravesical therapy (GEMDOC) has become an acceptable alternative for patients with high-risk non-muscle invasive bladder cancer. Longer-term outcomes are sparse. We report on an early cohort of heavily pretreated patients with recurrent noninvasive disease who were poor candidates for or refused cystectomy.

**Methods:** A single institution cohort of 26 patients with high-risk disease who had received an average of 4 prior courses of some form of intravesical therapy were offered an induction course of gem doc. Maintenance therapy was not performed. Patients were evaluated for initial response and recurrence rate over 3 or more years standard Kaplan-Meier statistical analysis was applied.

**Results:** The cohort was followed on average for 37.45 months. The initial complete response rate at 3 months was 92%. The recurrence free survival was maintained at 50% at 12 months, 35% at 24 months and 25% at 36 months.

**Conclusions:** The doublet of intravesical gemcitabine and docetaxel is an active regimen with good initial and reasonable prolonged response in heavily pretreated populations that are unsuitable or refuse cystectomy and diversion. This has demonstrated to some degree even at 3 years follow-up and has the potential for even further improvement with the use of maintenance therapy.



## THU-EP15

**Cancer-Testis Antigens in Urological Malignancies**

B. Wilson, R. Fogg, G. Guruli, M. Manjili, M. Dozmorov
*Virginia Commonwealth University School of Medicine, Richmond, VA, USA*

**Introduction and Objective:** Cancer testis antigens (CTA) are a group of highly immunogenic tumor-associated antigens which have attracted interest as potential targets for immunotherapy. They are aberrantly expressed in various tumors, including urologic malignancies. Decreased expression of these immunogenic antigens might confer low immunogenicity, allowing tumors to escape immune monitoring.

**Methods:** We analyzed patients' data from The Cancer Genome Atlas (TCGA). The expression of 13 different CTAs (ACRBP, AKAP4, CCNA1, CEP55, CTCFL, MAGE-A4, ODF4, PAGE4, SPA17, SSX2, TEX14, TEX15, TSGA10) were evaluated. There were 538 patients with renal cell carcinoma (with 72 controls), 411 patients with bladder cancer (19 controls) and 502 patients with prostate cancer (52 controls). We also obtained surgical specimens from radical nephrectomies and cystectomies at our institution's tissue bank, using Quantitative PCR to compare CTA expression in normal and cancerous tissues.

**Results:** Analyzing TCGA data, concerning kidney cancer, the levels of 7/13 CTAs were decreased, while 4 were unchanged and only 2 were increased in comparison to normal renal tissue. In bladder cancer samples, the expression of only one CTA (TEX15) was decreased, while 6 were increased and 6 were unchanged. In prostate cancer, the level of 4 CTAs were decreased, 4 unchanged and 5 increased. CEP55 was one CTA which demonstrated significantly increased expression in all urological malignancies examined. Considering postoperative samples from VCU Health Center, expression of CTAs were significantly decreased in tumor samples compared to normal tissue. That was true for both kidney and bladder cancer specimens analyzed.

**Conclusions:** Our results showed mostly decreased expression of examined CTA in human cancer tissues, which may help cancer cells to escape immune surveillance. Use of hypomethylating agents, which increase the expression of CTAs in various tumors, may have therapeutic value in these patients. Consistently increased expression of CEP55 was an interesting find, needing further evaluation.

## FRI-EP1

**Declining Medicare Reimbursement Rates for Urologic Surgeries, 2016 to 2024**

T. Martheswaran, B. Lee
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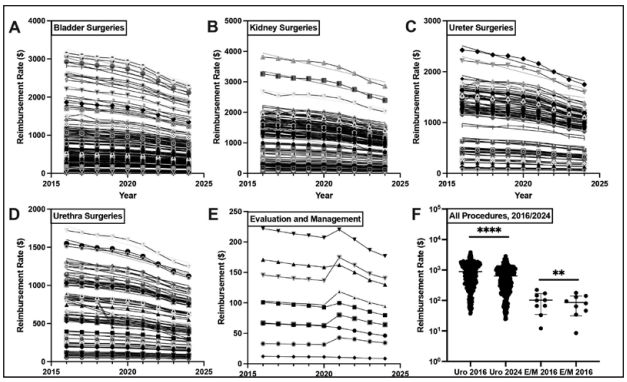
**Introduction and Objective:** The rapid decline of surgical reimbursement rates presents an active area of advocacy for physicians. This reduction has been linked to decreased quality, accessibility, and equity of surgical care. In 2021, the Center for Medicare and Medicaid Services (CMS) re-evaluated its reimbursement models to increase payment for evaluation and management (E/M), redistributing a fixed pot for Medicare reimbursement. However, the reimbursement formula for urologic surgeries has not been revisited. Thus, the objective of this study was to assess reimbursement rate trends for in-patient urologic surgeries compared to reimbursement rates for E/M.

**Methods:** Using the CMS Physician Fee Schedule Look-Up Tool for Current Procedural Terminology (CPT) code ranges of surgical procedures, we obtained reimbursement data from 2016 to 2024 for bladder, kidney, urethra, and ureter surgeries. Payments were corrected for inflation using the consumer price index (CPI) inflation calculator. Simple linear regression and wilcoxon matched-pairs signed rank tests were used to analyze price changes from 2016 to 2024.

**Results:** Mean reimbursements for urologic surgeries fell substantially by an average of $245.10 ($p<0.0001$) from 2016 to 2024, with substantial net decreases across bladder, kidney, ureter, and urethra surgeries. Consequently, each of these operation categories demonstrated a substantially negative CAGR (-3.75% bladder, -3.71% kidney, -3.62 % ureter, and -3.63% urethra). This is contrasted with a marginal decrease of -$16.18 ($p<0.01$) for E/M in this same time period, which translated to a -1.91% CAGR.

**Conclusions:** Urologic surgery Medicare reimbursements decreased dramatically from 2016 to 2024, while E/M reimbursement reductions were relatively attenuated. These findings have substantial implications for surgical accessibility and underscores the importance of advocacy for appropriate surgical reimbursements from payers.



## FRI-EP2

**Analyzing the Impact of Reduced Accessibility to Third-Year Urology Clerkship**

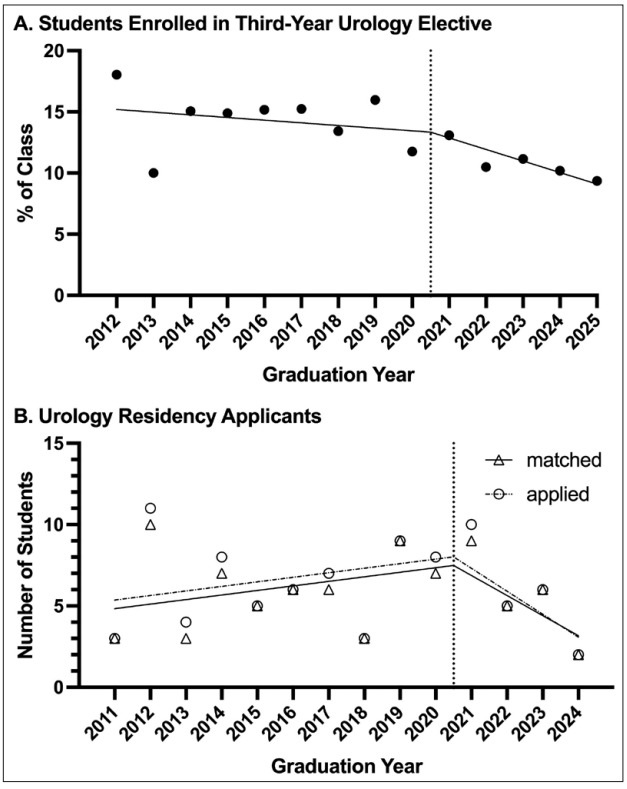
A. Hochberg, Y. Shah, B. Im, M. Shah, A. Murphy, P. Shenot, C. Lallas
*Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia, PA, USA*

**Introduction and Objective:** Medical students typically lack baseline urology exposure or interest. The literature shows that institution-specific curricular factors significantly influence the number and success of urology applicants. At our institution, curriculum changes starting with the graduating class of 2021 eliminated one of the two third-year surgical subspeciality electives. We aimed to analyze the impact of this change on urology exposure and ultimately the volume of students pursuing and matching into urology.

**Methods:** We reviewed 14 years of institutional data, encompassing enrollment from the graduating classes of 2012-2025 and match results from the classes of 2011-2024. Data were collected on enrollment in the third-year urology clerkship, total class size, number of applicants, and number of matched applicants. Two-sample unpaired t-tests were used to compare pre- and post-curriculum change (i.e. pre- and post-class of 2021) cohorts. Simple linear regression was used to examine pre- and post-curriculum change temporal trends.

**Results:** Urology clerkship enrollment significantly decreased after the curriculum change (14.4% vs. 10.9%, p=0.01). Prior to the change, enrollment was stable (p=0.62). After the change, there was a negative trend in enrollment that approached significance (r2=0.76, p=0.053) (Figure 1). Number of applicants (6.4 vs. 5.8) and matched applicants (5.9 vs. 5.5) decreased post-change; however, these changes were non-significant. After the curriculum change, there have been non-significant negative trends in total applicants (r2=0.81) and matched applicants (r2=0.81).

**Conclusions:** Clinical exposure to urology has fallen at our institution after the recent curriculum change. Although the decrease in urology matches was statistically non-significant, it may be too soon to observe significant changes. Alternatively, we have previously published data on strong preclinical urology exposure at our school, which may act as a protective factor.




## FRI-EP3

**Clay Modeling for Improved Understanding of Renal Anatomy in Urology Trainees**

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**Introduction and Objective:** A deep understanding of anatomy is a vital component of resident education. Current resident teaching paradigms focus on lectures and case-based workshops1. Clay modeling has been shown to improve anatomy students' long-term retention2. We have previously demonstrated that clay modeling is a unique kinesthetic learning tool to boost engagement in 4th year medical students participating in virtual sub-internships during COVID restrictions3. The purpose of this study was to determine whether clay modeling would improve anatomic knowledge of renal anatomy and imaging among urology trainees.

**Methods:** Residents were provided with a clay modeling kit including modeling tools. Trainees were asked to complete a three-dimensional clay model of a kidney using a provided CT scan or anatomic textbook model. The residents were administered a 25-question pre-test and identical post-test 2 weeks following the clay modeling activity. The test was designed to assess knowledge of gross renal anatomy, CT-based renal imaging, pathology, and renal vascular anatomy. Test results were collected using REDCap. Statistical analysis was performed using one-tailed, paired student's t-test with p values $< 0.05$ considered statistically significant.

**Results:** Seven residents (two PGY-2s, two PGY-3s, one PGY-4, and two PGY-5s) participated in the study. The mean pre-test score was 69.7%. After the clay modeling activity, the mean post-test score significantly improved to 79.4% ($p<0.05$). Each clay modeling kit and tools set cost approximately $15 per participant.

**Conclusions:** The use of clay modeling in conjunction with classic lecture-based learning improves long-term retention of renal anatomy. Clay modeling can be a cost effective and hands-on way for residents to comprehend anatomy. It can also be used to supplement traditional anatomy teaching. Future directions include increasing the sample size by expanding to other programs or specialties. We also plan on expanding clay modeling to teaching genitourinary anatomy to pre-clinical medical students.

## FRI-EP4

**Local Ablation is Associated with More Urinary Tract Complications Compared to Radical Nephroureterectomy for Management of UTUC**

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**Introduction and Objective:** Local ablation (LA) and radical nephroureterectomy (RNU) are two treatment modalities for upper tract urothelial carcinoma (UTUC). LA is recommended as a preferred option for patients with lower risk UTUC while RNU is the standard for higher risk UTUC. We evaluate morbidity differences between the treatment modalities with a focus on urinary tract complications.

**Methods:** Retrospective cohort review of patients from TriNetX database using ICD 9 and 10 diagnosis codes and CPT treatment codes from 2003-2023. Inclusion criteria were patients aged 18-90 years old with diagnoses of UTUC who were treated by either RNU or LA. Matched analysis was performed based on demographics and major comorbidities. Primary outcomes included post-operative complications within 1 year after intervention.

**Results:** There were 3,710 patients in LA group and 1,824 patients in RNU group. 1,763 patients were included in matched analysis from each cohort. At baseline, LA group was more comorbid with increased age, lower baseline renal function, higher rates of diabetes, and higher incidence of stroke. The LA group had significantly higher rates of post-operative sepsis (RR 1.64), urinary tract infection (RR 1.63), acute pyelonephritis (RR 3.08), hematuria (RR 2.02), acute kidney injury (RR 1.17), urinary retention (RR 1.53), and obstructive uropathy (RR 2.97) (Table 1). Additionally, the LA group had a 1.3-fold greater risk of return to the ER.

**Conclusions:** While LA is the recommended treatment option for low risk UTUC, patients should be counseled about the increased risks of associated urinary tract complications post-procedure. Though these results may be in part confounded by comorbidities, such observations can aid in the decision-making process.

Table 1: Postoperative complication comparison between cohorts from day 1 to day 365 post intervention for patients with UTUC.

| | Local Ablation | Radical Nephroureterectomy | Relative Risk (CI) | P-value |
|---|---|---|---|---|
| **Infection** | | | | |
| Sepsis or septic shock | 144 (8.17%) | 88 (4.99%) | 1.64 (1.27,2.12) | **0.0001** |
| Urinary tract infection | 471 (26.72%) | 287 (16.28%) | 1.64 (1.44,1.87) | **<0.0001** |
| Acute pyelonephritis | 40 (2.27%) | 13 (0.74%) | 3.08 (1.65,5.73) | **0.0002** |
| **Hemorrhage** | | | | |
| Transfusion | 99 (5.62%) | 88 (4.99%) | 1.13 (0.85,1.49) | 0.41 |
| Anemia (<8 g/dL) | 292 (20.24%) | 247 (18.34%) | 1.10 (0.95,1.29) | 0.20 |
| Hematuria | 665 (37.72%) | 330 (18.72%) | 2.02 (1.80,2.26) | **<0.0001** |
| **Cardiopulmonary** | | | | |
| Acute myocardial infarction | 57 (3.39%) | 34 (2.05%) | 1.65 (1.09,2.52) | **0.017** |
| Arrhythmia | 89 (5.89%) | 75 (4.90%) | 1.20 (0.89,1.62) | 0.23 |
| Respiratory failure | 122 (6.92%) | 85 (4.82%) | 1.44 (1.10,1.88) | **0.008** |
| Pneumonia | 80 (4.53%) | 75 (4.25%) | 1.07 (0.78,1.45) | 0.68 |
| Deep venous thrombosis | 66 (3.74%) | 65 (3.69%) | 1.02 (0.73,1.42) | 0.93 |
| Pulmonary embolism | 49 (2.78%) | 56 (3.18%) | 0.49 (0.60,1.28) | 0.49 |
| Shock | 31 (1.76%) | 22 (1.25%) | 1.41 (0.82,2.42) | 0.21 |
| **Renal** | | | | |
| Acidosis | 112 (6.35%) | 88 (4.99%) | 1.36 (0.97,1.67) | 0.081 |
| Hyperkalemia | 111 (6.30%) | 137 (7.78%) | 0.81 (0.64,1.03) | 0.087 |
| Acute Kidney Injury | 329 (18.66%) | 281 (15.94%) | 1.17 (1.01,1.35) | **0.033** |
| Hypertension | 160 (23.16%) | 79 (11.29%) | 2.05 (1.60, 2.63) | **<0.0001** |
| **Urologic** | | | | |
| Post-operative pain | 190 (10.78%) | 177 (10.04%) | 0.47 (0.88,1.30) | 0.47 |
| Post-operative ER visits | 382 (21.67%) | 292 (16.56%) | 1.31 (1.14,1.50) | **0.0001** |
| Urinary retention | 153 (9.68%) | 103 (6.33%) | 1.53 (1.20,1.95) | **0.0005** |
| Nephrolithiasis | 236 (13.39%) | 112 (6.35%) | 2.11 (1.70,2.61) | **<0.0001** |
| Obstructive uropathy | 689 (39.08%) | 232 (13.16%) | 2.97 (2.60,3.39) | **<0.0001** |
| Bladder cancer diagnosis | 354 (38.56%) | 370 (38.58%) | 1.00 (0.89,1.12) | 0.99 |
| Nephrostomy | 107 (7.43%) | 16 (0.99%) | 7.53 (4.47,12.67) | **<0.0001** |
| Double-J ureteral stent | 555 (31.48%) | 21 (1.19%) | 26.43 (17.18,40.66) | **<0.0001** |
| **Neurologic** | | | | |
| Cerebrovascular accident | 30 (1.70%) | 26 (1.48%) | 1.15 (0.69,1.94) | 0.59 |
| **Gastrointestinal** | | | | |
| Nausea or vomiting | 133 (7.54%) | 124 (7.03%) | 0.56 (0.85,1.31) | 0.56 |
| Ileus or bowel obstruction | 101 (5.73%) | 113 (6.41%) | 0.89 (0.69,1.16) | 0.40 |
| **Mortality** | | | | |
| Death | 180 (10.2%) | 172 (9.76%) | 0.45 (0.86,1.28) | 0.65 |

## FRI-EP5

**Association Between Dual-Eligible Status and Mortality Among SEER-Medicaid Prostate Cancer Patients**

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**Introduction and Objective:** Medicaid patients are eligible for dual enrollment in Medicare if they are either >65 years old or disabled. Recent attention has been given to this population due to studies showing they are in general poorer, sicker, and have higher healthcare utilization. Our objective was to assess the association between dual eligible status and mortality among SEER-Medicaid prostate cancer patients while controlling for age.

**Methods:** Prostate cancer cases from the SEER-Medicaid database (2006-2013) were collected demographic and clinical characteristics were compared between dual eligibles vs. non-dual eligibles. Then, a Cox proportional hazard model was used to evaluate the association between dual eligibility status and all-cause mortality while controlling for known demographic and clinical confounders.

**Results:** Of the 447,998 cases of prostate cancer reported in SEER-Medicaid from 2006-2013, 10,519 (2.3%) were in dual eligibles. Dual eligibles were older (mean age 70.8 vs. 66.5; p<.0001), poorer (43% vs. 17% living in census tracts with ≥20% poverty), and had higher proportion of non-Hispanic Blacks (30% vs.34%; p<.0001), lower proportion of localized disease (83% vs. 79%; p<.0001) lower rates of surgery (28% vs. 9%; p<.0001), and higher mortality rate (27% vs. 47%; p<.0001). As shown in Table 1, dual eligible Medicaid enrollees experienced 33% higher hazard of mortality compared to non-dual eligibles after controlling for confounders.

**Conclusions:** SEER-Medicaid dual eligible prostate cancer patients presented with more advanced stage disease. Even after controlling for disease stage and other common demographic confounders, including age, dual eligibility was associated with higher risk of death. Future efforts must focus on both earlier stage detection and improved management of prostate cancer in Medicaid dual eligibles, in particular focusing on the role that disability may play.

**Table 1.** Association between dual enrollee status and mortality for prostate cancer SEER-Medicaid patients

| Variable | Hazard Ratio | 95% CI | | P value |
|---|---|---|---|---|
| **Dual eligible status** | | | | |
| Yes | 1.325 | 1.282 | 1.370 | <.0001 |
| No (ref category) | - | - | - | |
| **Age at diagnosis** | 1.081 | 1.080 | 1.082 | <.0001 |
| **Marital status** | | | | |
| Married | 1.394 | 1.374 | 1.414 | <.0001 |
| Other (ref category) | - | - | - | - |
| **Race and ethnicity** | | | | |
| Non-Hispanic white | 1.363 | 1.331 | 1.397 | <.0001 |
| Non-Hispanic black | 1.494 | 1.452 | 1.537 | <.0001 |
| Hispanic | 1.001 | 0.963 | 1.040 | 0.5431 |
| Non-Hispanic other (ref category) | - | - | - | - |
| **Census track poverty indicator (% poverty)** | | | | |
| 0% - <5% | 0.701 | 0.687 | 0.715 | <.0001 |
| 5% - <10% | 0.786 | 0.771 | 0.802 | 0.0077 |
| 10% - <20% | 0.880 | 0.863 | 0.896 | 0.3323 |
| 20% - 100% (ref category) | - | - | - | - |
| **Treatment** | | | | |
| Surgery | 0.631 | 0.619 | 0.643 | <.0001 |
| Radiation | 0.769 | 0.756 | 0.781 | <.0001 |
| Chemo and/or other | 1.492 | 1.395 | 1.595 | 0.0070 |
| None (ref category) | - | - | - | - |
| **Stage** | | | | |
| Localized | 0.165 | 0.162 | 0.168 | <.0001 |
| Regional | 0.219 | 0.213 | 0.226 | <.0001 |
| Distant (ref category) | - | - | - | - |

## FRI-EP6

**Investigating the Oncologic Outcomes of Urothelial Carcinoma with Squamous Differentiation in a Large Rural Healthcare System**

K. Alaparthi[1], A. Battin[2], B. Perry[2], D. Wang[2], J. Salvato[1], A. Zawerton[2], K. Schranz[2], M. Meissner[2]
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**Introduction and Objective:** Urothelial carcinoma with squamous differentiation (SqUC) is the most common histological variant identified among urothelial carcinoma of the bladder. Squamous differentiation has been associated with rapid disease progression and worse prognosis, however very few studies have been dedicated to studying the overall survival and prognostic significance of the variant histology. Herein, we aim to elucidate the oncologic outcomes of SqUC.

**Methods:** Patients scheduled for transurethral resection of bladder tumor (TURBT) or cystectomy at a large rural, academic institution were retrospectively identified. Patients with SqUC on pathology were found and further investigated. Demographic and oncologic data including clinical T stage at diagnosis, rate of Bacille Calmette-Guérin instillation induction, rate of chemotherapy, cancer specific mortality, and overall survival using Kaplan-Meier analysis were obtained.

**Results:** Over 3300 patients were scheduled for either TURBT or cystectomy between 2008 and 2021. Pathology revealed 135 patients with urothelial carcinoma with variant squamous cell differentiation only, 2050 patients with pure urothelial carcinoma,186 patients with urothelial carcinoma with other/mixed variant histology, and 90 patients with non-urothelial cancer. For the SqUC group, the male:female ratio was 1.8:1 with a median age of 74 at the time of diagnosis. A total of 16.3% of patients had induction of BCG therapy, 40.3% underwent chemotherapy, and 38.8% underwent radical cystectomy. Clinical T stage at the time of diagnosis was 0.7% CIS, 8.2% Ta, 28.9% T1, 46.67% T2, 10.37% T3, and 5.19% T4. The overall cancer specific mortality was 42.2%. The average overall survival was 79.4 months with overall survival visualized in figure 1.

**Conclusions:** The study provides insight into the less examined clinical course of squamous variant urothelial carcinoma in a large rural healthcare system.

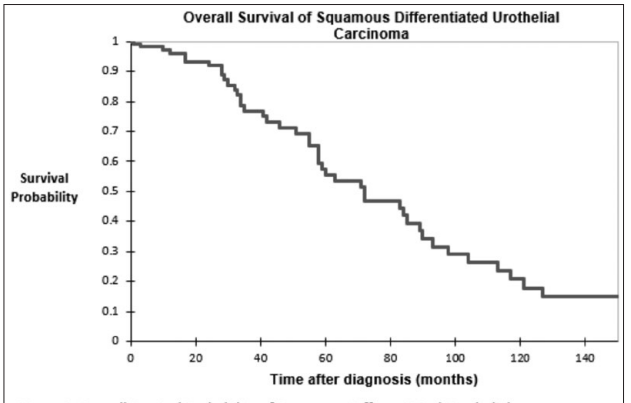


Figure 1. Overall Survival Probability of Squamous Differentiated Urothelial Carcinoma.

## FRI-EP7

**Utilization of Electronic Health Record Social Determinants of Health Feature in Kidney Stone Patients**

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**Introduction and Objective:** Social determinants of health (SDOH) have become an increasingly important tool in healthcare with some electronic health records (EHR) now capturing this data. An established association between poorer SDOH and worse outcomes for kidney stone disease exists, however there are limited data on the use of the EHR SDOH feature for this population. The objective of this study is to examine the frequency of SDOH documentation for kidney stone patients in the West Virginia University (WVU) health system EHR.

**Methods:** This is a retrospective review of patients within the WVU system that had a complaint of kidney stones within a year period. Patient charts were reviewed and SDOH data were collected from the EHR. Collected data included whether SDOH information was documented, number documented, and which SDOH were documented. The compiled data was then analyzed to compute the frequency of SDOH documentation and of the number and types documented.

**Results:** 473 patients with the complaint of kidney stones were included in the study over a year. 278 patients (59%) had no documentation of SDOH within their chart, while 195 patients (41%) had some form documented. Of the patients with documentation, 50% (21% of total) had 1 SDOH, 37% had all possible SDOH, 6% had 2, 4% had 3, 2% had 6, and <1% had 5 SDOH.

**Conclusions:** EHR documentation of SDOH was inconsistent in our patient population, with nearly 60% having no documentation of SDOH. SDOH information was fully completed in only 15% of total charts. These results are concerning when considering the established impact of social context on health, specifically in the setting of kidney stone disease. In an effort to tailor interventions to social needs, these results suggest more consistent documentation is needed to begin to use SDOH as a healthcare tool.

## FRI-EP8

**Real-World Experience with Optilume for Urethral Stricture Management: A Retrospective Analysis**

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**Introduction and Objective:** While endoscopic management of urethral stricture (US) offers patients a minimally invasive treatment option, it has historically suffered from higher stricture recurrence rates. Optilume(™) offers a novel approach to US management by utilizing a paclitaxel coated balloon to mitigate recurrence risk. While clinical trials have shown improvement compared to standard endoscopic management, real-world application remains unexplored. We sought to evaluate a clinically relevant population of men undergoing Optilume for US.

**Methods:** We conducted a retrospective chart review from all patients treated at a single institution from April 2022 to February 2024. Primary endpoints included need for further intervention. Secondary outcomes included changes in International Prostate Symptom Scores (IPSS).

**Results:** Sixty-nine OBD were performed on 65 patients. Mean age was 66 years old. Median stricture length was 2cm. There were 7 bulbomembranous strictures, 1 bladder neck contracture with the remaining strictures found at the bulbar urethra. For 16 patients, OBD was the first intervention. Fifteen patients had undergone prior urethroplasty and 34 patients had undergone endoscopic procedures. Average time to recurrence was 10.6 months. Sixty-one (93%) patients had clinical improvement in symptoms at first follow-up appointment. Four patients had recurrence of their US, with all patients electing to repeat OBD. Of these patients, two underwent two repeat OBD. No patients have undergone subsequent urethroplasty after OBD. Of the 9 patients with documented IPSS scores, the average IPSS decreased from 14.8 to 8.3.

**Conclusions:** We report high rates of clinical improvement after OBD, which is increased than the previously reported clinical trial data. Further research is needed to determine long-term real-world rates of clinical improvement.

| | | n |
|---|---|---|
| Age, average (years) | | 66 |
| Location | Bulbar urethra | 57 |
| | Bulbomembranous urethra | 7 |
| | Bladder neck contracture | 1 |
| Length, median (cm) | | 2 |
| Prior intervention | None | 16 |
| | Endoscopic | 34 |
| | Urethroplasty | 15 |
| Clinical Outcome | Improved symptoms | 61 |
| | Stricture recurrence | 4 |
| IPSS | Pre | 14.8 |
| | Post | 8.3 |
| Time to Recurrence, mean (mo) | | 10.6 |
| Intervention for Stricture Recurrence | Dilation | 4 |
| | Urethroplasty | 0 |

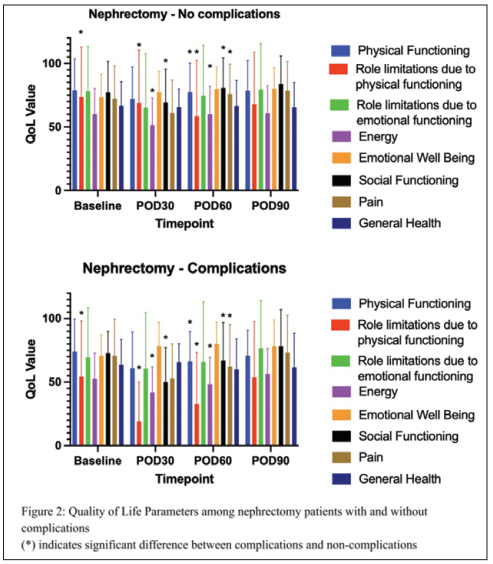



Figure 2: Quality of Life Parameters among nephrectomy patients with and without complications
(*) indicates significant difference between complications and non-complications

## FRI-EP9

**Evaluating Quality of Life Response in Patients Undergoing Radical Nephrectomy**

A. Asghar[1], R. Chelluri[2], F. Montanaro[2], D. Chen[2], M. Smaldone[2], R. Viterbo[2], Z. Asadi[1], C. Edalat[1], E. Helstrom[2], J. Ridge[2], E. Ross[2], A. Kutikov[2], R. Uzzo[2], A. Correa[2]
*[1]Drexel University College of Medicine, Philadelphia, PA, USA; [2]Fox Chase Cancer Center, Philadelphia, PA, USA*

**Introduction and Objective:** Patients undergoing radical nephrectomy face a significant risk of postoperative complications, yet the impact on their quality of life (QoL) remains poorly understood. We investigated QoL responses among nephrectomy patients with or without complications, hypothesizing that those with complications would exhibit lower QoL ratings 90 days post-nephrectomy.

**Methods:** In a large-scale randomized controlled trial, PRS-1, we investigated patients undergoing major cancer surgeries receiving either standard postoperative care or risk-stratified directed care. As part of this trial, QoL data was collected using the RAND 36-Item Health Surveys at baseline and on postoperative days (POD) 30, 60, and 90. Analysis included comparing QoL scores across eight domains between patients with and without complications using an unpaired T-test per parameter at each point in time ($p<0.05$).

**Results:** In this study of 464 nephrectomy patients, 29 experienced complications. Those with complications had a mean age of 65.4 years [SD 11.5], compared with 60.9 years [SD 11.5] for those without. The majority of patients with complications were male, Caucasian, and non-Hispanic. Preoperative and postoperative risk assessments indicated that most patients, both with and without complications, were classified as intermediate risk (Table 1). Those with complications saw significant decreases in role limitations due to physical functioning, energy, and social functioning at POD30 and POD60 (Figure 1).

**Conclusions:** Post-operative complications following nephrectomy are associated with significant decreases in QoL, further studies will allow us to tailor strategies for optimizing patient counseling and care. This study was limited to a small cohort of patients.

| Nephrectomy | No Complications | Complications | Significance (p<0.05) |
|---|---|---|---|
| | N=435 | N=29 | |
| **Age (years)** | | | 0.0372 |
| Mean (SD) | 60.9 (11.5) | 65.4 (8.9) | |
| | | | |
| **Sex** | | | 0.427 |
| Female | 158 (36.3%) | 13 (44.8%) | |
| Male | 277 (63.7%) | 16 (55.2%) | |
| **Race** | | | 0.8905 |
| Asian | 5 (1.1%) | 0 (0%) | |
| Black or African American | 35 (8.1%) | 3 (10.3%) | |
| More than one race | 0 (0%) | 0 (0%) | |
| Other | 9 (2.1%) | 0 (0%) | |
| White | 386 (88.7%) | 26 (89.7%) | |
| American Indian or Alaskan Native | 0 (0%) | 0 (0%) | |
| Hawaiian or Pacific Islander | 0 (0%) | 0 (0%) | |
| **Ethnicity** | | | 0.6094 |
| Hispanic | 7 (1.6%) | 1 (3.5%) | |
| Non Hispanic | 424 (97.5%) | 27 (93.0%) | |
| Unknown | 4 (0.9%) | 1 (3.5%) | |
| **Preoperative Risk Assessment Group** | | | 0.0001 |
| High | 1 (0.2%) | 0 (0%) | |
| Intermediate | 310 (71.3%) | 22 (75.9%) | |
| Low | 124 (28.5%) | 7 (24.1%) | |
| Unknown | 0 (0%) | 0 (0%) | |
| **Postoperative Risk Assessment Group** | | | 0.3377 |
| High | 4 (0.9%) | 1 (3.5%) | |
| Intermediate | 315 (72.4%) | 23 (79.3%) | |
| Low | 109 (25.1%) | 5 (17.2%) | |
| Unknown | 7 (1.6%) | 0 (0%) | |
| **Complications** | **# of Patients** | **Clavien Grade** | |
| **Cardiac Complications:** | | | |
| Myocardial Infarction | 3 | 1 Stage II, 1 Stage III, 1 Stage IV | |
| Cardiac Arrest | 1 | Stage V | |
| **Pulmonary Complications:** | | | |
| Unplanned Intubation | 3 | 1 Stage II, 2 Stage III | |
| Pneumonia | 7 | 6 Stage II, 1 Stage IV | |
| Pulmonary Embolism | 1 | Stage II | |
| **Renal Complications:** | | | |
| Progressive Renal Insufficiency | 4 | 3 Stage I, 1 Stage II | |
| Acute Renal Failure | 3 | 1 Stage II, 2 Stage IV | |
| Urinary Tract Infection | 6 | Stage II | |
| **Other** | | | |
| Deep Incisional | 1 | Stage II | |
| Sepsis | 1 | Stage II | |

Table 1: Description of cohort and sample size analyzed

## FRI-EP10

**Determining the Quality-of-Life Response When Patients Have a Complication After Radical Cystectomy**

C. Edalat[1], R. Chelluri[2], F. Montanaro[2], D. Chen[2], M. Smaldone[2], R. Viterbo[2], Z. Asadi[1], A. Asghar[1], E. Helstrom[2], J. Ridge[2], E. Ross[2], A. Kutikov[2], R. Uzzo[2], A. Correa[2]
*[1]Drexel University College of Medicine, Philadelphia, PA, USA; [2]Fox Chase Cancer Center, Philadelphia, PA, USA*

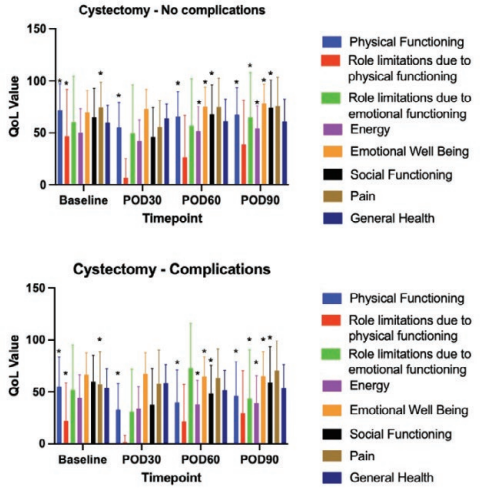
**Introduction and Objective:** Patients who undergo radical cystectomy are at significant risk of having postoperative complications. However, data defining their response via quality of life (QoL) metrics is limited. We sought to understand the QoL response across a variety of domains and hypothesized that those who had complications would have scored lower on QoL metrics when compared to patients who did not experience a complication.

**Methods:** We conducted a large-scale randomized control trial (PRS-1) in which patients who underwent major cancer operations received standard postoperative management or risk-stratified directed care. In this trial, we collected QoL data; patients completed the RAND 36-Item Health Survey at baseline and at postoperative days (POD) 30, 60, and 90. QoL scores were tabulated across eight domains, and we compared the differences between those who did and did not have complications across the four timepoints. Mean QoL scores were compared using an unpaired T-test per parameter at each time point ($p<0.05$).

**Results:** One hundred thirty-five patients underwent cystectomy, with 36 experiencing postoperative complications. Most patients in both cohorts were male, Caucasian, and non-Hispanic. The mean age of the group without complications was 66.5 years and 70.6 years for those with complications (Table 1). Patients with complications showed significant differences in physical functioning at all time points, and in energy, social functioning, and emotional wellbeing at POD60.

**Conclusions:** Patients with complications post-cystectomy had significantly different QoL scores thus potentially implicating further care for these individuals. This study was limited to a small sample size of patients assessed.

Figure 1: Quality of Life Categories Over Time
(* indicates significant difference between complications and no complications cohort)




## FRI-EP11

**Prostate Cancer Mortality Racial Disparities Worsen Across Income Strata**

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**Introduction and Objective:** 1 in 4 Black men develop prostate cancer in their lifetime – twice the risk compared to non-black men. This is hypothesized to be driven by genetic and social factors. However, diverse individuals are often underrepresented in major prostate cancer studies, making it challenging to assess the impact of social factors. Our study aims to examine the effect of income and residence on prostate cancer mortality among men from different ethnic backgrounds.

**Methods:** We conducted a population-based, cohort study using data from Surveillance, Epidemiology and End-Results (SEER). We identified 121,209 individuals diagnosed with prostate cancer between 1992-1997 and followed them until 2017. Our primary outcome was prostate cancer-specific survival. We calculated annual prostate cancer mortality rates and actuarial survival rates using age of diagnosis, tumor grade, and race.

**Results:** The median age of diagnosis was 70 (IQR: 64-76) with the majority of individuals diagnosed with Gleason 7 or above prostate cancer (80%). The majority of individuals identified as Caucasian (76%) or Black (10%) were from an urban location (population > 25,000: 84%) and had a middle-class income (median household income 65K-69.9K). 23,971 (19.8%) individuals died of prostate cancer with a corresponding 1.4% annual prostate specific mortality rate. The median time to prostate cancer death was 9.3 years (IQR: 4.3-9.3). A disparity was identified in prostate cancer mortality between Caucasian and Black individuals that was worse for individuals from lower income households.

**Conclusions:** Despite improvements in prostate cancer outcome disparities, Black and Hispanic men face worse prostate cancer-specific outcomes in comparison to White men when controlled for income or location. Diverse individuals from lower-income represent a very high-risk group for poor outcomes from prostate cancer.

| Income | Total | | | Urban | | | Rural | | |
|---|---|---|---|---|---|---|---|---|---|
| | White | Black | Hispanic | White | Black | Hispanic | White | Black | Hispanic |
| <$35,000 | 26% | 32% | 29% | -- | -- | -- | 26% | 32% | 29% |
| $35,000 – 39,999 | 27% | 44% | 26% | -- | -- | -- | 27% | 44% | 26% |
| $40,000 – 44,999 | 24% | 33% | 26% | -- | -- | -- | 24% | 33% | 26% |
| $45,000 – 49,999 | 24% | 38% | 33% | 27% | 43% | 34% | 23% | 38% | 33% |
| $50,000 – 54,999 | 22% | 33% | 27% | 19% | 32% | 22% | 23% | 33% | 33% |
| $55,000 – 59,999 | 20% | 21% | 19% | 19% | 19% | 20% | 21% | 31% | -- |
| $60,000 – 64,999 | 19% | 25% | 21% | 19% | 25% | 21% | 17% | 15% | 13% |
| $65,000 – 69,999 | 21% | 26% | 24% | 21% | 26% | 25% | 24% | 33% | 17% |
| $70,000 – 74,999 | 19% | 28% | 24% | 20% | 28% | 24% | 10% | -- | -- |
| $75,000+ | 21% | 27% | 23% | 21% | 27% | 23% | 25% | -- | 43% |

Table 1: Cohort Demographics

| Cystectomy | No Complications | Complications | Significance |
|---|---|---|---|
| | N=99 | N=36 | |
| **Age (years)** | | | 0.04 |
| Mean (SD) | 66.5 (10.3) | 70.6 (8.9) | |
| | | | |
| **Sex** | | | 0.4111 |
| Female | 20 (20.2%) | 10 (27.8%) | |
| Male | 79 (79.8%) | 26 (72.2%) | |
| **Race** | | | |
| Asian | 1 (1.0%) | 0 (0%) | 0.999 |
| Black or African American | 3 (3.0%) | 1 (2.8%) | |
| More than one race | 0 (0%) | 0 (0%) | |
| Other | 2 (2.0%) | 0 (0%) | |
| White | 93 (93.9%) | 35 (97.2%) | |
| American Indian or Alaskan Native | 0 (0%) | 0 (0%) | |
| Hawaiian or Pacific Islander | 0 (0%) | 0 (0%) | |
| **Ethnicity** | | | 0.999 |
| Hispanic | 6 (6.1%) | 2 (5.6%) | |
| Non Hispanic | 93 (93.9%) | 34 (94.4%) | |
| Unknown | 0 (0%) | 0 (0%) | |
| **Preoperative Risk Assessment Group** | | | 0.692 |
| High | 58 (58.6%) | 23 (63.9%) | |
| Intermediate | 41 (41.4%) | 13 (36.1%) | |
| Low | 0 (0%) | 0 (0%) | |
| Unknown | 0 (0%) | 0 (0%) | |
| **Postoperative Risk Assessment Group** | | | 0.3506 |
| High | 58 (58.6%) | 25 (69.4%) | |
| Intermediate | 36 (36.4%) | 11 (30.6%) | |
| Low | 0 (0%) | 0 (0%) | |
| Unknown | 5 (5.1%) | 0 (0%) | |
| **Complications** | | | |
| **Cardiac Complications:** | | | |
| Myocardial Infarction | 2 | 1 Stage I, 1 Stage IV | |

## FRI-EP12

**Regional and Epidural Anesthesia Increases Length of Stay in Patients Undergoing Radical Cystectomy**

Y. Son[1], R. Wong[2], J. Scali[1], L. Earnshaw[1], E. Wu[3], T. Mueller[1], G. Brown[1]
*[1]Jefferson New Jersey, Stratford, NJ, USA; [2]Nova Southeastern University, Fort Lauderdale, FL, USA; [3]Alabama College of Osteopathic Medicine, Dothan, AL, USA*

**Introduction and Objective:** Radical cystectomy (RC) is a treatment option for muscle invasive bladder cancer or those with high-risk non-muscle invasive bladder cancer. Length of stay (LOS) has been an important metric in quality of life and implementation of ERAS protocols have attempted to curtail the LOS. The aim of this study is to determine if additional anesthesia techniques can reduce LOS.

**Methods:** A retrospective review was performed using the NSQIP database in 2019 and 2020 for patients undergoing RC. Additional anesthesia techniques were subdivided into epidural, regional, and local blocks. The three groups were compared, and a multivariate linear regression was performed to determine increased LOS.

**Results:** A total of 1866 patients were included in the analysis. Epidural was used in 50.2%, regional in 29.4%, and local in 20.5%. There was no difference in age, gender, or BMI within the cohort. The length of stay was greatest in the epidural group at 8.1 days compared to 7.4 days of regional and 6.7 days in the local group (P<0.001) (Figure 1). In the adjusted analysis, regional (P=0.042) and epidural (P=0.019) was found to have longer LOS compared to local. Additionally, prolonged NPO, pneumonia, organ space SSI, and urinary leak were independent predictors of increased LOS (Figure 2).

**Conclusions:** Pain control during and after RC is crucial for recovery, however we show that additional anesthesia techniques including regional and epidural blocks have longer length of stay compared to local blocks alone. Caution should be used for surgeons utilizing additional anesthesia techniques to ensure optimized post operative course.

Figure 1. Mean Length of Hospital Stay with Additional Anesthesia Techniques

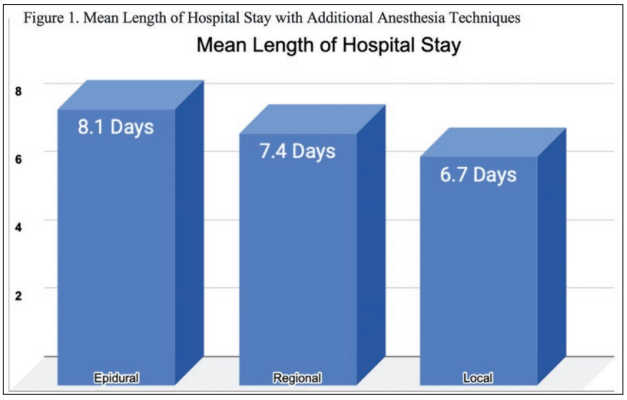
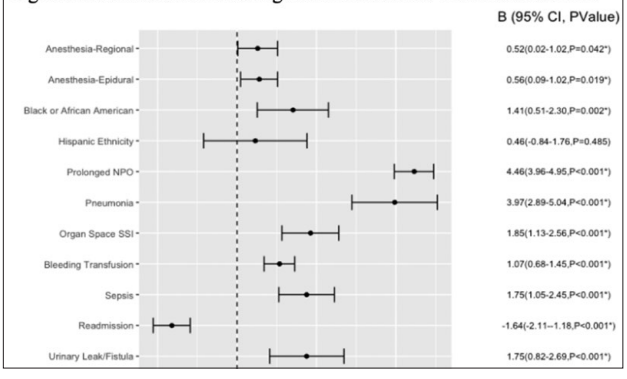



Figure 2. Multivariate Linear Regression Associated with Increased LOS




## FRI-EP13

**Examining the Clinical Utility of Post-Orchiectomy Lactate Dehydrogenase in Prognosis of Testicular Cancer**

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**Introduction and Objective:** Of the testis cancer tumor markers, lactate dehydrogenase (LDH) has been found to have limited utility in predicting disease recurrence after curative therapy compared to human chorionic gonadotropin (hCG) and alpha fetoprotein (AFP). The objective of this study is to examine the role of post-orchiectomy LDH in the staging of testicular cancer and its effects on overall and cancer specific survival.

**Methods:** We performed a retrospective cohort study of men who underwent orchiectomy for testicular cancer between 2000 and 2019. Data were extracted from the Surveillance, Epidemiology and End Results program. We excluded patients with absent LDH levels, non-testis primary tumors, or those diagnosed before the age of 19 or after death.

**Results:** Our cohort was 10,362 participants, of whom 76.6% had normal LDH levels, 14.5% less than 1.5X normal, 7.0% between 1.5-10X normal and 1.9% greater than 10X normal. Median follow-up was 41 months (IQR: 17-72). At the end of follow-up, 4.5% had died of any cause and 2.6% had died of testicular cancer.
Individuals with elevated LDH levels were more likely to die of testis cancer compared to those with normal levels (7.8% versus 0.5%) and had shorter median survival. Among those with elevated LDH but normal hCG and AFP levels, only 1.8% died of testis cancer. Most patients were S-staged by qualifying elevations in LDH.
By logistic regression, the highest risk of testis cancer death was significantly associated with LDH level (OR 5.0, 95% CI: 3.5-7.2) compared to hCG (OR: 2.9, 95% CI: 2.0-4.1) or AFP (OR: 2.3, 95% CI: 1.6-3.1).

**Conclusions:** Isolated LDH elevation is a weak independent predictor of cancer mortality but strongly drives risk category designation in combination with other markers.

**Table 1:** Number and percent of each S-stage who were upstaged to that S-stage based on a qualifying isolated elevation of each serum tumor marker.

| | S Stage [ n (%) ] | | |
|---|---|---|---|
| | **S1 (n=1,719)** | **S2 (n=610)** | **S3 (n= 326)** |
| **LDH** | 609 (35.4%) | 356 (58.3%) | 103 (31.6%) |
| **HCG** | 299 (17.4%) | 63 (10.3%) | 126 (38.6%) |
| **AFP** | 300 (17.5%) | 99 (16.2%) | 57 (17.5%) |
| **Two or more** | 511 (29.7%) | 92 (15.1%) | 40 (12.3%) |

## FRI-EP14

**Defining Success: Functional Outcomes Following Robot-Assisted Radical Prostatectomy**

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**Introduction and Objective:** The assessment of continence and potency outcomes following robotic prostatectomy (RALP) is complicated by the use of varying definitions of success. Our study analyzed success rates post-RALP using multiple definitions of success for urinary incontinence and potency.

**Methods:** A retrospective review of patients enrolled in the UVA prostatectomy functional outcomes program (PFOP) was performed. Stress (SUI) and urge incontinence (UUI) outcomes were assessed using the ICIQ-MLUTS questionnaire, daily pad use (PPD), and global bladder control score. Sexual function and quality of life were assessed with SHIM and IIQ-7 questionnaires. Further analysis evaluated the proportion of men achieving success across two or three functional outcomes.

**Results:** Forty men with a mean age of 62.8 (± 7.52) and a median BMI of 28.1 (IQR 26.2-30.8) were included. A significant proportion of men reported baseline UUI or ED, 35% and 55% respectively. At 3-, 6-, and 12-month follow-ups, 20%, 40%, and 37.5% of men met the strictest SUI criteria ("never"). At 3-, 6-, and 12-month follow-ups, 2.5%, 5%, and 12.8% of men met the strictest potency criteria (SHIM ≥ 22). The 12-month success rates for SUI, UUI, and potency ranged from 37.5%-92.5%, 37.5%-95%, and 12.8%-23% respectively. At 12-month follow-up, 5.1% of men met the strict definition of success across three functional domains (SUI, UUI, and Potency) compared to 35% at baseline.

**Conclusions:** The success rates across all functional outcomes following RALP vary greatly depending on the definition of success used. Achieving strict success across all functional outcomes is rare, compounded by the significant proportion of men who report some degree of incontinence or ED at baseline. Providers should assess baseline function before treatment to set expectations of recovery.

Table 1. Functional Outcomes following RALP

| | Baseline | 3 months | 3mo Cumulative[1] | 6 months | 6mo Cumulative[1] | 12 months | 12mo Cumulative[1] |
|---|---|---|---|---|---|---|---|
| **ICIQ SUI Domain Score** | | | | | | | |
| Never (0) | 37 (92.5) | 8 (20) | - | 16 (40) | - | 15 (37.5) | - |
| Occasionally (1) | 3 (7.5) | 13 (32.5) | 21 (52.5) | 9 (22.5) | 25 (62.5) | 14 (35) | 29 (72.5) |
| Sometimes (2) | 0 (0) | 12 (30) | 33 (82.5) | 8 (20) | 33 (82.5) | 8 (20) | 37 (92.5) |
| **ICIQ UUI Domain Score** | | | | | | | |
| Never (0) | 26 (65) | 11 (27.5) | - | 15 (37.5) | - | 15 (37.5) | - |
| Occasionally (1) | 10 (25) | 13 (32.5) | 24 (60) | 12 (30) | 27 (67.5) | 18 (45) | 33 (82.5) |
| Sometimes (2) | 3 (7.5) | 8 (20) | 32 (80) | 12 (30) | 39 (97.5) | 5 (12.5) | 38 (95) |
| **Daily Pad Use** | | | | | | | |
| 0 | 39 (97.5) | 14 (35) | - | 20 (50) | - | 27 (67.5) | - |
| 1 | 1 (2.5) | 12 (30) | 26 (65) | 11 (27.5) | 31 (77.5) | 6 (15) | 33 (82.5) |
| 2-3 | 0 (0) | 8 (20) | 34 (85) | 8 (20) | 39 (97.5) | 5 (12.5) | 38 (95) |
| **Bladder control** | | | | | | | |
| 0 | 10 (25) | 2 (5) | - | 6 (15) | - | 6 (15) | - |
| 1 | 6 (15) | 6 (15) | 8 (20) | 2 (5) | 8 (20) | 8 (20) | 14 (35) |
| 2 | 4 (10) | 7 (17.5) | 15 (37.5) | 4 (10) | 12 (30) | 8 (20) | 22 (55) |
| 3 | 3 (7.5) | 2 (5) | 17 (42.5) | 7 (17.5) | 19 (47.5) | 4 (10) | 26 (65) |
| 4 | 1 (2.5) | 3 (7.5) | 20 (50) | 4 (10) | 23 (57.5) | 3 (7.5) | 29 (72.5) |
| 5 | 12 (30) | 8 (20) | 28 (70) | 7 (17.5) | 30 (75) | 4 (10) | 33 (82.5) |
| **SHIM (n) (%)** | | | | | | **n=39** | |
| ≥ 22 no signs of ED | 18 (45) | 1 (2.5) | - | 2 (5) | - | 5 (12.8) | - |
| 17-21 mild ED | 8 (20) | 2 (5.1) | 3 (7.6) | 0 (0) | 2 (5) | 2 (5.1) | 7 (17.9) |
| 12-16 mild to moderate ED | 7 (17.5) | 2 (5.1) | 5 (12.7) | 1 (2.5) | 3 (7.5) | 2 (5.1) | 9 (23) |
| **IIQ-7 Score** | | **n=39** | | **n=38** | | **n=38** | |
| ≤ 10 | 40 (100) | 36 (92.3) | - | 35 (92.1) | - | 35 (92.1) | - |
| 11-14 | 0 (0) | 1 (2.6) | 37 (94.9) | 3 (7.9) | 38 (100) | 1 (2.6) | 36 (94.7) |
| **Combination outcomes, strict (n) (%)[2]** | | | | | | **n=39** | |
| Trifecta | 14 (35) | 0 | - | 0 | - | 2 (5.1) | - |
| Bifecta (SUI+UUI) | 25 (62.5) | 4 (10) | - | 9 (22.5) | - | 6 (15) | - |
| Bifecta (SUI+SHIM) | 18 (45) | 0 | - | 0 | - | 2 (5.1) | - |
| Bifecta (UUI+SHIM) | 14 (35) | 0 | - | 2 (5) | - | 5 (12.8) | - |
| **Combination outcomes, lenient (n) (%)[3]** | | | | | | **n=39** | |
| Trifecta | 24 (60) | 2 (5) | - | 1 (2.5) | - | 6 (15.4) | - |
| Bifecta (SUI+UUI) | 36 (90) | 20 (50) | - | 22 (55) | - | 26 (65) | - |
| Bifecta (SUI+SHIM) | 26 (65) | 2 (5) | - | 1 (2.5) | - | 6 (15.4) | - |
| Bifecta (UUI+SHIM) | 24 (60) | 3 (7.5) | - | 2 (5) | - | 7 (17.9) | - |

ICIQ, International Continence Impact Questionnaire; SHIM, Sexual Health Inventory for Men; IIQ, Incontinence Impact Questionnaire; SUI, stress urinary incontinence; UUI urge urinary incontinence.

[1]Figures represent patients achieving listed outcome or superior outcome.
[2]Strict success by outcome: SUI = SUI Domain Score 0; UUI = UUI Domain Score 0; Potency = SHIM ≥ 22
[3]Lenient success by outcome: SUI = SUI Domain Score 0 or 1; UUI = UUI Domain Score 0 or 1; Potency = SHIM ≥ 17
Trifecta = success in all three outcomes; Bifecta = success in any two of three outcomes

## FRI-EP15

**History of Hysterectomy is Not Associated with Overactive Bladder Symptoms: Analysis of National Health and Nutrition Examination Survey**

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**Introduction and Objective:** Infrasacral insult can cause lower urinary tract symptoms (LUTS) such as overactive bladder (OAB). Hysterectomy has been argued as an etiology; however, studies have shown mixed results in urodynamic or bladder capacity changes after total hysterectomy. This study aims to determine if there is an association between hysterectomy and OAB.

**Methods:** The 2017-2020 National Health and Nutrition Examination Survey (NHANES) was used to review patients with and without a prior hysterectomy. NHANES produces national estimates that are representative of the total noninstitutionalized civilian USA population. The OAB Symptom Score results were compared between groups. Descriptive analysis and logistic regression were performed to find associations between hysterectomy and OAB.

**Results:** A total of 41,437,023 weighted samples were included in the study, with 4.7% having had a prior hysterectomy. Rates of OAB were similar between hysterectomy and non-hysterectomy groups (8.7% vs. 11.9%) (Figure). The hysterectomy group was older, more likely to be White race, and more likely to be widowed/separated/divorced. In the adjusted analysis, age ($p<0.001$) and White race ($p=0.024$) were independent covariates associated with hysterectomy. OAB was not a predictive independent variable ($p=0.166$). Interestingly, however, urine flow rate was inversely correlated ($p=0.05$) (Table).

**Conclusions:** Hysterectomy is commonly believed to be a risk factor for LUTS, especially OAB. We show that a prior hysterectomy is not associated with OAB yet may influence urine flow rate. A thorough neurological workup should be implemented if de novo OAB occurs, regardless of previous hysterectomy status.

**Figure**. Rates of OAB Compared Between Hysterectomy and Non-Hysterectomy Groups

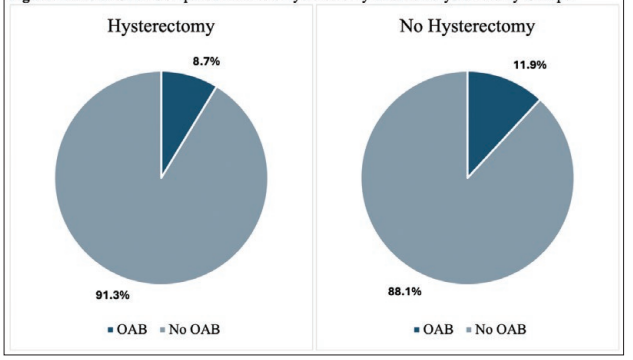


**Table**. Logistic Regression Analysis: Associations with Hysterectomy

| | Univariate | | Multivariate | |
|---|---|---|---|---|
| | Odds Ratio (95% CI) | p-value | Odds Ratio (95% CI) | p-value |
| Age | 1.007 (1.004 - 1.009) | **<0.001** | 1.006 (1.003 - 1.008) | **<0.001** |
| White Race | 1.029 (0.999 - 1.060) | 0.06 | 1.031 (1.004 - 1.060) | **0.024** |
| Hispanic Race | 0.966 (0.941 - 0.992) | **0.012** | 0.968 (0.945 - 0.991) | **0.007** |
| Black Race | 0.978 (0.954 - 1.003) | 0.08 | 0.971 (0.946 - 0.997) | **0.028** |
| Asian Race | 0.983 (0.953 - 1.013) | 0.264 | 0.988 (0.959 - 1.017) | 0.41 |
| Other Race | 1.045 (0.948 - 1.150) | 0.376 | 1.023 (0.945 - 1.107) | 0.58 |
| OAB | 0.986 (0.954 - 1.020) | 0.422 | 0.975 (0.941 - 1.011) | 0.166 |
| Urine Flow Rate | 0.988 (0.974 - 1.001) | 0.074 | 0.988 (0.975 – 0.999) | **0.05** |

No hysterectomy used as the reference. Controlled for age, race, marital status, and the ratio of family income to poverty where applicable.