RPE-01

A Comparative Propensity Score-matched Analysis of Perioperative Outcomes of Laser Enucleation of the Prostate vs. Simple Prostatectomy for Benign Prostatic Hyperplasia: Will Approach Affect Morbidity and Mortality Post Prostatectomy?

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Introduction and Objective: Open simple prostatectomy (SP) and laser enucleation of the prostate (LEP) remain recommended surgical treatment options for the large prostates with bothersome lower urinary tract symptoms. LEP offers endoscopic approach for simple prostatectomy. In this study, we aimed to assess perioperative outcomes of SP vs. LEP.

Methods: ACS-NSQIP data was queried for patients who underwent SP and LEP between January 2015 and December 2017. A total of 2321 patients were identified, of which 628 underwent SP and 1693 underwent LEP. After propensity score (1:1) matching for all confounding variables, LEP was compared to SP for operative time, perioperative complications, blood transfusions, risk of mortality and morbidity, and total length of stay. Chi-square and t-tests were used for statistical analysis for categorial and continuous variables respectively.

Results: LEP patients had fewer overall complications (4.1% vs. 25.8%, $p < 0.001$). They experienced fewer respiratory complications (0.2% vs. 1.5%, $p = 0.021$), pulmonary embolisms (0.3% vs. 2%, $p = 0.012$), acute renal failures (0.2% vs. 1.4%, $p = 0.038$), urinary tract infections (2.6% vs. 4.9%, $p = 0.045$), and sepsis (2.7% vs. 6.7%, $p = 0.002$). There was no significant difference in cardiac complications. LEP patients required less perioperative blood transfusions (0.7% vs. 14.8%, $p < 0.001$) and had shorter hospital stay (1.2 days vs. 4 days, $p < 0.001$). NSQIP estimated probability of mortality (0.2% vs. 0.3%, $p < 0.001$) and morbidity (3% vs. 9.2%, $p < 0.001$) were lower for LEP.

Conclusions: LEP is associated with fewer complications, shorter hospital stay, and lower risk of morbidity and mortality after surgical treatment of enlarged prostate with bothersome lower urinary tract symptoms.

Table 1. Pre and Post Propensity Score Matching Characteristics of Patients Undergoing Laser Enucleation of the Prostate and Open Simple Prostatectomy.

	Pre-Propensity Score Matching			Post-Propensity Score Matching		
	Laser Enucleation of the Prostate N=1693	Open Simple Prostatectomy N=628	p Value	Laser Enucleation of the Prostate N=586	Open Simple Prostatectomy N=586	p Value
Age, mean [SD]	69 [9.0]	69 [7.9]	0.002	69 [9.4]	70 [8.0]	0.02
Non-Caucasian Race, N (%)	229 (14)	188 (31)	<0.001	174 (30)	177 (30)	0.8
Elective Surgery, N (%)	1632 (96)	583 (93)	<0.001	551 (94)	552 (94)	1.0
ASA 3 and above, N (%)	841 (50)	314 (50)	0.9	309 (53)	290 (49.5)	0.2
Comorbidities, N (%)						
Bleeding Disorders	51 (3.0)	7 (1.1)	0.007	7 (1.2)	7 (1.2)	1
Congestive Heart Failure[a]	7 (0.4)	1 (0.2)	0.7	2 (0.3)	1 (0.2)	1
Severe COPD	64 (3.8)	18 (2.9)	0.3	16 (2.7)	16 (2.7)	1
Disseminated cancer	10 (0.6)	2 (0.3)	0.5	4 (0.7)	1 (0.2)	0.4
Diabetes Mellitus	318 (19)	124 (20)	0.6	111 (19)	112 (19)	0.9
Dyspnea[a]	70 (4.1)	16 (2.4)	1	22 (3.7)	15 (2.6)	0.2
End Stage Renal Disease[b]	8 (0.5)	3 (0.5)	1	3 (0.5)	2 (0.3)	1
Hypertension	986 (58)	365 (58)	1	344 (59)	340 (58)	0.9
Sepsis[a]	2 (0.1)	1 (0.2)	1	1 (0.2)	1 (0.2)	1
Current Smoker	161 (9.5)	56 (8.9)	0.7	57 (9.7)	55 (9.4)	0.9
Functionally Dependent	43 (2.5)	15 (2.4)	1	16 (2.7)	12 (2.0)	0.6
Steroid use[b]	44 (2.6)	3 (0.5)	0.001	3 (0.5)	3 (0.5)	1
Weight Loss of >10*	3 (0.2)	3 (0.5)	0.4	1 (0.2)	2 (0.3)	1

[a] within 30 days prior to surgery, [b] on dialysis, [t] with mild exertion or more, [f] for chronic condition, [*] within last 6 months, COPD- Chronic Obstructive Pulmonary Disease

Table 2. Perioperative Outcomes of Laser Enucleation of the Prostate and Open Simple Prostatectomy.

	Laser Enucleation of the Prostate N=586	Open Simple Prostatectomy N=586	p Value
30-day Mortality, N (%)	0	0	-
30-day Complications, N (%)	24 (4.1)	151 (25.8)	<0.001
Respiratory Complications	1 (0.2)	9 (1.5)	0.021
Pulmonary Embolism	2 (0.3)	12 (2.0)	0.012
Acute Renal Failure	1 (0.2)	8 (1.4)	0.038
Sepsis	16 (2.7)	39 (6.7)	0.002
Bleeding Transfusions	4 (0.7)	87 (14.8)	<0.001
Cardiac Complications	0	3 (0.5)	0.2
Urinary Tract Infections	15 (2.6)	29 (4.9)	0.045
Total Operative Time, min [SD]	96 [54]	141 [65]	<0.001
Length of Total Hospital Stay, days [SD]	1.2 [21]	4.0 [3.4]	<0.001
Estimated Probability of Mortality, mean [SD]	0.002 [0.004]	0.003 [0.006]	<0.001
Estimated Probability of Morbidity, mean [SD]	0.030 [0.016]	0.092 [0.034]	<0.001

RPE-02

Low-Intensity Shockwave Therapy (LiSWT) Appears to Improve Baseline Erectile Function at 1 Month Compared to SHAM in a Heterogeneous Group of Men with Erectile Dysfunction

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Introduction and Objective: Restorative therapies such as Low-intensity Shockwave Lithotripsy (LiSWT) for erectile dysfunction (ED) have generated substantial interest. Despite growing popularity, a paucity of data exists to confirm efficacy in reversing underlying pathophysiologies of ED. We evaluated the efficacy of the Storz® Duolith™ to determine whether active versus sham treatment is superior for treatment of ED.

Methods: We performed a two-arm stratified, single-blinded, randomized controlled clinical trial. Inclusion/exclusion criteria are listed in table 1. A total of 31 patients were enrolled, with 15 randomized to the sham group and 16 to the treatment group. Patients underwent LiSWT with the Duolith™ device delivered twice weekly for 3 weeks, comprising 3000 shockwaves at $0.1 \, mJ/mm^2$ delivered to the distal penis, base of penis, and crura. Outcomes included absolute change in IIEF/SHIM score and change in EHS score. Changes in SHIM scores were compared between the treatment arms using Student's t-test, while changes in EHS scores were compared using Wilcoxon rank-sum test.

Results: Demographic and baseline clinical characteristics were similar between arms. At one-month post-treatment, SHIM scores improved by 3.4 points in the LiSWT arm while no improvement was seen in the sham arm (-3.4 vs. 0.7, $p = 0.014$). This corresponded to a 42.1% improvement in the LiSWT arm and a 0.1% decline in the sham arm. No significant differences were observed in EHS change scores between treatment arms. No adverse outcomes were reported.

Conclusions: The present interim analysis shows improvement in SHIM scores in men undergoing LiSWT for ED. Additional recruitment and follow-up is in ongoing to further demonstrate efficacy and sustainability of LiSWT in the treatment of ED.

Table 1. Inclusion/Exclusion Criteria

Inclusion Criteria	Exclusion Criteria
Baseline IIEF-EF score ≥ 8 and ≤ 21	History of extensive pelvic surgery
HgbA1C level ≤ 7.5%	6-month recovery from any non-prostate cancer treatment
Testosterone level > 300 ng/dL within 3 months of enrollment	Significant neurologic disease
	Known penile malformation

Resident Prize Essay Podium Session

RPE-03

Variable Cancer Detection Rates and Core Positivity in Targeted Biopsies of PIRAD4 and PIRAD5 Lesions Across Academic Medical Centers?

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Introduction and Objective: The optimal number of targeted cores for diagnosis of prostate cancer (CaP) on mpMRI fusion biopsy is not clearly defined. We investigate biopsy outcomes of PIRADS ≥ 4 lesions to determine the ideal number of targeted biopsy cores.

Methods: Records of 477 patients undergoing transrectal mpMRI targeted biopsy across 2 academic centers were reviewed. 388 patients had PIRAD ≥ 4 and were included in this study. The number of biopsy cores obtained from each lesion was at physician discretion. Practice patterns were compared reporting means of cores biopsies per site for each lesion, core positivity, and site cancer detection rates (CDR).

Results: 537 lesions including 321 PIRADS 4 and 216 PIRADS 5 were included. Among PIRADS 4 lesions, clinically significant cancer (CSC) (Grade Group ≥ 2) was detected in 107 (33.4%). For PIRADS 5 lesions, CSC was detected in 110 (50.9%). Figure 1 and 2 summarizes average number of cores and core positivity, respectively. CDR were significantly higher in Site 2 for PIRADS 4 (59.3% vs. 30.8% $p < 0.05$) and PIRADS 5 (74.3% vs. 39.6%, $p < 0.05$) lesions.

Conclusions: When performing MRI targeted biopsy for PIRADS ≥ 4 lesions, the number of cores obtained from each lesion, core positivity and CDR varied between different centers. These differences highlight a potential opportunity for standardization of protocols thereby improving the quality of prostate biopsy.
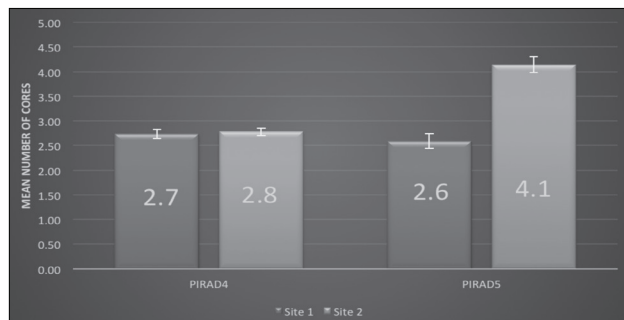

Figure 1. Average number of cores according to PIRAD lesions stratified by site (n = 573), (PIRAD 5; 2.8 vs. 4.1 $p < 0.001$*, PIRAD 4 (2.7 vs. 2.8) $p > 0.05$.
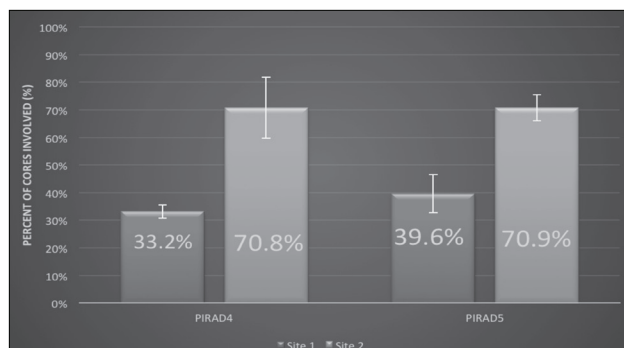

Figure 2. Clinically significant cancer (Grade Group ≥ 2) of PIRAD lesions stratified by site (n = 573), (PIRAD 4; 33.2% v. 70.8%, PIRAD 5; 39.6% vs. 70.9% $p < 0.001$*).

RPE-04

Pelvic Floor Dysfunction is a Common Cause of Chronic Orchialgia

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Introduction and Objective: Pelvic floor dysfunction (PFD) is an often-overlooked etiology of chronic orchialgia. The objective of this study is to determine the prevalence of PFD as an etiology for chronic orchialgia and compare the presenting symptoms of chronic orchialgia patients with and without PFD.

Methods: An IRB approved retrospective review was performed for patients diagnosed with chronic orchialgia from 2016-2021 using CPT codes N50.82 (scrotal pain), N50.819 (testicle pain) and G89.29 (chronic pain in testicle). Patients with acute orchialgia (< 3 months) were excluded. PFD was diagnosed on rectal exam with increased tone or pain to palpation of the levator ani muscle group. Etiology and accompanying urinary, bowel, or sexual symptoms were recorded. Unpaired t-tests were used to determine significant associations while accounting for difference in sample size.

Results: Of 130 patients with chronic orchialgia, the etiology was classified as idiopathic 37.7%, prior surgery 32.1%, varicocele or spermatocele 28.3%, PFD 17.6%, post-infection 11.3%, trauma 7.5%, neuropathic 3.7%, musculoskeletal 1.9%, and referred 0.9%. Patients with chronic orchialgia due to PFD (N = 24) were significantly more likely to present with accompanying urinary ($p < 0.01$), bowel ($p < 0.01$) and sexual dysfunction symptoms ($p = 0.02$). Orchialgia patients with PFD reported 2.5 urinary symptoms on average as opposed to 0.9 by orchialgia patients due to other causes. Orchialgia patients with PFD also report symptoms indicative of functional obstruction most commonly (hesitancy 73%, constipation 85%, and painful ejaculation 69%) as opposed to orchialgia due to other etiologies (urgency 43%, constipation 71%, erectile dysfunction 64%).

Conclusions: PFD was determined to be the etiology in 1 in 6 chronic orchialgia patients. All patients presenting with chronic orchialgia and obstructive symptoms warrant a rectal exam as part of their initial evaluation.

	Chronic orchialgia due to other etiologies (N) (N = 106)	Chronic orchialgia due to confirmed PFD (N) (N = 24)	P-value (p < 0.05)
Average Age (yrs)	44.4	36.7	
Total duration (mths)	54.4	37.8	
Ultrasound performed	64% (68)	79% (19)	
Pain score[1]	High: 43% (46) Low: 57% (60)	High: 58% (14) Low: 42% (10)	
Radiation of pain	35% (37)	58% (14)	**0.04**
Presence of urinary symptoms	35% (37)	79% (19)	**< 0.01**
Average number of urinary symptoms	0.90	2.50	**< 0.01**
Most common urinary symptoms	Urgency: 43% (16) Frequency: 41% (15)	Hesitancy: 74% (14) Weak Stream: 42% (8)	
Presence of bowel symptoms	7% (7)	54% (13)	**< 0.01**
Average number of bowel symptoms	0.07	0.75	**< 0.01**
Most common bowel symptoms	Constipation: 71% (5)	Constipation: 85% (11)	
Presence of sexual dysfunction	42% (44)	67% (16)	**0.02**
Average number of sexual complaints	0.50	0.96	**< 0.01**
Most common sexual complaints	Erectile dysfunction: 64% (28)	Painful ejaculation: 69% (11)	

[1]Subjective pain score was determined by a numerical self-reported pain score from 1-10, in which >5 was defined as high.

RPE-05

Role of Anterior Prostate Sampling Using a Novel Philadelphia Hybrid Anatomic Transperineal (PHAT) Template: A Single Center Experience
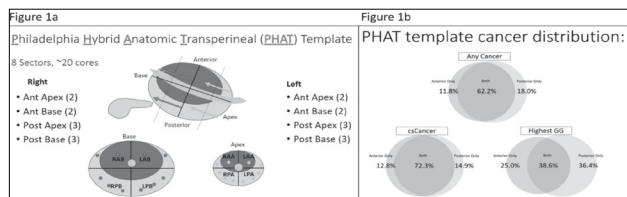
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Introduction and Objective: The use of transperineal prostate biopsies has become more widespread due to lower rate of post-biopsy infections and better anterior gland sampling. Despite increasing popularity no standard biopsy template exists. Here we propose a simplified office-based transperineal biopsy template and describe cancer detection rates with attention to the added value of routine anterior gland sampling.

Methods: A retrospective chart review of patients that underwent PHAT template transperineal biopsy (Figure 1a) was performed. Clinicopathologic data along with relevant multiparametric MRI (mpMRI) and immediate post-procedural data were abstracted. In patients on active surveillance with multiple biopsies only the initial biopsy was used. Clinically significant cancer (csCa) was defined as ≥ GG2.

Results: 178 unique patients comprised the cohort of interest, with 148 (83%) performed in the office under local analgesia. Mean age was 63.9 years and 65.2% were African American. Mean PSA was 9.2 ng/ml and abnormal DRE was noted in 5.6%, with 25.8% undergoing the biopsy as part of active surveillance protocol. Morbidity of this template remained low, without any episodes of sepsis. Overall, cancer detection rate (CDR) was 140/178 (79%), while csCa was present in 94/178 (52.8%), Figure 1b. Cancer in anterior cores only was observed in 21 (11.8%) men, with 57.1% being csCa. mpMRI was available for 13/21 (61.9%) patients with anterior-only prostate cancer, of which 8/13 (61.6%) had no anterior lesions detected on MRI.

Conclusions: The PHAT prostate biopsy template provides a high CDR and allows for comprehensive anterior gland sampling with minimal morbidity and can be performed in the office. Importance of routine anterior gland sampling is underscored, as 2/3 of anterior-only cancers would be missed if mpMRI was used to triage anterior gland targeting.

Figure 1a: Philadelphia Hybrid Anatomic Transperineal (PHAT) Template
Figure 1b: PHAT template cancer distribution

RPE-07

Facebook Group Use among Patients with Pelvic Organ Prolapse

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Introduction and Objective: Pelvic Organ Prolapse (POP) is a highly prevalent condition but is not always openly discussed by patients due to social stigma. Reports have shown that high proportions of patients are turning to social media to share their health experience, learn more about their conditions, and seek reviews on treatment options. Our objective was to review Facebook groups pertaining to POP and to characterize the most common themes to inform our understanding of the patient experience.

Methods: We searched "pelvic organ prolapse" among Facebook groups and identified the largest five groups. We collected the most recent 200 posts in each group, and each post was analyzed by two reviewers. Using the qualitative approach of modified grounded theory, recurring content was identified. If posts mentioned more than one theme, they were recorded for each theme separately.

Results: One thousand posts were analyzed from five Facebook groups containing approximately 42,000 members. The primary focus of the groups was seeking support (29.7% of posts) and providing support (14.5%). Common themes included questions or comments about surgery for POP (21.6%), exercise (15%), equipment such as pessaries (11.6%), pelvic floor physical therapy (11%), pregnancy or post-partum (8.4%), sexual activity (4.5%), and constipation (3.7%). There were very few posts mentioning mesh (0.7%).

Conclusions: There is a significant number of patients with POP seeking and offering support online. Despite the recent suspension of surgical mesh for vaginal repair of POP, there were very few posts concerning mesh. Many patients asked about pregnancy after a POP diagnosis and their ability to have intercourse. Overall, reviewing common themes in public forums where patients seek and offer support may help to identify weak spots in patient counseling that can be focused on in the office, and to identify gaps in patient understanding and expectations.

RPE-06

Impact of SPY Fluorescence Angiography on Incidence of Ureteroenteric Stricture after Urinary Diversion: Early Experience and Analysis

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Introduction and Objective: Ureteroenteric strictures (UES) are a common and morbid complication of radical cystectomy and urinary diversions. UES occurs in 4-25% of all patients undergoing urinary diversion and anastomotic ischemia is implicated in the formation of stricture. SPY fluorescence angiography is a technology that can be employed during open surgery that allows for evaluation of ureteral perfusion.

Methods: We are conducting a prospective single-institution study of intraoperative use of SPY for ureteral assessment with a primary outcome of ureteroenteric stricture incidence compared with a cohort of historic controls prior to the use of SPY during urinary diversion at our institution. Chart abstraction was conducted to determine the presence of confirmed stricture in these patients, defined as endoscopic diagnosis or definitive imaging findings. Statistical analysis was performed in SAS using chi squared test, t-test, and Wilcoxon Rank-Sum Test.

Results: 323 patients underwent urinary diversion during the study period. UES occurred in 31 of 291 patients (10.6%) in the control group compared with 1 of 32 patients (3.1%) enrolled in the SPY arm to date (p = 0.11). The per ureter UES rate was 5.3% (31/582) in the control group compared with 1.5% (1/63) in the SPY group. Median follow-up in the SPY group is 9.3 months and 40.7 months in the control group. There were no significant demographic differences between the study groups.

Conclusions: SPY fluorescent angiography can be used during open urinary diversion to ensure perfusion to ureteroenteric anastomosis. Research is ongoing to assess its role in urinary diversion and the prevention of UES; while our preliminary analysis does not demonstrate a statistically significant reduction in stricture rate with those patients enrolled to date, these results are promising and merit continued analysis with larger sample sizes to power conclusions.

Moderated Poster Session 1: Stones/Endourology/ BPH and Reconstruction

MP1-01

Percutaneous Nephrolithotomy Access: A Meta-Analysis Comparing Access by Urologist vs. Radiologist

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Introduction and Objective: Percutaneous nephrolithotomy is a minimally invasive procedure indicated for the management of staghorn calculi or renal calculi larger than 2.0 cm. Percutaneous renal access is a critical step in this procedure and can be performed by either urologists or interventional radiologists. The purpose of this study is to perform a meta-analysis to compare outcomes between urologist and interventional radiologist mediated access.

Methods: An electronic literature search was conducted to identify studies comparing urologist and interventional radiologist acquired access. Studies must have included both urologist and intervention radiologist acquired access data, but were excluded if (1) not in English; (2) abstract without full text; (3) unable to determine who acquired access; (4) only included either urologist or interventional radiologist data. Meta-analysis comparison was generated with the Review Manager 5.4 software.

Results: After screening the abstracts and title, 55 relevant studies were identified. Nine articles were utilized in the meta-analysis. Urologist acquired access was associated with a greater stone free rate (RR = 1.10; 95% CI, 1.01, 1.20), a reduction in major complications (RR = 0.69, 95% CI, 0.53, 0.92), and a shorter hospital stay (mean difference -0.40, 95% CI, -0.64, -0.16) in comparison to radiologist acquired access. Urologist acquired access was associated with greater mean difference blood loss (RR = 0.46; 95% CI, 0.32, 0.60) when compared to interventional radiology acquired access. No significant differences were found with regards to unusable access, multiple tracts, supracostal access, ancillary procedure requirement, operative time, minor complications, and transfusions.

Conclusions: Urologist acquired access may be associated with a higher stone free rate and a reduction in major complications, whereas interventional radiologist mediated access may be associated with a reduction in blood loss, despite similar transfusion rates.

Outcome	Risk Ratio (95% CI)	P-value
Unusable access	0.44 (0.11, 1.80)	0.26
Stone free rate	1.10 (1.01, 1.20)	0.04
Transfusion rate	0.71 (0.43, 1.19)	0.20
Multiple tracts	7.61 (0.13, 430.8)	0.32
Major complications	0.69 (0.53, 0.92)	0.01
Minor complications	0.75 (0.45, 1.24)	0.26
Ancillary procedure requirement	1.09 (0.40, 2.99)	0.86
Supracostal tracts	1.48 (0.81, 27.0)	0.20
Table 1. Risk ratios of count variables comparing urology group to IR group		

MP1-02

Mixing it Up: Are Patients With Mixed Urine Cultures at Higher Risk of Postoperative Sepsis After Ureteroscopy?

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Introduction and Objective: Ureteroscopy with laser lithotripsy is the standard of treatment for ureteral calculi. Life-threatening urosepsis is a complication of this procedure. The significance of colonization in an asymptomatic patient is unknown. Our objective is to determine if preoperative urine cultures with mixed flora on microbiology report will have a higher rate of postoperative sepsis compared to patients with negative cultures for uncomplicated elective ureteroscopy with laser lithotripsy.

Methods: Retrospective multi-institutional chart review was performed on 306 patients with procedure code of elective ureteroscopy with lithotripsy from April 2018 until December 2020. Patients were excluded if mixed urine cultures were treated with antibiotic therapy, inpatient setting, percutaneous nephrostomy, or nephroureterostomy tubes. Mixed cultures were defined as >10,000 CFU and positive cultures were defined as >100,000 CFU.

Results: Overall sepsis rates were 3% with negative culture, 10.9% with mixed culture, and 19.2% with positive culture. There was a significant difference in carbonate apatite between mixed culture and negative culture groups (p = 0.02) and positive culture and negative culture groups (p = 0.01). Plus, a stent duration of 38.4 days in the sepsis group and 16.6 days in the non-sepsis group (p < 0.002). There were differences in the carbonate apatite group with mean composition of 37.7% in the sepsis group versus 14.2% in the non-sepsis group (p = 0.003).

Conclusions: It is 3.6 times more likely that postoperative sepsis patients had mixed cultures compared to negative cultures. Stone composition was 2.7 times more likely to be carbonate apatite in the sepsis group. Longer indwelling stent time was associated with increased risk of sepsis.

Urine Cultures Significance on Parameters						
Parameter	Negative Culture	Mixed Culture	Positive Culture	Negative vs. Mixed (P-value)	Mixed vs. Positive (P-value)	Positive vs. Negative (P-value)
Septic	7	5	5			
Non Septic	227	41	21			
Sepsis Rate (%)	3%	10.9%	19.2%	0.03	0.48	0.003
Mean Stent Time In (Days)	14.5±18.7	30.627±40.8	27.12±25.7	0.02	0.68	0.0093
Stone Weight (Grams)	0.121±0.206	0.181±0.388	0.114±0.076	0.24	0.357	0.0393
Stone Size (cm)	0.81±0.63	0.83±0.33	1.04±0.43	0.133	0.0387	0.0013
%Oxalate Monohydrate	48.57±34.5	39.2±35.5	49.35±32	0.098	0.298	0.9496
%Oxalate Dihydrate	23.5±24.45	22.11±27.16	18.7±15.17	0.5657	0.821	0.8066
%Uric Acid	7.68±23.04	7.66±22.7	7.27±23.54	0.913	0.678	0.5667
%Carbonate Apatite	12.41±23.86	25.11±36.7	28±33.03	0.017	0.61	0.0103

Alternative Hypotheses (Sepsis Rates) followed: Negative<Mixed, Mixed≠Positive, Positive≠Negative. Fisher Exact Test Used.
Alternative Hypotheses (Stent,Weight,Size,Monohydrate,Dihydrate,Uric,Carbonate) followed: Mixed≠Negative , Mixed≠Positive, Positive≠Negative. Wilcoxon Rank Sum/Mann Whitney U Used.

Table 1: Negative vs. Mixed vs. Positive Urine Culture

Parameter's Significance of Post Op Sepsis			
Parameter	Septic (Mean±SD)	Non Septic (Mean±SD)	P-value
Stent Time In (Days)	38.44±43.4	16.63±22.45	0.0024
Stone Weight (Grams)	0.18±0.18	0.127±0.24	0.4040
Stone Size (cm)	1.01±0.34	0.82±0.59	0.23
%Oxalate Monohydrate	48.33±36.81	47.11±34.47	0.8939
%Oxalate Dihydrate	12.66±10.5	23.465±24.68	0.1018
%Uric Acid	0±0	8.069±23.5	0.9946
%Carbonate Apatite	37.66±44.72	14.16±25.74	0.0029

All p-values were computed by testing if each parameter contributes to post op sepsis. A logistic fit was used.

Table 2: Sepsis vs. Non-Sepsis

MP1-03

US Healthcare Claims Analysis Suggests Lower Rates of Continued and De Novo BPH Medication Use After PUL Compared to TURP and PVP

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Introduction and Objective: Rates of medical therapy usage prior to and after treatment with surgical and minimally invasive BPH therapies are largely unknown. This analysis of US healthcare claims presents rates of pre-operative, post-operative, and continued BPH medical therapy after TURP, photo-vaporization of the prostate (PVP), and Prostatic Urethral Lift (PUL).

Methods: 40,267 patients who underwent outpatient TURP, PVP, or PUL for BPH were identified within a representative sample of Medicare and commercial claims from 2015-2020. Rate and duration of BPH medication usage (i.e. a-blocker, 5-ARI, combination, PDE5-inhibitor, beta-3-agonist, anti-cholinergic) was calculated. Odds ratios demonstrate likelihood of continued and de novo medication use after each surgical treatment relative to PUL.

Results: Of the surgery patients who had records of BPH medical therapy prior to their index procedure, a larger proportion of patients ceased taking medication after PUL (66%) vs. TURP (60%) and PVP (58%). Fewer PUL patients (13%) began taking de novo medication after their procedure vs. TURP and PVP (19% and 20%, respectively). Alpha-blockers were the most utilized medication prior to surgery and continued after. Odds ratios estimated 58% and 39% increased likelihood of continuing medication after PVP and TURP compared to PUL, and 65% and 51% increased likelihood of de novo medication usage after PVP and TURP vs. PUL.

Conclusions: Unavoidable data inaccuracies notwithstanding, these results suggest that following procedures with the greatest expectation for symptomatic improvement (TURP/PVP), more patients continue or start medications compared to PUL, a procedure associated with lesser expectations of improvement. Whether this is due to an underperformance of TURP and PVP or an overperformance against expectations for PUL requires more investigation.

	PVP	TURP	PUL
Total patients that underwent procedure	11,158	22,021	7,088
- With medical records for BPH medication	3,162 (28.3%)	5,803 (26.4%)	1,497 (21.1%)
Prior Med Usage: n of prior usage (% of patients with med records)	2,533 (80.1%)	4730 (81.5%)	1,301 (86.9%)
	n (% prior med(s) users)	n (% prior med(s) users)	n (% prior med(s) users)
5-ARI	749 (29.6%)	1,306 (27.6%)	328 (25.2%)
α-blocker	2,230 (88.0%)	4,111 (86.9%)	1,115 (85.7%)
Combination	64 (2.5%)	100 (2.1%)	32 (2.5%)
Anti-cholinergic	389 (15.4%)	787 (16.6%)	221 (17.0%)
Beta-3-agonist	360 (14.2%)	572 (12.1%)	225 (19.6%)
PDE5-inhibitor	361 (14.3%)	653 (13.8%)	293 (22.5%)
- Stopped Upon Procedure: n of stopped usage (% of prior med users)	1,467 (57.9%)	2,860 (60.5%)	858 (65.9%)
Avg duration to procedure (first med record to procedure)	*68d*	*70d*	*127d*
- Continued After Surgery: n of continued usage (% of prior med users)	1,066 (42.1%)	1,870 (39.5%)	443 (34.1%)
Avg duration post-procedure (procedure to final med record)	*260d*	*200d*	*222d*
	n (% continued med(s) users)	n (% continued med(s) users)	n (% continued med(s) users)
5-ARI	309 (29.0%)	504 (27.0%)	99 (22.3%)
α-blocker	790 (74.1%)	1,414 (75.6%)	306 (69.1%)
Combination	17 (1.6%)	27 (1.4%)	10 (2.3%)
Anti-cholinergic	246 (23.1%)	491 (26.3%)	122 (27.5%)
Beta-3-agonist	267 (25.0%)	395 (21.1%)	159 (35.9%)
PDE5-inhibitor	206 (19.3%)	346 (18.5%)	129 (29.1%)
Odds Ratio for Continued Usage (vs. PUL)	1.58	1.39	--
De Novo Med Usage: n of de novo usage (% of patients with med records)	629 (19.9%)	1,073 (18.5%)	196 (13.1%)
Avg time from procedure to first med record	*123d*	*94d*	*150d*
Avg duration of de novo usage	*51d*	*36d*	*30d*
	n (% de novo med(s) users)	n (% de novo med(s) users)	n (% de novo med(s) users)
5-ARI	110 (17.5%)	204 (19.0%)	23 (11.7%)
α-blocker	302 (48.0%)	501 (46.7%)	76 (38.8%)
Combination	3 (0.5%)	4 (0.4%)	0 (0.0%)
Anti-cholinergic	297 (47.2%)	674 (62.8%)	136 (69.4%)
Beta-3-agonist	348 (55.3%)	485 (45.2%)	139 (70.9%)
PDE5-inhibitor	160 (25.4%)	253 (23.6%)	58 (29.6%)
Odds Ratio (vs. PUL)	1.89	1.63	--

MP1-04

Evaluation of Reports Made to the FDA MAUDE Database for BPH Therapeutic Device Assessments Demonstrates the Importance of Data Context and Quality

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Introduction and Objective: The FDA's Manufacturer and User Facility Device Experience (MAUDE) database has been utilized to examine rates and severities of BPH treatment device adverse events. Per the FDA, MAUDE reports may be "incomplete, inaccurate…or biased," and should not be used in isolation to evaluate devices. This review contextualizes BPH therapeutic medical device reports (MDRs) with total procedures performed, while assessing the quality of the dataset.

Methods: MAUDE was queried for "UroLift", "Rezum", "GreenLight" and "transurethral resection" key words between January 1, 2019 and December 31, 2020; duplicate/irrelevant reports were excluded. An independent physician arbitrator assigned severity scores using the externally validated Gupta (intraoperative events) and Clavien-Dindo (CD) scales (post-operative events). Entry completeness was assessed using a novel scale based on intervention-reliant CD assignment (0=intervention not specified, 1=incomplete intervention information, 2=complete intervention information). Finally, an independent market model utilizing Medicare data and CPT codes estimated total number of procedures performed in the US in 2019-2020.

Results: The number of MDRs relative to total procedures were: UroLift (n = 106; 130,132), Rezum (n = 185; 21,056), GreenLight (n = 1,535; 75,862), and TURP (n = 223; 248,147); GreenLight and TURP results were discordant with established adverse event rates and were excluded. Most events occurred in the post-operative period and were more severe than intra-operative events. 33% of Rezum events resulted in procedure cancellation. A considerable portion of MDR narratives were incomplete (UroLift 46.2%, Rezum 44.3%); of the UroLift and Rezum post-operative events graded CD 3 and higher, 57% and 61.5% were incomplete, respectively. 100% of the mortality event narratives were incomplete.

Conclusions: MAUDE should be utilized with caution considering this analysis found average entry incompleteness was 45.3%. Per-case event rates should be contextualized using real-world procedure rates.

MAUDE database MDRs		UroLift PUL	Rezum
2019 reports n (procedure n, %)		44 (66,655, 0.07%)	105 (10,638, 1%)
2020 reports n (procedure n, %)		62 (63,477, 0.1%)	80 (10,418, 0.8%)
	Total	106 (130,132, 0.08%)	185 (21,056, 0.9%)
Procedure Cancelled, n		0	61
Intra-op Severity (Gupta), n	1	26	16
	2	5	46
	3	0	0
	4	0	0
Post-op Severity (Clavien-Dindo), n	1	4	56
	2	15	38
	3	31	16
	4	8	8
	5	10	2

Moderated Poster Session 1: Stones/Endourology/ BPH and Reconstruction

MP1-05

The New Gold Standard for Surgical Management of BPH: A Single-Institution Review of 1000 HoLEPs Performed
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Introduction and Objective: HoLEP is a size-independent, endoscopic surgical managements for BPH. HoLEP offers a distinct advantage for patients who are in the high-risk category for bleeding whilst preserving prostatic tissue for pathology analysis unlike photoselective vaporization. With intravesical morcellation, HoLEP avoids the need for cystotomy compared to simple open and robotic prostatectomy. We report on the first 1000 documented HoLEP procedures at our institution almost exclusively performed by a single surgeon.

Methods: We performed a retrospective review of all HoLEP procedures performed at our institution from 2013-2021 to capture patient demographics, procedure details, and outcomes.

Results: 1000 HoLEP procedures were performed. The average patient age and BMI were 71.1 years (± 8.1 years) and 27.9 kg/m² (± 4.9 kg/m²) respectively. 69.4% of patients were on an alpha blocker and 33.3% of patients were on a 5-alpha reductase inhibitor prior to surgery. 11.2% of cases were redo outlet procedures including Urolift®. The average prostate volume was 108.0 mL (± 66.5 mL). Average enucleation time was 119.7 minutes (± 56 min). The average weight of resected prostate tissue was 65 grams (± 53.2 g). Pre-operative and post-operative flow, post-void residual (PVR), AUA symptom score (AUA-SS), and quality of life (QoL) score are included in Table 1. Regarding complications, the rate of blood transfusion was 2.8%, urethral stricture was 4.3%, and persistent SUI was 1.3%.

Conclusions: HoLEP is emerging as the new surgical gold standard for BPH. The challenge of the steep learning curve still exists. However, with increasing number of high-volume centers of excellence and residency programs that offer training in HoLEP, there are more urologists in the community who are adequately trained to perform the procedure.

Table 1. Pre-operative and post-operative outcomes

	Pre-Op	Post-OP
Peak Flow (mL/sec)	9.8 (± 18.3)	22.8 (± 16.8)
Mean Flow	3.6 (± 2.6)	6.4 (± 5.4)
PVR (mL)	240.0 (± 250.8)	61.7 (± 96.2)
AUA-SS	18.8 (± 8.2)	7.3 (± 6.5)
QoL Score	3.5 (± 1.5)	1.4 (± 1.6)

MP1-07

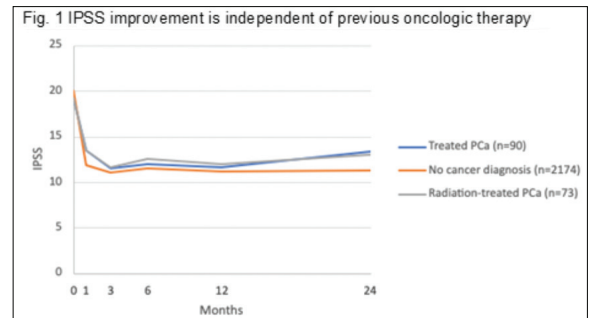**Real-world Patients with Prostate Cancer Experience Durable Symptom Relief with the Prostatic Urethral Lift (PUL)**
G. Eure[1], M. Rochester[2], P. Chin[3], N. Barber[4]
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Introduction and Objective: Patients treated for prostate cancer are at increased risk of post-operative complications, increasing the appeal of minimally invasive surgical techniques. This analysis examines outcomes in patients with a diagnosis of prostate cancer who are treated with PUL procedure using the UroLift System.

Methods: 3226 patients treated with PUL after market clearance were included in the Real-World Retrospective (RWR) database were included in analysis after stratification according to diagnosis: prostate cancer (n = 138), treated prostate cancer (n = 90), and prostate cancer treated with radiation (n = 74). Cohorts were compared to those without a cancer diagnosis (n = 2174) through 36 months post-PUL.

Results: The time between prostate cancer diagnosis and PUL procedure was 5.2 years. Cancer patients were older than non-cancer patients, with significantly higher PSA levels at baseline. All analyzed cohorts demonstrated similar improvements in IPSS, QoL, Qmax, and PVR through 24 months following PUL procedure. Post-procedural catheter-free rates were similar between non-cancer, treated cancer, and cancer patients treated with radiation. Incontinence rates within 1 year of treatment were 7.8% in the treated cancer group and 2.6% in the non-cancer group, with 2 of 3 patients experiencing ongoing urge incontinence at last contact and the remaining 4 resolving after an average of 64 days. Rates of UTI, stricture, and hematuria were equivalent between groups, with most adverse events occurring within 3 months of the procedure.

Conclusions: PUL provides durable improvement in BPH-associated LUTS for real-world patients with a history of prostate cancer.

Fig. 1 IPSS improvement is independent of previous oncologic therapy

MP1-06

Prostatic Urethral Lift (PUL) Demonstrates Consistent Results in Obstructive Median Lobes Across Controlled Trial and Real-world Settings
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Introduction and Objective: The safety and efficacy of prostatic urethral lift (PUL) have been established in randomized and controlled clinical trials (RTC and CCTs). This serves as the first detailed comparison of PUL in treating RCT, CCT, and real-world patients with obstructive median lobes (OML).

Methods: Outcomes were compared through 12 months post-procedure among controlled PUL studies: 36 men randomized to TURP in the BPH6 RCT, 66 subjects with lateral lobe obstruction randomized to sham in the L.I.F.T. pivotal RCT, and 45 men with OML in MedLift, the FDA-approved IDE extension of the L.I.F.T. trial. Results were compared between MedLift and 187 OML patients from the large RWR study filtered to approximate the MedLift population.

Results: IPSS improvement for MedLift subjects was 170% greater than sham at 3 months post-procedure; Qmax, QoL, and BPHII also improved significantly in MedLift compared to sham. MedLift IPSS and QoL improved significantly compared to TURP at 1- and 3 months; PUL demonstrated superior ejaculatory function scores at all post-procedure timepoints. Outcomes were equivalent between MedLift and RWR OML groups in terms of IPSS, Qmax, QoL, and PVR at 3-, 6-, and 12 months post-procedure; overall adverse event rates were not elevated in RWR OML patients.

Conclusions: Controlled trial and real-world outcomes confirm PUL is a safe and effective treatment for BPH in patients with or without obstructive median lobes.

Figure 1. IPSS improvement for MedLift patients post-PUL is significantly better compared to sham and TURP at 1 and 3 months.

MP1-08

Development of Squamous Cell Carcinoma after Buccal Mucosa Graft Urethroplasty: A Review

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Introduction and Objective: Patients with urethral strictures often undergo formal reconstruction with urethroplasty. Strictures longer than 2 cm are regularly augmented with oral mucosal tissue from the buccal cavity (buccal mucosal graft, BMG). A rare but potentially devastating complication is transformation of the BMG to squamous cell carcinoma (SCC). We aimed to perform a review of the literature and report an additional case.

Methods: A systematic PubMed search was performed to identify articles describing patients with SCC after urethroplasty with BMG from years 1992 to 2021. The final cohort included four patients: three from the literature and one additional case from our institution. We collected information on patient demographics, presentation, work up, and treatment.

Results: All three patients from the literature underwent a BMG urethroplasty for stricture disease. The results are displayed in Table 1. Average age at SCC diagnosis was 47 (44-51) years. Two patients had disease that rapidly metastasized. Our 70-year-old patient presented with hematuria 20 months post-operatively. He underwent cystourethroscopy, which revealed inflammation and edema at the urethroplasty site. He was found to have invasive moderately-differentiated keratinizing SCC and has localized metastatic disease. Currently, he is undergoing chemotherapy and radiation.

Conclusions: BMG transformation to SCC is a rarely encountered process. Given the established connection between HPV and SCC, it may be prudent to refer patients to otolaryngology for oropharyngeal assessment after diagnosis of SCC. Patients and urologists must have a high index of suspicion and investigate related symptoms, even if these occur long after BMG. By compiling previously reported cases and adding an additional case to the literature, we hope that familiarity with this entity will lead to earlier recognition and diagnosis.

Study author	Year	Number of patients	Gender	Age of patient	Location of graft	Indication for BMG	Presentation of cancer	Imaging for detection of cancer	Pathology	Metastasis	Intervention	Outcome
Domino et al.	2016	1	M	43	Distal bulbar urethra	2 cm urethral stricture	16 months post-op-persistent microscopic hematuria	Cystourethroscopy PET/CT	pT1Ns, SCC of urethra w/ verrucous features and focal subepithelial invasion w/ extensive SCC in-situ.	No	1) Partial urethrectomy 2) One-stage urethral reconstruction	Alive
Massimo et al.	2021	2	M	46	Bulbar urethra	Post-infectious HPV-related urethral stricture after two failed internal urethrotomies	3 years post-op HPV-related squamous papilloma of tongue + genital condyloma. 5 years post-op-urethral discharge w/ dysuria, bulbar module, inguinal adenopathy	Cystourethroscopy	Poorly diff. SCC pT2N2	Yes	1) Chemotherapy w/ paclitaxel, cisplatin, ifosfimide 2) Obturator-iliac laparoscopic lymphadenectomy 3) Chemotherapy w/ docetaxel and cetuximab	Deceased
			M	45	Bulbar urethra	Post-traumatic urethral stricture after unsuccessful 1 urethrotomy kit	6 months post-op-hematuria, inguinal adenopathy, and hard, nodular mass of posterior urethra	Cystourethroscopy	Poorly diff. SCC diffusely infiltrating the corpora cavernosa	Yes	Excision of perineal, bulbar and penile urethra w/ suprapubic cystostomy	Deceased

Table 1 – Characteristics of Previously Reported Cases of SCC from BMG

MP1-09

Delayed Iatrogenic Ureteral Injury Identification and Repair: A Retrospective Case Series of 34 Cases

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Introduction and Objective: The location and delicate blood supply of the ureters puts them at risk of iatrogenic injury during gynecologic and abdominal surgery. We aimed to characterize the clinical presentation and management outcomes of ureteral injuries with postoperative recognition.

Methods: Retrospective review of iatrogenic ureteral injuries (UI) with delayed recognition managed within two healthcare systems in a major metropolitan area. Preoperative risk factors, clinical presentation, and outcome data were evaluated.

Results: 34 patients were identified from 2010-2020. Commonalities included prior surgical history (62.5%), pelvic masses (73.3%), adhesions (43.3%), BMI > 30 (50%), and laparoscopic index surgery (73%). Only 41% of cases had intraoperative cystoscopy. The most common presenting symptoms were urinary leakage (50%) and/or UTI-like symptoms (24%). Median time to presentation of delayed injury was 12.5 days [1-76] postoperatively. 7 patients were managed conservatively with stents or PCN. The remaining 27 patients received stent (25.9%), PCN (40.7%), or both (11.1%) prior to definitive surgical repair. The majority (77.8%) were repaired robotically. 16/34(477%) patients experienced Clavien-Dindo grade 2 or higher complications following surgical repair including 2 cases of sepsis requiring ICU management and 1 case of vesicovaginal fistula. 11/34(32%) patients reported continued urinary symptoms including incontinence, urgency, and leakage after definitive repair.

Conclusions: Iatrogenic UI may be identified earlier with regular cystoscopy. Urinary symptoms, such as incontinence after abdominopelvic surgery, should increase suspicion for iatrogenic ureteral injury. These patients require extensive management and follow-up before and after definitive surgical repair. Surgery exposes patients to life-threatening complications leading to greater healthcare utilization, and many patients have residual urinary issues requiring protracted follow-up.

Index Surgery		Injury Presentation		Temporizing Measures		Definitive Repair	
BMI:		**Date of Presentation POD (days):**		**Date of Measure POD (days):**		**Managed Conservatively Without Surgery:**	7/34 (21%)
<30	17/34 (50%)	Range	1-76	Range	0-85	**Surgical Repair:**	27/34 (79%)
>30	17/34 (50%)	Median	12.5	Median	18	Open	2/27 (7%)
Approach:		**Symptoms at Presentation:**		**Patients Receiving Temporizing Measures**	33/34 (97%)	Laparoscopic	4/27 (15%)
Open	4/34 (12%)	Leaking/Incontinence	17/34 (50%)	**Types of Temporizing Measures:**		Robotic	21/27 (78%)
Laparoscopic	24/34 (71%)	UTI-like Symptoms	8/34 (24%)	Stent	18/34 (53%)	**Duration of Follow-Up (months):**	
Robotic	4/34 (12%)	Pyelonephritis	2/34 (6%)	PCN	16/34 (47%)	Range	1-44
Vaginal	2/34 (6%)	Abdominal/flank pain	7/34 (21%)	Foley/Bladder Decompression	7/34 (21%)	Median	6
Prior Surgical History:	20/32 (59%)	**Urinoma on Imaging:**	12/34 (38%)	PCNU	1/34 (3%)	**Adverse Events after Repair Procedure (Clavien-Dindo):**	
Adhesions Identified Intraop:	13/30 (38%)	**Diagnostics Used:**		Multiple Measures	11/34 (32%)	0	12/34 (35%)
Pelvic Mass Identified:	22/30 (73%)	Cystoscopy	27/34 (79%)			1	6/34 (18%)
Intraoperative Cystoscopy:	14/32 (44%)	Retrograde Pyelogram	21/34 (62%)			2	8/34 (24%)
		CT	21/34 (62%)			3	6/34 (18%)
		Injury Location:				4	2/34 (6%)
		Distal Ureter	24/34 (71%)				
		Pelvic Ureter	3/34 (9%)				
		Unknown	7/34 (20%)			**Post-Operative Urinary Issues:**	11/34 (32%)

Table 1: Summary of Index Surgery, Injury Presentation, Temporizing Measures, and Repair. Abbreviations: POD (postoperative day), UTI (urinary tract infection), CT (computerized tomography), PCN (percutaneous nephrostomy), PCNU (percutaneous nephroureteral tubes)

MP1-10

Investigating the Lithogenic Potential of Energy Drinks

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Introduction and Objective: Energy drinks, which are rich in caffeine, have exploded in popularity in the United States and are being marketed to and consumed by younger age groups. Although the caffeine in these drinks may play a protective role with respect to lithogenesis, energy drinks are composed of chemicals and artificial products which may contain metabolites that affect lithogenesis. The purpose of this study is to analyze the content of energy drinks to assess potential impact on lithogenesis.

Methods: We selected eight of the most common energy drinks (Bang, Celsius, Monster, Rockstar, Red Bull, NOS, Reign, ZOA) using an internet search in February 2022. Sodium, calcium, potassium and caffeine were extracted from the nutrition label. A pH meter was used to determine the pH values. High-performance liquid chromatography was utilized to determine concentrations of oxalate, uric acid, and citric acid.

Results: The eight analyzed energy drinks had minimal amounts of sodium, calcium, and potassium. The caffeine content per serving ranged from 75.4-300 mg. Energy drinks were quite acidic, with pH ranging from 2.73-3.48. Uric acid was minimally existent in energy drinks. Monster and Red Bull contained the highest concentrations of citric acid, 9532 and 9519 ug/mL, levels comparable to orange juice. Many beverages had high oxalate content, with NOS the greatest at 205 ug/mL.

Conclusions: While energy drinks are known to have high concentrations of caffeine, our analysis demonstrates they are acidic, with some having considerable amounts of citric acid and oxalate. The true impact on lithogenesis requires additional studies, however these beverages may play a role in the ever increasing prevalence of nephrolithiasis.

Energy Drink	Serving size	pH	Citric acid (ug/mL)	Potassium (mg, %)	Sodium (mg, %)	Calcium (mg, %)	Oxalate (ug/mL)	Magnesium (mg, %)	Caffeine (mg)	Uric Acid (ug/mL)
Redbull	260 ml (8.4 fl oz)	3.41	9519	7.8, 0%	101, 4%	15.6, 2%	12.8	49.4, 12%	75.4	BQL
Monster	257 ml (8.3 fl oz)	3.48	9532	5.14, 0%	198, 8%	0, 2%	48.4	0, 0%	84.8	BQL
Rockstar	248 ml (8 fl oz)	2.73	6699	14.9, 0%	39.7, 2%	2.48, 0%	68.2	0, 0%	81.8	BQL
Celsius	355 ml (12 fl oz)	3.01	4037	0, 0%	0, 0%	50, 5%	20.5	N/A	200	BQL
NOS	240 ml (8 fl oz)	3.36	8376	0, 0%	200, 9%	0, 0%	205	0, 0%	80	BQL
Bang	474 ml (16 oz)	2.85	5431	85, 2%	40, 2%	N/A	No peak	8, 2%	300	No peak
Reign	240 ml (8 fl oz)	3.46	6803	35, 1%	100, 4%	N/A	No peak	N/A	150	BQL
ZOA	473 ml (16 oz)	3.38	6528	80, 2%	200, 9%	N/A	39.7	10, 2%	160	BQL

Table 1. Nutritional contents of energy drinks pertaining to lithogenesis
N/A—not available on nutrition label
No peak—no signal detected above baseline of the assay
BQL (below quantification limit)—presence of compound was detected but was less than the lower limit of quantification

MP1-11

24-Hour Urine Parameters in Kidney Stone Patients with Obesity

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Introduction and Objective: Patients with obesity are known to be at higher risk for kidney stone disease, however it is unknown whether this risk is independent of metabolic syndrome. The purpose of the current study was to investigate abnormalities on 24-hour urine collections in patients with obesity.

Methods: 24-hour urine collections from a single tertiary care center were retrospectively reviewed from May 2014 to May 2021. Univariate analysis was performed using Chi-square test and unpaired T-test for categorical and continuous variables, respectively. A multivariable logistic regression was performed controlling for age, race, gender, and diabetes. Obese patients were characterized as those with body mass index (BMI) $\geq$ 30.

Results: 404 patients met inclusion criteria, of which 194 (48%) were not obese and 210 (52%) were obese (BMI $\geq$ 30). There were no differences in baseline characteristics between groups including age, race, and gender. On univariate analysis, patients who were obese had lower urinary pH (5.94 vs. 6.10, p = 0.025), increased urinary calcium (207 vs. 180, p = 0.031) and sodium (185 vs. 151, p < 0.001) relative to patients who were not obese. When controlling for age, gender, race, and diabetes mellitus (DM), patients with obesity had persistently elevated urinary sodium (p = 0.001) relative to those without DM.

Conclusions: After adjusting for confounding factors, obese patients without DM were found to have elevated urinary sodium compared to non-obese patients. When counseling obese patients on stone prevention strategies, education on reducing dietary sodium may help reduce future risk of stone formation.

24-hour Urine Parameter	Obese Patients	Non-Obese Patients	p-value
pH	5.94	6.10	0.02
volume (L)	1.8	1.8	0.94
calcium (mg/24 hours)	207	180	0.03
potassium (mmol/24 hours)	59	57	0.46
sodium (mmol/24 hours)	184	151	0.0001
oxalate (mg/24 hours)	38	35	0.02
citrate (mg/24 hours)	577	525	0.11
uric acid (mg/24 hours)	7.4	12.4	0.60
sulfate (mEq/24 hours)	38	34	0.06
supersaturation calcium oxalate	6.9	6.6	0.30
supersaturation calcium phosphate	1.2	1.2	0.72
supersaturation uric acid	1.2	1.7	0.45

Table 1. 24-hour urine parameters in obese vs non-obese patients

MP1-12

Incidence of Reintervention for Benign Prostate Hyperplasia Within One Year Following First Prostatic Urethral Lift (UroLift)
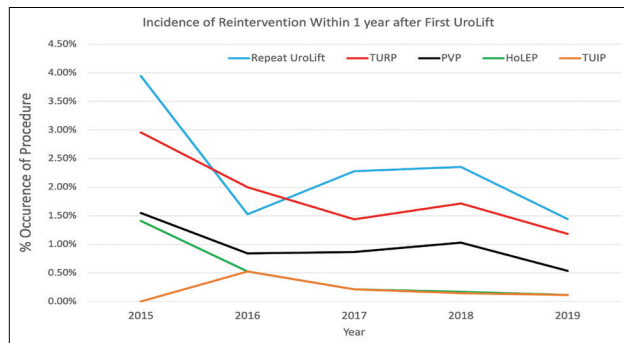
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Introduction and Objective: Prostatic urethral lift, or UroLift, has gained in popularity as a treatment for lower urinary tract symptoms (LUTS) associated with benign prostate hyperplasia (BPH). Reintervention rates following the first UroLift procedure are a reliable indicator for the durability of treatment effect. The objective of this study is to utilize TriNetX, a third-party database, to investigate incidence of re-procedures within one year following first UroLift procedures for BPH from 2015 to 2019.

Methods: Male patients aged 18-100 who were diagnosed with BPH were filtered within the TriNetX database. Yearly cohorts undergoing their first UroLift procedure were searched using Current Procedural Terminology (CPT) and International Classification of Diseases 10 (ICD-10) codes. The cohorts were then queried for subsequent BPH-related procedures within one year. These procedures include repeat UroLift, Transurethral Resection of the Prostate (TURP), Photoselective Vaporization of the Prostate (PVP), Holmium Laser Enucleation of the Prostate (HoLEP), and Transurethral Incision of the Prostate (TUIP).

Results: The mean age of first-time UroLift users was 70 ± 9 years (n = 25,329). Total reintervention rate within one year after the first UroLift was 4.33%. However, the rate of re-procedure following the first UroLift dropped 6.25% from 2015-2019. The most common interventions were repeated UroLifts (1.83%), followed by TURP (1.41%), PVP (0.74%), HoLEP (0.12%), and TUIP (0.07%).

Conclusions: UroLift demonstrated minimal reintervention rates within one year of first treatment from 2015 to 2019. The favorable side effect profile, low re-procedure rate, and comparative effectiveness to other treatments could make UroLift a popular procedure choice for patients with BPH going forward.

Incidence of Reintervention Within 1 year after First UroLift

MP1-14

Real World Results of Prostatic Urethral Lift for Men with Lower Urinary Tract Symptoms at an Academic Medical Center

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Introduction and Objective: Lower urinary tract symptoms (LUTS) associated with benign prostatic hyperplasia are common causes of decreased quality of life (QoL) among aging men. The Prostatic Urethral Lift (PUL) is an effective, non-invasive option for the treatment for LUTS refractory to medication and lifestyle modifications. The objective of this study was to analyze real-world outcomes of men who underwent PUL at an academic medical center.

Methods: A retrospective review of men who underwent PUL from March 2019 to June 2021 was completed. Patient demographics, uroflowmetry, post void residual (PVR), and International Prostate Symptom scores (IPSS) before and after the procedure were recorded. Analysis was performed using paired t-test. Complete data were available in 62 patients.

Results: The average age was 64.9 years (SD = 12.0). The average prostate volume was 33.6 mL (range 11.5-87.3). The average number of implants placed was 4.4 (range 2-7). Following PUL, patients experienced significantly decreased IPSS from 19.7 to 11.6 (p-value < 0.0001), an average improvement of 41%. QoL improved from 4.1 to 2.5 (p-value < 0.0001), representing a 39% improvement. PVR decreased from an average of 132 mL to 74 mL (p-value = 0.0014). There was a mild increase in maximum flow rate from 10.1 to 10.9 mL/s (p-value = 0.09). The average time to first follow up appointment where patients completed a uroflow and IPSS was 4.3 months, and this was used for comparisons.

Conclusions: These data represent real-world, short-term results of PUL from an academic medical center with residents participating in the procedure and patients treated under general anesthesia without medication washout. In this setting, PUL led to improvements in IPSS, QoL, and PVR although not as robust as the original LIFT study.

Table 1. Demographics, procedure details, and results

	Mean (SD), median [interquartile range]
Age (years)	64.9 (12.0), 63.5 [59, 72]
BMI	30.2 (6.8), 28.0 [24.8, 33.6]
Prostate Volume (mL)	33.59 (16.7), 29.7 [22, 44.4]
IPSS	19.7 (6.8), 20.5 [16, 25]
QoL	4.1 (1.3), 4.0 [3, 5]
Maximum flow rate (mL/s)	10.1 (6.1), 9.5 [5.9, 13.7]
PVR (mL)	131.7 (179.2), 56.0 [9, 156]
At follow up:	
IPSS	11.6 (7.0), 11.5 [6, 16]
IPSS change	-8.1 (7.0), p-value < 0.0001
QoL	2.5 (1.6), 2 [1, 3]
QoL change	-1.6 (1.5), p-value < 0.0001
Maximum flow rate (mL/s)	10.9 (6.5), 8.9 [6.3, 14.1]
Maximum flow rate change	1.3 (6.6), p-value = 0.09
PVR (mL)	74.2 (105.2), 40.5 [10.5, 97.5]
PVR change	-58 (157), p-value = 0.0014
BMI = Body Mass Index, IPSS = International Prostate Symptom Score, QoL = quality of life survey, PVR = post void residual volume	

MP1-13

Vulnerability to Financial Toxicity Following Stone Surgery

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Introduction and Objective: There is growing recognition of the financial burdens patients face in healthcare, termed financial toxicity. The mechanisms that lead to financial toxicity include not only the costs of a procedure, but also the insurance coverage, socioeconomic status, and financial literacy of the patient. We sought to describe our institution's surgical stone population to assess their vulnerability of experiencing financial toxicity following their procedure.

Methods: All patients at our institution undergoing ureteroscopy or percutaneous nephrolithotomy were eligible. Prior to surgery, we administered a modified version of the Commonwealth Biennial Health Insurance questionnaire to participants, which measures health insurance coverage, affordability, and financial impact of medical bills. Percentages, median, and interquartile range described the data.

Results: A total of 32 participants completed a questionnaire between 1/21/2022-4/4/2022. The median age was 52 (IQR 44,58) with 67% male (22/32) and 75% white (24/32). The majority were employed (69%; 22/32). Median household income had a bi-peaked distribution, with one peak in the $45,000-$60,000 bracket (7/32) and the second in the $140,000+ bracket (10/32).

While all participants were insured, a third (11/32) did not know their deductible amount. A total of 28% (9/32) participants were currently paying off other medical bills, 16% (5/32) had used up all their savings, and 16% (5/32) had been unable to pay for basic necessities like food, heat, or rent.

Conclusions: There is a subgroup of surgical stone patients at risk of experiencing financial toxicity post-operatively. All participants were insured, yet a high portion did not know their deductible amount, suggesting that having insurance does not necessarily coincide with good financial literacy or the ability to prepare for future medical costs. This is most pronounced for the portion already experiencing financial strain in the form of unpaid medical bills, lack of savings, or an inability to pay for basic costs of living.

Moderated Poster Session 1: Stones/Endourology/ BPH and Reconstruction

MP1-15

Stone Location and the Degree of Hydronephrosis: Their Role in Postoperative Sepsis After Ureteroscopy with Laser Lithotripsy

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Introduction and Objective: Ureteroscopy with laser lithotripsy is a commonly performed procedure for stone disease of the ureter and kidney, and postoperative sepsis occurs in 2% of all cases. We sought to determine the impact of stone location and degree of hydronephrosis on postoperative sepsis rates in patients who underwent ureteroscopy. Locations analyzed included intrarenal, ureteropelvic junction (UPJ), proximal, mid-ureteral, distal, and ureterovesical junction (UVJ).

Methods: Patients who underwent elective ureteroscopy with lithotripsy from 2018-2021 at four hospitals were retrospectively reviewed. A total of 306 charts were collected, 255 met selection criteria. Stone location, degree of hydronephrosis, and postoperative sepsis rates were recorded. A one-sided two sample Z-test and Chi-square test were performed to assess the association with post operative sepsis.

Results: Of the 255 cases, 18 (7.06%) developed postoperative sepsis. There was a statistically significant difference in postoperative sepsis rates and location of stones (p = 0.037). Patients with intrarenal stones predicted higher risks of postoperative sepsis than distal (21.4% vs. 16.1%, p = 0.05). The other stone locations did not have a significance with post operative sepsis (table).

Conclusions: Intrarenal stones were associated with an increase in postoperative sepsis rates when compared to the total data. There were no differences in post operative sepsis with any other stone location.

Table: Stone location and post operative sepsis rates

	No sepsis	Sepsis	Total	p value
Distal	58(95.08%)	3(4.92%)	61	0.55
Intrarenal	**11(78.57%)**	**3(21.43%)**	**14**	**0.05**
Mid	26(83.87%)	5(16.13%)	31	0.079
Proximal	72(92.31%)	6(7.69%)	78	0.85
UPJ	51(98.08%)	1(1.92%)	52	0.16
UVJ	19(100%)	0(0%)	19	n/a
Total	237	18	255	

Chi Square Test: Tests any association between two categorical variables. Likelihood ratio used because cell count violated

MP1-16

Surgeon Visualization of in-situ Kidney Stones as a Predictor of Stone Composition

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Introduction and Objective: Kidney stone composition plays an important role in the medical management of patients who are recurrent kidney stone formers. This information is normally obtained via microscopic analysis, but this is a costly examination and is becoming less common as improved laser technology allows for complete annihilation of the stone, leaving no specimen left to send. This study evaluates an alternative method of stone composition prediction. The objective of this study is to determine whether a urologist has the ability to correctly identify kidney stone composition based on its endoscopic appearance.

Methods: Data was collected from all ureteroscopy (URS) and percutaneous nephrolithotomy (PCNL) procedures that also had microscopic stone analysis between November 2021 and March 2022. The primary outcome was the accuracy of the surgeon's intraoperative prediction of the dominant (> 50%) stone composition based on stone color, its fragmentation, its size, and its smell. The secondary outcome was correlation of predictive accuracy and the surgeon's level of training (junior resident, senior resident, attending physician).

Results: 44 patients underwent URS or PCNL with accompanying microscopic stone analysis. A total of 65 intraoperative predictions were recorded from attending physicians and residents during those surgeries. Attending physicians were successful in predicting the dominant stone composition 61% of the time, senior residents (PGY4/5) 58% of the time, and junior residents (PGY2/3) 38% of the time. The most commonly misidentified stone composition was calcium phosphate, with successful identification 26% of the time for both attending physicians and residents.

Conclusions: Though a urologist's clinical gestalt on kidney stone composition appears to improve with experience, success rates seem to peak at about 60%. Calcium phosphate stones were the most misidentified, but they cannot be easily distinguished from other stones via other methods like imaging. As such, microscopic stone analysis still plays an important role in the management of kidney stones.

MP1-17

Incidence of Nephrolithiasis During the COVID-19 Pandemic
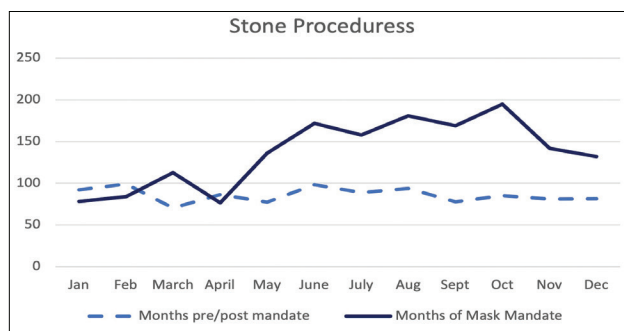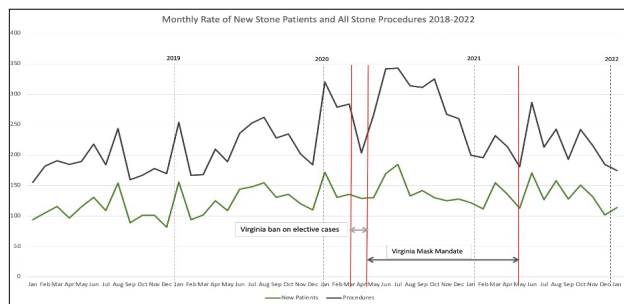C. Robey[1], K. McCammon[1,2], K. Cobb[1,2]
[1]Eastern Virginia Medical School, Norfolk, VA, USA; [2]Uroloy of Virginia, Virginia Beach, VA, USA

Introduction and Objective: Nephrolithiasis is a common medical condition with an annual incidence of roughly 0.9% in the United States. We anecdotally noticed an increase in stone cases and stone procedures. We therefore sought to analyze the monthly rate of new stone patients and stone procedures during the pandemic as well as during the Virginia mask mandate compared to corresponding months pre-pandemic and post-mandate.

Methods: We examined monthly rate of new stone patients to our practice from January 2018 to January 2022. We further examined all stone procedures during the same time. We also performed a sub-analysis of stone patients and procedures during months of Virginia mask mandate compared to months pre-COVID and post-mask mandate.

Results: During January 2018 to January 2022, we saw a total of 6,272 new stone patients and performed 4,900 stone procedures. Comparing pre-COVID and COVID rates we found a statistically significant increase in monthly new stone patients (p=0.006), stone procedures (p = 0.011). This significance persisted when adjusted for mask mandate with a significance of p=0.016 for new patients and p = 0.0008 for stone procedures.

Conclusions: We saw a total of 6,272 new stone patients and performed 4,900 stone procedures. Comparing pre-COVID and COVID rates we found a statistically significant increase in monthly new stone patients (p = 0.006), stone procedures (p = 0.011). This persisted when adjusted for mask mandate with a significance of p = 0.016 for new patients and p = 0.0008 for stone procedures.

MP1-18

Risk Factors for Nephrolithiasis in 24-Hour Urine Studies of Patients with Nonalcoholic Fatty Liver Disease (NAFLD)
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Introduction and Objective: Nonalcoholic fatty liver disease (NAFLD) has been suggested to be an independent risk factor for renal stone disease by several studies. We aimed to identify abnormalities on 24-hour urine collections in this patient population.

Methods: 24-hour urine collections from a single tertiary care center were retrospectively reviewed from May 2014 to May 2021. Univariate analysis was performed using Chi-square test and unpaired T-test for categorical and continuous variables, respectively. A multivariable logistic regression was performed controlling for age, body mass index (BMI), diabetes mellitus (DM).

Results: 98 (24%) of 406 patients who met inclusion criteria were identified to have radiographic hepatic steatosis. There were no differences in baseline characteristics between groups including age, race, and gender. On univariate analysis, patients with NAFLD had decreased urinary pH (5.88 vs. 6.06, p = 0.02), elevated urinary oxalate (40 vs. 36, p = 0.04), calcium (219 vs. 186, p = 0.02) and sodium (185 vs. 163, p = 0.02) relative to those who did not have fatty infiltration of the liver on imaging. After controlling for DM and obesity as defined as BMI≥30, no 24-hour urine abnormalities were identified.

Conclusions: After adjusting for confounding factors, patients with hepatic steatosis did not have identifiable abnormalities in their 24-hour urine studies. Increased risk of nephrolithiasis in patients with NAFLD is likely related to contributors of metabolic syndrome such as diabetes and obesity.

24-hour Urine Parameter	NAFLD patients	non-NAFLD patients	p-value
pH	5.88	6.06	0.02
volume (L)	1.9	1.8	0.45
calcium (mg/24 hours)	219	186	0.02
potassium (mmol/24 hours)	60	58	0.49
sodium (mmol/24 hours)	185	163	0.02
oxalate (mg/24 hours)	40	36	0.04
citrate (mg/24 hours)	571	546	0.52
uric acid (mg/24 hours)	14	8	0.59
sulfate (mEq/24 hours)	39	35	0.1
supersaturation calcium oxalate	7.0	6.7	0.44
supersaturation calcium phosphate	1.0	1.2	0.12
supersaturation uric acid	1.2	1.5	0.72

Table 1. 24-hour urine parameters in NAFLD vs non-NAFLD disease

Moderated Poster Session 2: Reconstruction/FPMRS

MP2-01

Characterization and Outcomes of Iatrogenic Urinary Catheterization Injuries

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Introduction and Objective: Iatrogenic injury during urinary catheter placement is a common reason for inpatient urologic consultation and has been associated with increased morbidity and resource utilization. Literature defining the patient population, interventions, or outcomes associated with traumatic urinary catheterization (UC) is scarce. This study presents a single-hospital experience of iatrogenic UC injuries with focus on patient characteristics and complications following catheter placement.

Methods: We performed a retrospective review of prospectively collected data related to 300 consults for adult urethral catheter placement at a single tertiary care center between July 2017 and December 2019. Traumatic UC was defined as catheterization attempts by the primary team with one of these conditions: gross hematuria, blood at the meatus, or cystoscopic evidence of urethral trauma. Characteristics collected included urologic history, catheterization circumstances, procedural intervention, and subsequent visits.

Results: One hundred six total injuries were identified. Mean patient age was 67.2 years and 98% were men. Sixty-one (57.5%) patients had a Charlson Comorbidity Index ≥ 5. Seventy-seven (72.6%) patients had notable urologic history, including BPH, TURP, prostate cancer, and chronic catheterization. Fifty (47.2%), 20 (18.9%), and 25 (23.5%) patients experienced gross hematuria, urethral balloon inflation, and false passage formation respectively. Table 1 shows interventions after injury. Twelve (11.3%) patients developed CAUTI within 30 days of UC and 3 (2.8%) developed urosepsis. Complications required an additional 19 ICU admission days and 114 outpatient urology visits.

Conclusions: Traumatic UC is an event that is associated with increased need for procedural intervention, risk of CAUTI, and additional resource utilization. Further studies on risk factors, complications, and costs are needed along with related efforts to develop systems and care teams that facilitate urethral catheter placement while minimizing injury and cost.

Intervention Required	N (%)
Cystoscopy	35 (33.0)
Urethral Dilation	14 (13.2)
Continuous Bladder Irrigation	7 (6.6)
Packed Red Blood Cells	4 (3.7)
Suprapubic Tube Placement	2 (1.9)
Cystoscopy with clot evacuation	2 (1.9)

MP2-02

Characterizing Pelvic Organ Descent in Women after Radical Cystectomy: An Exploratory Analysis

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Introduction and Objective: The effect of radical cystectomy (RC) on female pelvic floor support remains poorly understood; recent reports suggest 20% of women experience vaginal complications within 2 years. We aim to characterize the prevalence of pelvic organ descent beyond the pubococcygeal line (PCL) in women who have undergone RC.

Methods: We retrospectively reviewed charts of women who underwent RC at our institution from 2017-2021. We recorded the presence of severe pelvic organ prolapse (POP) preoperatively, postoperatively, and throughout surveillance as determined by intestinal descent below the PCL on supine, sagittal images obtained without Valsalva/strain. Imaging review protocol was developed in collaboration with an expert GU radiologist. We also recorded relevant covariates, including age, race/ethnicity, BMI, prior vaginal deliveries, prolapse, hysterectomy, constipation/chronic cough and AUA-SI.

Results: We identified 43 women with ≥ 1 preoperative and postoperative scan who underwent RC at our institution. Median age at surgery was 71 years (IQR: 65-77), median BMI was 25 (23-29), and median follow-up time was 795 days. The majority (81%) underwent ileal conduit and non-organ sparing RC (79%). The median preoperative pelvic organ proximity to the PCL was 2 mm (IQR: -4-6). Median organ descent from preoperative imaging was 9 mm (IQR: 4-17). On scans with maximum organ descent, 93% of patients had increased organ descent from baseline, and 42% of patients had descent > 1 cm. Median time to maximum descent was 232 days (IQR: 104-482). On multivariable analysis, age (p < 0.001, OR: 1.01) and orthotopic neobladder (p = 0.003, OR: 1.32) were predictive of postoperative descent beyond PCL.

Conclusions: In our population, 93% of women demonstrate increased pelvic organ descent after RC. Descent of pelvic floor support is likely associated with vaginal complications and pelvic symptoms post-RC. Prospective studies including quality of life measures will provide important information to better understand the effect of RC on female pelvic floor support.

MP2-03

The Reliability of Urologists' Interpretation of Retrograde Urethrograms

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Introduction and Objective: The reliability of pre-operative imaging is crucial for adequate surgical planning. According to the AUA guidelines, the diagnosis of urethral stricture disease requires either cystoscopy, ultrasound, or retrograde urethrogram (RUG). The radiographic interpretation of RUGs are often done by urologists themselves. We aimed to evaluate the reliability of RUG interpretation by urologists at our institution.

Methods: We examined the RUGs of 223 patients at our institution. These were identified and interpreted by three urologists, two general urologists and one reconstructive urologist. We used Two-way ANOVA without replication to calculate the intraclass correlation coefficient (ICC) to rate variability and among RUG reads with regards to stricture location, length, and caliber. ICC values less than 0.5, between 0.5 and 0.75, between 0.75 and 0.9, and greater than 0.90 are indicative of poor, moderate, good, and excellent reliability, respectively.

Results: Of the 223 available RUGs, 192 were available for review. All images were reviewed by each of the three urologists. The ICC values for stricture location, length, and caliber were as follows: 0.19, 0.49, 0.15. The ICC value for recommended procedure was 0.02.

Conclusions: The calculated ICC values for stricture location, length, and caliber varied greatly among the urologists who read these images with an ICC value indicating poor reliability among readers. This result may also suggest that some patients may not be provided the best option for management of their stricture, and a need for standardized imaging education or implementation of artificial intelligence.

MP2-04

Characteristics and Outcomes of Urology Consultations for Urethral Catheter Placement
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Introduction and Objective: Complicated urethral catheter placement is a common reasons for urologic consultation. There is limited published data to understand the incidence, characteristics, and outcomes of urethral catheter placements in the setting of urologic consultation. The present study represents a quality initiative to characterize these factors in a tertiary care setting.

Methods: We performed a retrospective review of prospectively collected data related to 300 consults on adult patients for urethral catheter placement at a single tertiary care center between July 2017 and December 2019. Clinical and patient characteristics were collected including catheter attempts prior to consultation, associated trauma and complications, need for additional resources and interventions, and subsequent follow-up.

Results: The median patient age was 67.4 years with 89% men. The most common indication for catheter placement was acute urinary retention (52.3%) followed by difficult placement in the peri-operative setting (33.3%). Catheter placement by the urology team was required in 275 (91%) consults. The remaining consultations were related to complications following catheter placement (e.g. hematuria). Of 300 consults, 232 (77%) had an attempted catheter placement prior to urologic consultation, with an average of 1.4 [range 1-7] catheters attempted. A minority of consults required more advanced urological intervention and/or resulted in adverse outcomes following successful catheter placement as described in table 1.

Conclusions: Urologic consults related to urethral catheterization are common and often associated with significant related morbidity and continued utilization of the healthcare resources. Further studies are needed to evaluate predictors and outcomes of traumatic urethral catheter placement and related cost. Such data will allow for the development of care systems that can decrease related cost and minimize complications in the setting of urethral catheter placement.

Table 1. Outcomes of foley-related urology consults, n=300	
Outcome	**N (%)**
Hematuria	63 (21)
Urinary tract infection	16 (5)
Continuous bladder irrigation	15 (5)
Cystoscopic guidance	82 (27)
Suprapubic tube placement	3 (1)
Operative intervention	3 (1)
Discharged with catheter	181 (60)
Subsequent ED or PCP visits	21 (7)

MP2-06

Characterizing the Challenges of Transgender Individuals Seeking Urological Care: An Opportunity to Educate Providers
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Introduction and Objective: Providers will encounter transgender individuals in their practice, and it is important that they understand the unique challenges they face. We sought to characterize the challenges transfeminine individuals face in seeking urological care through a developed questionnaire.

Methods: IRB approval was obtained to develop (with transgender community feedback) and administer a 58-item questionnaire assessing urinary and sexual health. Participants were recruited from the local community and the Philadelphia Trans Wellness Conference. We assessed the urologic care experiences of participants while comparing vaginoplasty (VP) and non-vaginoplasty (NVP) respondents.

Results: 53 transfeminine individuals (11 vaginoplasty, 10 orchiectomy, 32 no procedure) with mean age of 40 years (range 21-80) participated. 6 (54%) VP respondents experienced complications as depicted in Table 1. During the prior year, 5 (45%) VP respondents sought medical care for genitourinary symptoms compared to 12 (27%) NVP respondents (P=0.04). In this group, 3 (27%) VP respondents saw a urologist compared to 4 (9.5%) NVP patients. Of participants not seeing a urologist, 10 (71%) cited discomfort at discussing genitourinary issues, while 3 (21%) feared misgendering. 30 (57%) respondents experienced a lack of knowledge of transgender needs from urology staff. 4 (33.3%) age-eligible respondents did not have prostate cancer screening, 2 (16.7%) of which were not offered screening.

Conclusions: VP versus NVP may have improved access or familiarity with the medical care system as they were more likely to see a medical provider for their symptoms. Participants indicated a reluctance to seek care because of discomfort and fear, and most reported inexperience from staff regarding transgender care. It is important for providers to be aware with these issues and communicate in a compassionate and affirming manner with their transgender patients.

Age	Race	How recent was your surgery?	Complications following vaginoplasty/labiaplasty?	Corrective Surgery Performed?
31	White	<5 years ago	Inadequate vaginal depth, Numbness or lack of sensation, Chronic pain	No
32	Latino/Hispanic	<5 years ago	Wound separation, Numbness, or lack of sensation	Yes
45	White	10+ years ago	Wound separation, Inadequate vaginal depth, Meatal stenosis	Yes
64	White	10+ years ago	Numbness or lack of Sensation	Yes
45	Black/African American	<5 years ago	Wound separation	Yes
80	White	10+ years ago	Abnormal scar tissue in and/or around the vagina, Rectovaginal fistula, Inadequate vaginal depth	Yes

MP2-05

Is Cystoscopy Necessary Prior to Male Sling Placement for Post Prostatectomy Incontinence?
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Introduction and Objective: The American Urological Association Guidelines recommend that men with post prostatectomy incontinence (PPI) undergo cystourethroscopy prior to undergoing surgical management to rule out urethral pathology that may affect the outcome of the procedure and to assess urethral function to ensure voluntary contraction. However, there is limited data on whether these findings affect the success of PPI procedures and whether patients who undergo pre-operative cystourethroscopy have better outcomes compared to those who do not. This review investigates if the absence of pre-operative cystourethroscopy affects or precludes intraoperative sling placement.

Methods: In this retrospective review, patients with post prostatectomy incontinence who underwent male sling placement between January 2013 and January 2022 were investigated. Open, laparoscopic, and robotic approaches to prostatectomy were included.

Results: Seventy-one patients with PPI incontinence underwent male sling placement between January 2013 and January 2022. Thirty-one patients (44%) did not undergo pre-operative cystourethroscopy. Intraoperatively, to ensure proper sling positioning, all 31 men underwent flexible cystourethroscopy and therefore urethral and bladder evaluation. In 4 patients (13%), a bladder neck contracture was present: 2 of the patients had prior radiation and one patient had a bladder neck contracture (BNC) that required dilation. Despite findings of BNC, all patients were considered appropriate candidates to proceeded with sling placement. Only one patient with a BNC at the time of sling placement required an additional incontinence procedure (bulking agent) postoperatively.

Conclusions: Pre-operative cystourethroscopy may not be necessary in the evaluation of men with uncomplicated, mild post prostatectomy incontinence who wish to undergo male sling placement. Forgoing pre-operative cystourethroscopy will not only spare patients discomfort but will also lessen their medical financial burden.

Moderated Poster Session 2: Reconstruction/FPMRS

MP2-07

The Role of Interposing Rectus and Gracilis Muscle Flaps in Bladder Neck Closure in the Exstrophy-Epispadias Complex
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Introduction and Objective: The exstrophy-epispadias complex (EEC) is a spectrum of ventral wall malformations including classic bladder exstrophy (CBE) and cloacal exstrophy (CE). Patients undergo multiple soft-tissues procedures to achieve urinary continence. If unsuccessful bladder neck closure (BNC) is performed, muscle flaps may be used to reinforce BNC or afterwards for fistula reconstruction. In this study patients reconstructed using a rectus abdominis muscle flap (RAMF) or gracilis muscle flap (GMF) were reviewed.

Methods: EEC patients who underwent BNC were reviewed for indication for muscle flap use and surgical technique. Risks for BNC failure including mucosal violations (MVs) before BNC were reviewed. MVs were prior bladder mucosa manipulation for exstrophy closure, repeat closure(s) and bladder neck reconstruction. Success was defined as BNC without fistula development.

Results: Thirty-four patients underwent reconstruction. Indications included; during BNC (n = 13), fistula closure after BNC (n = 17), following BNC during open cystolithotomy (OC, n = 1) or fistula closure after OC (n = 3). A vesicourethral fistula developed most frequently in CBE (88.9%) and vesicoperineal fistula in CE (87.5%). Thirty-three RAMFs and 3 GMFs were used with success achieved in 97.1% and 66.7%, respectively. All 34 patients achieved success and 2 CE patients required a second flap.

Conclusions: The RAMF is preferred as its arc of rotation allows coverage of the antero-inferior bladder and pelvic floor to prevent urethral, cutaneous, and perineal fistula formation. The GMF only reaches the pelvic floor to prevent urethral and perineal fistula development. Increased MVs, increase the risk of fistula formation and may influence the need for prophylactic flaps.

MP2-09

Applying the Russell Principle to Restore Urethral Patency in Patients with Fournier's Gangrene. The Importance of Negative Pressure Wound V.A.C.® Therapy in Promoting Tissue Granulation
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Introduction and Objective: Fournier's gangrene (FG) is an infectious necrotizing fasciitis of the genital, perineal and perianal region. Urethral involvement is rare, and not well documented. The extent of urethral involvement, when present, is usually significant, making urethral repair a challenge. We share our results of restoring urethral patency in patients with FG by using a urethral catheter and wound V.A.C.® Our study relies on the urethra's tendency to retubularize under a natural process known as Russell's principle.

Methods: This is a retrospective case series from a single center of men who underwent urethral patency restoration relying on Russell's principle during management of FG between 2019 and 2021. Six patients with significant ventral strip bulbar urethral effacement were included in the study. The intervention included identifying the distal and proximal ends of the urethra followed by placing a transurethral Foley catheter. A wound V.A.C.® dressing was placed over the site. Patients underwent wound evaluation until adequate tissue granulation was noted, followed by split thickness skin graft reconstruction of the FG defect. Urethral patency was assessed by performing a voiding cystourethrogram/retrograde urethrogram and cystoscopy.

Results: Out of 6 patients, 2 patients had complete granulation and tubularization of the urethra by 3 months, although 1 required proximal bulbar urethral dilatation due to a pre-existing urethral stricture. The remaining 4 patients had near complete granulation, with non-restored areas converted to urethrocutaneous fistulas which were later excised and closed primarily. Urethral continuity was restored in all patients, and all were continent.

Conclusions: If a healthy dorsal urethral plate is present, urethral continuity and patency can be achieved based on Russell's principle aided by the negative pressure exerted by the wound V.A.C.® device. We believe the technique to be novel and worth sharing with the urologic community. A study comprised of a larger multi-institutional population could show this technique's true potential.

MP2-08

Post-Void Urethral Residual Volume and Lower Urinary Tract Symptoms Improve Up to One-Year Post-Phalloplasty with Urethral Lengthening: A Prospective Cohort Study
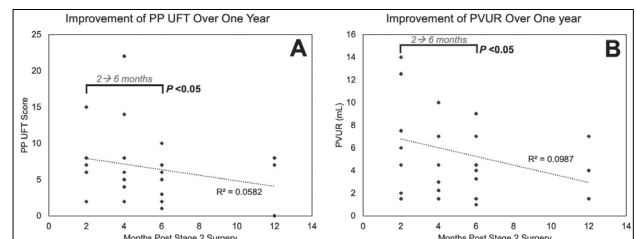M. Rabinowitz[1], J. Liu[1], L. Eisenbeis[1], S. Preston[2], A. Burnett[1], H. DiCarlo[1], D. O'Brien-Coon[3]
[1]Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]The University of Texas Southwestern Medical Center, Dallas, TX, USA; [3]The Brigham and Women's Hospital, Boston, MA, USA

Introduction and Objective: Gender-affirming surgery prevalence continues to rise; however, few have reported on functional outcomes after these surgeries. Our cross-sectional pilot study using our novel Post Phalloplasty Urinary Function Test (PP UFT) found many patients suffered from lower urinary tract symptoms (LUTS), predominantly post void dribbling, resulting in patient dissatisfaction. The objective of this study was to prospectively investigate the time course of urinary dysfunction using the PP UFT in transmen in the initial 12 months after urethral lengthening.

Methods: Prospective, single-institution cohort study of nine transmen who had undergone phalloplasty between 2019 and 2021. Patients were followed up to 12 months after their second stage of surgery (i.e., post urethral lengthening). Patients completed the PP UFT to assess for LUTS. Post-void urethral volume (PVUR) was recorded at each visit by quantifying residual urine after voiding.

Results: The average PP UFT score improved from 7.9 of 40 points at two months (IQR 6,8) to 4.6 points by six months (n = 9; P < .05; IQR 2,6) with a net improvement of 4 points by 12 months (n = 3) (Figure 1a). The average PVUR improved from 7.6mL at two months (IQR 4.5,12.5) to 4.4mL at six months (n = 9, P < .05; IQR 3.3,4.5) with a net improvement of 4.5mL by 12 months (n = 3) (Figure 2b). Three of nine patients who had post-void dribbling after surgery reported resolution by six months.

Conclusions: This interim report on a small cohort of phalloplasty patients demonstrates improvements in both self-reported and quantitative measures of urinary dysfunction up to one-year after urethral reconstruction. These metrics may offer more quantitative tools for evaluating surgical success. Study continuation with a larger sample and longer follow-up will be critical to validate our findings.

MP2-10

Risk Factors For Complicated Urethral Catheterization
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Introduction and Objective: Foley catheter placement occurs frequently in the inpatient setting and is associated with risk for injury and complications. While descriptive data exists about such risks, most focuses on urinary tract infection and few identify patient populations at highest risk for additional traumatic injuries. The aim of this analysis was to assess risk factors for complicated urethral catheter placement, with focus on patient characteristics.

Methods: We performed a retrospective review of prospectively collected data related to 300 inpatient adult consults to urology for urethral catheter placement at a single tertiary care center between July 2017 and December 2019. Consults that required suprapubic tube placement, dilation, cystoscopy, continuous irrigation, wire placement, or operative intervention were classified as complex. The remaining consults were classified as simple. Student's t-test and chi-squared analyses were used to assess for a relationship between complex catheter placement and patient characteristics.

Results: Of 300 total consults, 111 (37%) were classified as complex. Notably, 134 (44.7%) consults required only 1-2 placement attempts by urology without need for advanced technique. Patients requiring complex consults were more likely to be male (p = 0.002) and have a history of prostate cancer with or without treatment (p < 0.001), with other baseline characteristics in table 1. Complex consults were more likely to result in subsequent inpatient urology visits (p < 0.001), additional admission days (p = 0.002), and discharge with a catheter (p < 0.001).

Conclusions: The majority of urologic consultations for foley catheter placement are simple and may be avoided through increased education efforts. In addition, we identify several risk factors for complicated urethral catheter placement that may help to guide scenarios in which early urologic consultation may be helpful to optimize placement and minimize risk of related complications.

Variable, n (%)	Simple Consults (n=189)	Complex Consults (n=111)	p-value
Baseline Characteristics			
Gender female	14.8	3.6	0.002
Age ≥65 years	60.3	65.8	0.35
Charlson Comorbidity Index ≥5	47.1	56.8	0.11
Hx stricture	9.0	14.4	0.15
Hx BPH	36.0	36.0	0.99
Hx prostate cancer	6.3	21.6	<0.001
Outcomes			
Inpatient follow up visits req	0.333	0.532	<0.001
Hematuria	23.3	17.3	0.22
CAUTI inpatient	4.2%	7.2	0.41
Additional stay ICU or floor	1.1%	8.1%	0.002
Sent home w cath	52.4	73.9	<0.001

MP2-11

The Impact of Racial Disparities and Outcomes on Urinary Anastomotic Leak in Radical Prostatectomy
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Introduction and Objective: Racial disparities exist in prostate cancer incidence and mortality. Radical prostatectomy (RP), a common treatment for prostate cancer, has been associated with increased complications in African American (AA) men compared to other racial groups. Anastomotic urinary leak is associated with prolonged hospitalization rates, increased rates of ileus, and longer time to regain continence. This analysis aims to evaluate differences in urinary anastomotic leak rates between racial groups and potential predictive factors for this disparity.

Methods: The American College of Surgeons National Surgical Quality Improvement Program (ACS NSQIP) database (2019-2020) was utilized to compare rates of urinary anastomotic leak in AA vs. Whites. Preoperative factors examined included patient demographics, comorbid conditions, and surgical preparation. Perioperative and medical complications, postoperative diagnosis, and surgical complications were all postoperative variables assessed.

Results: A total of 11,010 RP patients were analyzed after selection criteria. AA men were more likely to be younger, a current smoker, on dialysis, have had prior pelvic radiotherapy, diabetes mellitus, dyspnea, and hypertension controlled with medications (Table 1). The odds of having a urinary anastomotic leak in AA men post RP were 63.2% higher than in Whites (Odds ratio = 1.632, 95% CI 1.14 - 2.33, p = 0.0072). Severe chronic obstructive pulmonary disease, bowel anastomotic leak, chemotherapy within 90 days, organ space surgical site infection, progressive renal insufficiency, and lymphocele/lymphatic leak were risk factors for urinary anastomotic leak in AA (Table 2).

Conclusions: There is a significant disparity in rate of urinary anastomotic leak in AA vs. Whites undergoing RP.

Table 1. Patient Demographics and Pre-Operative Conditions, Race Reported as Black or African American vs. White

	Total Cohort		Black or African American		White		P Value
Total No. (%)	11,010		1737	(15.8%)	9273	(84.2%)	
Pt Characteristics:							
Mean yrs. age (Range)	63.29	(25 – 89)	60.89	(25 – 82)	63.68	(39 – 89)	P < 0.01
BMI (Range)			29.84		29.20		
Current smoker (%)	1144	(10.4%)	318	(18.31%)	826	(8.90%)	P < 0.01
Pre-Op Non-Functional Health Status (%)	15	(0.1%)	7	(0.40%)	8	(0.008%)	
Bleeding Disorder (%)	110	(1.0%)	16	(0.92%)	94	(1.01%)	
Currently on Dialysis (%)	35	(0.3%)	16	(0.92%)	19	(0.20%)	P < 0.01
Prior pelvic surgery (%)	1880	(17.1%)	227	(13.07%)	1653	(17.83%)	
Chemotherapy Within 90 Days (%)	99	(0.9%)	13	(0.75%)	86	(0.93%)	
Prior Pelvic Radiotherapy (%)	78	(0.7%)	22	(1.27%)	56	(0.60%)	P < 0.01
Comorbid Conditions:							
Diabetes Mellitus (Treated with Insulin) (%)	354	(3.2%)	110	(6.33%)	244	(2.63%)	P < 0.01
Diabetes Mellitus (Treated with Oral Agents) (%)	1140	(10.4%)	288	(16.58%)	852	(9.19%)	P < 0.01
Congestive heart failure (%)	15	(0.1%)	4	(0.23%)	11	(0.12%)	
History of Severe COPD (%)	195	(1.8%)	40	(2.30%)	155	(1.67%)	
Dyspnea (At Rest or With Excursion) (%)	254	(2.3%)	53	(3.05%)	201	(2.17%)	P = 0.02
Hypertension Controlled w/ Medication (%)	5834	(53.0%)	1150	(66.21%)	4684	(50.51%)	P < 0.01
Steroid use for chronic condition (%)	219	(2.0%)	26	(1.50%)	193	(2.08%)	
Pre-Operative Considerations							
Pre-Op Bowel Prep (%)	2212	(23.5%)	292	(16.81%)	1920	(20.71%)	P < 0.01
Pre-Op Antibiotic (>3 days Pre-Op) (%)	393	(4.2%)	53	(3.05%)	340	(3.67%)	
Transferred from Healthcare Facility (%)	21	(0.2%)	12	(0.69%)	9	(0.009%)	P < 0.01
ASA Class 3 or Greater (%)	4878	(44.3%)	894	(51.46%)	3984	(42.96%)	P < 0.01

P Value represents tests for significant variation from chi-square analysis of categorical variables and T Test analysis for continuous factors.
COPD = Chronic Obstructive Pulmonary Disease, HTN = Hypertension, AKI = Acute Kidney Injury, DVT = Deep Vein Thrombosis

Table 2. Predictors of Urinary Anastomosis Leak in African American Patients post Radical Prostatectomy
Multivariable Logistic Regression Analysis: Urinary Anastomosis Leak vs. No Urinary Anastomosis Leak

Coefficients and Standard Errors:

INDEPENDENT VARIABLES	Coefficient	Std. Error	Odds Ratio	95% CI	P-Value
History of Severe COPD	1.42	0.670	4.14	1.11 to 15.40	P = 0.03
Bowel Anastomotic Leak	2.94	0.520	18.84	6.79 to 52.26	P < 0.01
Chemotherapy Within 90 Days	2.96	0.729	19.28	4.62 to 80.43	P < 0.01
Organ Space SSI	2.45	0.598	11.59	3.59 to 27.46	P < 0.01
Progressive Renal Insufficiency	2.10	1.051	8.13	1.04 to 63.82	P = 0.04
Lymphocele / Lymphatic Leak	1.55	0.633	4.71	1.36 to 16.29	P < 0.01

MP2-12

Analysis of Fournier's Gangrene Pre-pandemic and During COVID-19 in Hampton Roads Virginia.

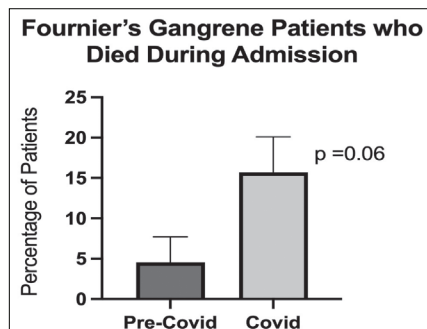T. King[1,2], K. McCammon[1,2]
[1]Eastern Virginia Medical School, Norfolk, VA, USA; [2]Urology Of Virginia, Virginia Beach, VA, USA

Introduction and Objective: Fournier's Gangrene is a urologic emergency that requires prompt surgical debridement of affected tissue, intravenous antibiotics, and resuscitative measures. Sars-Cov-2 and its associated syndrome COVID-19 caused a global pandemic that has resulted in millions of deaths worldwide. Lockdown orders, as well as concern of contracting the virus, may have prevented patients from presenting to the ER for management of emergent conditions.

Methods: We conducted a retrospective chart review of adult patients who were admitted for Fournier's Gangrene within a regional hospital system between March 15, 2018, and February 1, 2022. The data was used to determine the effects of the pandemic on Fournier's Gangrene presentation. Inclusion criteria include patients age 18+ with a diagnosis of Fournier's Gangrene who underwent at least one procedure during admission.

Results: 114 patients met the inclusion criteria. There were 44 patients between March 15, 2018, and March 15, 2020. During the remaining 2 years that cover the pandemic, there were 70 patients, which amounts to a 59.1% increase in number of cases. The mortality rate for pre-COVID patients was 4.5% compared to 15.7% for patients during the pandemic, however this was not determined to be statistically significant (p = 0.06). It did not appear that a COVID-19 infection directly affected the increased number of cases or mortality with only 10% of patients having a diagnosis during their admission, and only one mortality was noted in a patient with concurrent Fournier's Gangrene and COVID-19.

Conclusions: These results suggest that the pandemic may have resulted in delayed patient presentation. The delay may have led to an increased number Fournier's cases, and though not statistically significant, a higher mortality rate which is clinical important.

Fournier's Gangrene Patients who Died During Admission

MP2-13

Patient Experience with Imiquimod for Extramammary Paget's Disease: Analysis of a Patient-reported Survey

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Introduction and Objective: Extramammary Paget's Disease (EMPD) is a rare but lethal skin malignancy. Currently, there are no standardized treatment modalities for EMPD. An off-brand treatment modality is imiquimod, a topical cream considered to be a safe alternative to surgical management. Utilizing a patient-reported survey, we aimed to collect data on patient experience with this medication.

Methods: Institutional review board approval was obtained to distribute a survey to patients between November to December 2021 from an international, online EMPD support group. Eligible patients were those who received imiquimod for EMPD.

Results: A total of 106 respondents replied to the survey. The most common presenting symptoms were itching (76%), rash (57%) and redness (55%). EMPD most commonly presents on the labia/vulva of females (85%) and the scrotum of males (67%). Dermatologists were the most frequent prescribers (44%) of imiquimod. 35% of respondents received imiquimod as the sole treatment for their disease. 88% of patients reported side effects from the medication, with burning (78%), pain (60%) and ulcerations/wounds (43%) of the application sites being the most common. Lesion biopsy during/after imiquimod use was reported in 47%, most commonly 6 months following initiation of treatment (23%). Of these, 20% were never rid of the disease, 40% had no EMPD recurrence, and 40% had EMPD recurrence. The total reported rate of remission was 43%, however only 84% of those maintained remission status. The average respondent still in remission is approximately about two years. Recurrence of disease occurred at the highest frequency between six months and two years after remission (66%).

Conclusions: Topical imiquimod as a treatment modality for EMPD has demonstrated certain degree of efficacy. While treatment typically involves surgical excision, imiquimod may be used as adjuvant therapy in select cases. This study will hopefully shed light on the patient experience and provide insight into the application of this medication.

MP2-14

Role of Histology in Influencing Outcomes after Cytoreductive Nephrectomy for Metastatic Renal Cell Carcinoma with Caval Tumor Thrombus

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[1]The Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Penn Presbyterian Medical Center, Philadelphia, PA, USA
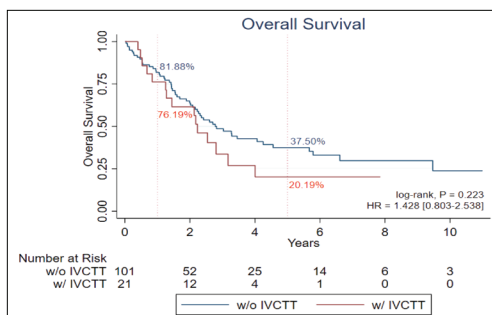
Introduction and Objective: The role for cytoreductive nephrectomy (CN) in patients with metastatic renal cell carcinoma (RCC) continues to evolve, with limited data on the surgical management and outcomes of patients with clear cell RCC (ccRCC) with inferior vena cava tumor thrombus (IVCTT). We sought to characterize survival outcomes among patients who underwent CN for metastatic ccRCC based on the presence of tumor thrombus extension.

Methods: We identified patients who underwent CN for ccRCC between 1996-2021 at our institution and stratified by presence of venous caval tumor thrombus (pT3b or pT3c). Baseline clinicopathologic characteristics were compared, and overall survival (OS) was assessed using the Kaplan-Meier method and Log-rank tests.

Results: Of 126 patients identified, 104 (82.54%) did not have an IVCTT and 22 (17.46%) had an IVCTT. Compared to those without IVCTT, patients with IVCTT had increased comorbidities, larger pathological tumor size, and increased prevalence of lymphovascular invasion and sarcomatoid features (Table 1). OS was similar between the two groups undergoing CN (Figure 1), despite patients with IVCTT having more intraoperative complications (13.6% vs. 3.8%, p = 0.03) and a longer hospital length of stay (6 vs. 3 days, p = 0.01).

Conclusions: No differences in overall survival were observed based on the presence of a caval tumor thrombus among patients with metastatic ccRCC undergoing CN. Although associated with increased surgical morbidity, tumor thrombi may not be an exclusionary factor in carefully selected patients who are otherwise appropriate candidates for CN.

Table 1: Baseline clinicopathologic characteristics of patients with ccRCC, with or without IVCTT, that underwent CN

Factor	Level	Overall	Without IVCTT	With IVCTT	p-value
N		126	104	22	
Age at Surgery, median (IQR)		60.755 (55.11, 68.22)	60.335 (55.425, 67.065)	61.965 (51.73, 74.47)	0.26
Sex	Female	33 (26.2%)	29 (27.9%)	4 (18.2%)	0.35
	Male	93 (73.8%)	75 (72.1%)	18 (81.8%)	
Race	White	117 (92.9%)	95 (91.3%)	22 (100.0%)	0.36
	Asian	5 (4.0%)	5 (4.8%)	0 (0.0%)	
	Black	4 (3.2%)	4 (3.8%)	0 (0.0%)	
Smoking History	Active Smoker	22 (17.5%)	20 (19.2%)	2 (9.1%)	0.25
	Former Smoker	42 (33.3%)	33 (31.7%)	9 (40.9%)	
	Never Used	44 (34.9%)	34 (32.7%)	10 (45.5%)	
	Unknown	18 (14.3%)	17 (16.3%)	1 (4.5%)	
Preoperative Symptoms	No	29 (23.0%)	29 (27.9%)	0 (0.0%)	**0.003**
	Yes	27 (21.4%)	24 (23.1%)	3 (13.6%)	
	Unknown	70 (55.6%)	51 (49.0%)	19 (86.4%)	
CCI, median (IQR)		8 (7, 9)	8 (7, 8.5)	9 (8, 10)	**0.003**
Laterality	Left	60 (47.6%)	55 (52.9%)	5 (22.7%)	**0.010**
	Right	66 (52.4%)	49 (47.1%)	17 (77.3%)	
Clinical N stage	cN0/ycN0	82 (65.1%)	70 (67.3%)	12 (54.5%)	0.29
	cN1	39 (31.0%)	31 (29.8%)	8 (36.4%)	
	Unknown	5 (4.0%)	3 (2.9%)	2 (9.1%)	
Pathological Tumor Size (cm), median (IQR)		8.7 (6.5, 11.5)	8.5 (6, 10.9)	11.5 (8, 15)	**0.008**
Tumor Grade	2	20 (15.9%)	19 (18.3%)	1 (4.5%)	0.25
	3	57 (45.2%)	48 (46.2%)	9 (40.9%)	
	4	46 (36.5%)	35 (33.7%)	11 (50.0%)	
	Unknown	3 (2.4%)	2 (1.9%)	1 (4.5%)	
Pathological Stage Classification	pT1	9 (7.1%)	9 (8.7%)	0 (0.0%)	0.059
	pT2	15 (11.9%)	15 (14.4%)	0 (0.0%)	
	pT3	94 (74.6%)	72 (69.2%)	22 (100.0%)	
	pT4	6 (4.8%)	6 (5.8%)	0 (0.0%)	
	Unknown	2 (1.6%)	2 (1.9%)	0 (0.0%)	
Lymphovascular Invasion	No	72 (57.1%)	66 (63.5%)	6 (27.3%)	**0.005**
	Yes	47 (37.3%)	34 (32.7%)	13 (59.1%)	
	Unknown	7 (5.6%)	4 (3.8%)	3 (13.6%)	
Sarcomatoid Features	No	108 (85.7%)	95 (91.3%)	13 (59.1%)	**<0.001**
	Yes	15 (11.9%)	9 (8.7%)	6 (27.3%)	
	Unknown	3 (2.4%)	0 (0.0%)	3 (13.6%)	
Rhabdoid Features	No	42 (33.3%)	31 (29.8%)	11 (50.0%)	0.082
	Yes	12 (9.5%)	12 (11.5%)	0 (0.0%)	
	Unknown	72 (57.1%)	61 (58.7%)	11 (50.0%)	
Necrosis	No	68 (54.0%)	58 (55.8%)	10 (45.5%)	**0.036**
	Yes	53 (42.1%)	44 (42.3%)	9 (40.9%)	
	Unknown	5 (4.0%)	2 (1.9%)	3 (13.6%)	
Surgical Margin	Morselated	2 (1.6%)	2 (1.9%)	0 (0.0%)	**0.004**
	Negative	106 (84.1%)	92 (88.5%)	14 (63.6%)	
	Positive	18 (14.3%)	10 (9.6%)	8 (36.4%)	

Figure 1. Overall Survival

Number at Risk
w/o IVCTT: 101, 52, 25, 14, 6, 3
w/ IVCTT: 21, 10, 6, 1, 0, 0

log-rank, P = 0.223
HR = 1.428 [0.803-2.538]

MP2-15

Factors Associated with Unplanned Conversion to Open in Nephrectomy for Kidney Cancer

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Introduction and Objective: Minimally invasive surgery (MIS) has been adopted widespread in kidney surgery. The ubiquitous use of MIS for kidney cancer has been standard of practice, however unplanned conversion to open kidney surgery was predicted at 4.9% for laparoscopic and 6.0% in robotic radical nephrectomy.

Methods: A total of 14,186 patients were evaluated and 4862 patients met the inclusion criteria of nephrectomy performed for kidney cancer. The groups were then subcategorized to planned MIS only (endoscopic, laparoscopic, other MIS, and robotic) n = 4756 and unplanned conversion to open starting as either robotic, laparoscopic, or endoscopic (n = 106). For categorical variables, Fisher's exact test was performed and Chi-squared analysis where more than two categories were evaluated. Statistical significance was set at P-value < 0.05.

Results: The unplanned conversion to open rate was 2.2%. The age (mean (SD)) of the cohort was 62.6 (11.2) and 61.3 (12.2) for the unplanned and the planned group. There was a baseline difference with preoperative labs including BUN, creatinine, PTT, and INR. An increased incidence of T3 and T4 (30.2% and 8.5%) in the unplanned group compared to the (21.2% and 0.50%) in the planned group was noted. ASA classification 4 also favored the unplanned group vs. planned group (table 1). The outcome variables were also compared between the unplanned and the planned group (table 2).

Conclusions: Higher stage, ASA classification, kidney function, PT/INR were predictive factors for conversion to open in nephrectomies. The open group had worse outcomes including length of hospital stay, discharge to nursing care, prolonged NPO/NGT, and lymph leak.

Table 1. Patient Characteristics, Unplanned Conversion to Open Nephrectomy

	Total Cohort n = 4862	Unplanned Conversion to Open n = 106	Minimally Invasive Surgery n = 4756	P Value
Patient Demographics				
Mean Age (Range)	61.28 (19 - 89)	62.58 (32 - 88)	61.25 (19 - 89)	
Male Gender (%)	3170 (65.20%)	72 (67.92%)	3098 (65.14%)	
Non-Caucasian Race (%)	1580 (32.50%)	39 (36.79%)	1541 (32.40%)	
Hispanic Ethnicity (%)	353 (7.26%)	4 (3.77%)	349 (7.34%)	
Preoperative Considerations:				
Admitted from Other Than Home (%)	23 (0.4%)	2 (1.9%)	21 (0.4%)	
Preoperative ASA Classification Greater than 3 (%)	3008 (61.9%)	80 (75.4%)	2928 (61.6%)	P < 0.01
Preoperative Non-Functional Health Status (%)	40 (0.82%)	0 (0.0%)	40 (0.8%)	
> 10% Decrease in Body Weight in 6 Months (%)	66 (1.4%)	4 (3.8%)	62 (1.3%)	P = 0.02
Preoperative Mechanical Bowel Prep (%)	754 (15.5%)	11 (10.4%)	743 (15.6%)	
Preoperative Oral Antibiotic Prep (%)	70 (1.4%)	1 (0.9%)	69 (1.5%)	
Prior Pelvic Surgery (%)	1608 (33.1%)	41 (38.7%)	1567 (32.9%)	
Prior Pelvic Radiotherapy (%)	75 (1.5%)	0 (0.0%)	75 (1.6%)	
Chemotherapy (within 90 days of surgery) (%)	103 (2.1%)	3 (2.8%)	100 (2.1%)	
ASA Classification:				
Class 1 (%)	62 (1.3%)	1 (0.9%)	61 (1.3%)	
Class 2 (%)	1792 (36.9%)	25 (23.6%)	1767 (37.2%)	P < 0.01
Class 3 (%)	2834 (58.3%)	71 (67.0%)	2763 (58.1%)	
Class 4 (%)	171 (3.5%)	8 (7.5%)	163 (0.04%)	P = 0.02
TNM Classification:				
T1, T1a, T1b (%)	3481 (71.6%)	57 (53.8%)	3424 (72.0%)	P < 0.01
T2, T2a, T2b (%)	334 (6.9%)	8 (7.5%)	298 (6.3%)	
T3, T3a, T3b, T3c (%)	1042 (21.4%)	32 (30.2%)	1010 (21.2%)	P = 0.03
T4 (%)	33 (0.7%)	9 (8.5%)	24 (0.2%)	P < 0.01
Nx (%)	4199 (86.4%)	74 (69.8%)	4125 (86.7%)	P < 0.01
N0 (%)	472 (9.7%)	21 (19.8%)	451 (9.5%)	P < 0.01
N1 (%)	61 (1.3%)	4 (3.8%)	57 (1.2%)	P = 0.02
M0 (%)	2196 (45.2%)	44 (41.5%)	2152 (45.2%)	
M1 (%)	67 (1.4%)	5 (4.7%)	62 (1.3%)	P < 0.01
Pre-Operative Lab Values:				
Elevated Creatinine (Greater than 1.6 mg/dL) (%)	337 (6.9%)	15 (14.2%)	322 (6.8%)	P < 0.01
Elevated BUN (Greater than 21 mg/dL) (%)	1155 (23.8%)	33 (31.1%)	1122 (23.6%)	P < 0.01
Elevated PTT (Greater than 36 seconds) (%)	233 (4.8%)	13 (12.3%)	220 (4.6%)	P < 0.01
Elevated INR (Greater than 1.16) (%)	271 (5.6%)	12 (11.3%)	259 (5.5%)	P < 0.01
Decreased Platelet Count (Less than 149 x 10⁹/Liter) (%)	567 (11.7%)	17 (16.0%)	550 (11.6%)	
Comorbidities:				
Transfusion within 72 hours of Surgery (%)	15 (0.3%)	2 (1.9%)	13 (0.3%)	P < 0.01
Currently on Hemodialysis (%)	124 (2.6%)	8 (7.5%)	116 (2.4%)	P < 0.01
Current Smoker (within past year) (%)	789 (16.2%)	13 (12.3%)	776 (16.3%)	
Diabetes Mellitus Treated with Insulin (%)	342 (7.0%)	8 (7.5%)	334 (7.0%)	
Diabetes Mellitus Treated with Oral Medication (%)	754 (15.5%)	18 (17%)	736 (15.5%)	
Disseminated Cancer (%)	155 (3.2%)	10 (9.4%)	145 (3.0%)	P < 0.01
History of Severe COPD (%)	184 (3.8%)	2 (1.9%)	182 (3.8%)	
Hypertension (Treated with Medication) (%)	2984 (61.4%)	69 (65.1%)	2915 (61.3%)	
Steroid Use for Chronic Medical Condition (%)	195 (4.0%)	5 (4.7%)	190 (4.0%)	
Dyspnea (%)	285 (5.9%)	12 (11.3%)	273 (5.8%)	P = 0.03
Bleeding Disorder (%)	124 (2.6%)	6 (5.7%)	118 (2.55)	P = 0.04

P Value represents T-test for continuous variables or Chi-Square for categorical variables.
ASA = American Society of Anesthesiologists, COPD = Chronic Obstructive Pulmonary Disorder, BUN = Blood urea nitrogen

Table 2. Postoperative Outcomes Frequency Table, Unplanned conversion to open

	Total Cohort n = 4862	Unplanned Conversion to Open n = 106	Minimally Invasive Surgery n = 4756	P Value
Outcome Variables				
Readmission to Hospital (%)	227 (4.7%)	17 (16.0%)	210 (4.4%)	P < 0.01
Pt Requiring Bleeding Transfusion (%)	189 (3.9%)	35 (33.0%)	154 (3.2%)	P < 0.01
Mean Total Operating Time in Minutes (Range)	176.4 (4 - 769)	255.08 (66 - 732)	174.7 (4 - 769)	P < 0.01
Mean Length of Hospital Stay (Range)	2.4 (0 - 36)	5.07 (1 - 27)	2.3 (0 - 36)	P < 0.01
Mean Days from Operation to Discharge (Range)	2.1 (0 - 30)	0.85 (0 - 21)	2.2 (0 - 30)	P < 0.01
Superficial Incisional Surgical Site Infection (%)	62 (1.3%)	3 (2.8%)	59 (1.2%)	
Deep Incisional Surgical Site Infection (%)	7 (0.1%)	2 (1.9%)	5 (0.1%)	P < 0.01
Organ Space Incisional Surgical Site Infection (%)	27 (0.6%)	6 (5.7%)	21 (0.4%)	P < 0.01
Sepsis (%)	20 (0.4%)	2 (1.9%)	18 (0.4%)	P = 0.02
Septic Shock (%)	10 (0.2%)	1 (0.9%)	9 (0.2%)	
Urinary Tract Infection (%)	52 (1.1%)	0 (0.0%)	52 (1.1%)	
Acute Renal Failure (%)	15 (0.3%)	4 (3.8%)	11 (0.2%)	P < 0.01
Pneumonia (%)	54 (1.1%)	1 (0.9%)	53 (1.1%)	
CVA/Stroke with Neurological Deficit (%)	6 (0.1%)	0 (0.0%)	6 (0.1%)	
Cardiac Arrest Requiring CPR (%)	16 (0.3%)	1 (0.9%)	15 (0.3%)	
Myocardial Infarction (%)	26 (0.5%)	1 (0.9%)	25 (0.5%)	
Pulmonary Embolism (%)	24 (0.5%)	3 (2.8%)	21 (0.4%)	P < 0.01
DVT/Thrombophlebitis (%)	26 (0.5%)	4 (3.8%)	22 (0.5%)	P < 0.01
Discharge to SNF (%)	119 (2.5%)	11 (10.4%)	108 (2.3%)	P < 0.01
Discharge to Home (%)	4743 (97.6%)	95 (89.6%)	4648 (97.7%)	P < 0.01
Rectal Injury (%)	3 (0.1%)	0 (0.0%)	3 (0.1%)	
Unplanned Intubation (%)	18 (0.4%)	0 (0.0%)	18 (0.4%)	
Wound Disruption (%)	17 (0.4%)	4 (3.8%)	13 (0.3%)	P < 0.01
On Ventilator Greater than 48 Hours (%)	17 (0.3%)	2 (1.95)	15 (0.3%)	P < 0.01
Clostridium Difficile Colitis (%)	10 (0.2%)	1 (0.9%)	9 (0.2%)	
Prolonged NPO or NGT Use (%)	82 (1.7%)	13 (12.3%)	69 (1.5%)	P < 0.01
Lymphocele/Lymphatic Leak (%)	82 (1.7%)	7 (6.6%)	75 (1.6%)	P < 0.01
Unplanned Reoperation (%)	85 (1.7%)	10 (10.9%)	75 (1.6%)	P < 0.01

P Value represents T-Test for continuous variables and Chi-Square for categorical variables.
UTI = Urinary Tract Infection, PNA = Pneumonia, DVT = Deep Vein Thrombosis, SNF = Skilled Nursing Facility, NPO = Nothing by mouth, NGT = Nasogastric Tube

MP2-16

Characterizing the Urinary Symptoms of Transgender Individuals Using Questionnaire Data
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Introduction and Objective: There is limited research on assessments of urinary function and health for transgender individuals. Providers may therefore be unaware of the urinary symptoms this population experiences, which hinders care. We sought to improve the understanding of urinary function and health in transfeminine individuals by reporting results from a developed questionnaire.

Methods: IRB approval was obtained to develop (with feedback from the transgender community) and administer a 58-item questionnaire assessing urinary and sexual health. Participants were from the local community and the Philadelphia Trans Wellness Conference. Respondents were evaluated on AUA symptom score (AUASS) and questions about urinary infections, and incontinence. Urinary symptoms were compared among respondents who had vaginoplasty (VP), and those who did not (NVP).

Results: 53 transfeminine individuals (11 vaginoplasty, 10 orchiectomy, 32 no procedure) with mean age of 40 (range 21-80) completed the questionnaire. Average AUASS among participants was 9.8 (range 0-29) indicating moderate severity. Only 3 (13.6%) respondents with AUASS > 8 (moderate to severe) used oral medications to improve urinary symptoms, while 1 had prostate surgery for symptoms. In questions of urinary flow and incontinence, VP participants were more likely to experience urinary spraying than NVP participants (p = 0.009), but no difference in urgency (p = 0.6), urge incontinence (p = 0.9), stress incontinence (p = 0.1), or post-void dribbling (p = 0.4).

Conclusions: Our results suggested moderate severity urinary symptoms in transfeminine individuals. However, only a minority of respondents with elevated AUASS had received treatment. While urinary flow and continence was similar in VP and NVP groups, we noted that VP respondents were likelier to experience urinary spraying as a symptom, which may relate to prior surgical history and scarring. These findings highlight an opportunity for providers to assess the urinary symptoms of their transfeminine patients and provide treatment when appropriate.

MP2-17

Financial Impact of Urologic Conditions in Women In Belize
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Introduction and Objective: Pelvic floor disorders (PFD) are highly prevalent in low-and-middle-income countries (LMIC). Concurrently, the inability to maintain employment or provide care for family are significant factors that contribute to extreme poverty in these countries. The impact of PFD on economic productivity and caretaking responsibilities in developing countries is poorly understood.

Methods: The study aimed to formally assess the financial impact of PFD on women in Belize. Accordingly, we conducted a prospective survey-based study of patients treated during three separate global health trips from 2019-2021 with the charity Global Surgical Expedition. Patients completed a 17-item survey with focus on urologic PFD, work/caretaking responsibilities, and financial data. Items from the validated Work Productivity and Activity Impairment Questionnaire (WPAI) were used to assess financial impact.

Results: Forty-nine patients completed surveys, with chief complaint including pelvic organ prolapse (69.4%) and overactive bladder/urinary incontinence (30.6%). Overall, 83.7% and 26.5% of respondents reported PFD negatively impacted job and caretaking responsibilities, respectively. Twenty-one (42.8%) patients were employed and provided financial data sufficient for analysis. Table 1 demonstrates financial impacts . Median weekly income was $214.5 BZD ($107.25 USD). Median weekly cost for PFD treatment was $20[5,70] BZD. Accordingly, total weekly cost of PFD (income loss from missed work and/or work impairment + treatment cost) was $70[5,150] BZD per capita, representing 28.1% of weekly income. Most (87.8%) patients reported that cure of PFD would increase ability to work and/or care for family.

Conclusions: For women in Belize, PFD results in significant impairment to work and caretaking responsibilities, as well as income loss. Efforts are necessary to provide surgical/subspecialist care in LMIC as PFD not only impacts quality of life but also financial health.

Table 1. Work and Financial Impairment Related to Urologic Disease				
	All Patients n = 21	**OAB/UI** n = 9	**POP** n = 12	**p-value**
Missed Any Work, n (%)	6 (28.6)	2 (22.2)	4 (33.3)	0.94
Work Missed, hrs	0.0 [0.0, 2.0]	0.0 [0.0, 0.0]	0.0 [0.0, 2.8]	0.72
None	/	/	/	
Missed work	13.0 [6, 23]	21.0 [19.5, 22.5]	6.5 [4.25, 12.5]	0.36
% Impairment at Work	0.0 [0.0, 50]	0.0 [0.0, 40]	30.0 [0.0, 58]	0.25
% Overall Work Impairment	0.0 [0.0, 59]	0.0 [0.0, 40]	40.0 [0.0, 64]	0.27
Income (BZD)	214.5 [175, 483]	214.5 [200, 250]	225.0 [156, 487]	0.75
Income Loss (BZD)	0.0 [0.0, 35]	0.0 [0.0, 0.0]	0.0 [0.0, 47]	0.66
None	/	/	/	
Missed work	84.6 [71, 94]	83.3 [75, 92]	84.6 [71, 88]	0.64
% Income Loss	0.0 [0.0, 6.9]	0.0 [0.0, 0.0]	0.0 [0.0, 9.6]	0.66
None	/	/	/	
Missed work	37.5 [22, 48]	41.7 [38, 46]	29.7 [15, 45]	0.64

Data presented as median [IQR] unless otherwise specified. Work hours and income are weekly values. Missed work hours and income loss include subanalysis the of cohort of patients reporting having missed any work due to urologic disease.

MP2-18

A Biomechanical Model of Bladder Wall Micromotion Using Ex-Vivo Perfused Porcine Bladders
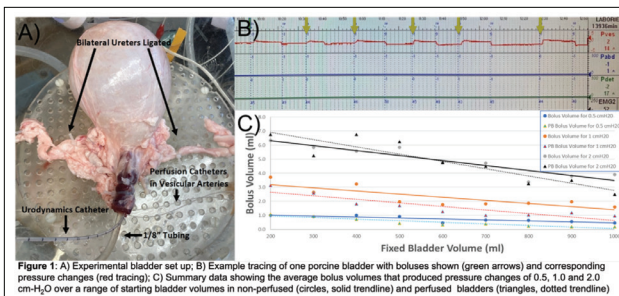
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Introduction and Objective: Micromotion of the bladder wall may impact both the dynamics of urine storage and the clinical symptoms patients experience. Developing new technologies to identify and quantitate bladder wall micromotion is necessary. The objective of this study was to dexqvelop a reproducible biomechanical model of bladder wall micromotion in porcine bladders.

Methods: Porcine bladders were collected fresh from local abattoirs. Ex vivo bladders were stored in physiologic buffer solution. Bladders were prepared by intubation of vesicular arteries, ligation of ureters, and cannulation of the urethra with a urodynamics catheter and 1/8" tubing. Half of the bladders were perfused with physiologic buffer —the other half were not (Figure 1A). Each bladder was filled from 200 to 1000ml with deionized water, and experiments were performed at 50ml increments. At each volume, a sequence of 18 boluses ranging between 0.2-10 ml was injected into the bladder and immediately withdrawn. Pressure changes were recorded using a Laborie Urodynamics System (Figure 1B).

Results: Twelve bladders were tested. For all bladders, the minimum observable pressure change was 0.5 cm-H2O. A bolus of 1.6 ml produced a measurable pressure change across all fixed bladder volumes. A measurable pressure change with the smallest bolus of 0.2 ml was seen in 11 of 12 (92%) bladders and occurred at an average fixed volume of 564 ml. As the fixed volume increased, a smaller fluid bolus was required to produce a measurable pressure change (Figure 1C).

Conclusions: These data demonstrate the relationship between bladder volume, bolus volume, and pressure change in the porcine bladder. This may be used as a model of bladder wall micromotion in future experiments to quantify micromotion using ultrasound or other imaging technologies.

Figure 1: A) Experimental bladder set up; B) Example tracing of one porcine bladder with boluses shown (green arrows) and corresponding pressure changes (red tracing); C) Summary data showing the average bolus volumes that produced pressure changes of 0.5, 1.0 and 2.0 cm-H₂O over a range of starting bladder volumes in non-perfused (circles, solid trendline) and perfused bladders (triangles, dotted trendline)

MP2-19

An Isolated Perfused Porcine Bladder Model to Assess Afferent Nerve Signal Correlation with Filling

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Introduction and Objective: Assessment of afferent nerve signaling in response to bladder filling is critical for understanding normal micturition, and aberrations may be associated with voiding dysfunction. The purpose of this study is to develop an "ex-vivo" model that aims at quantifying afferent nerve signals in perfused porcine bladders during filling. To our knowledge, there is limited similar literary evidence.

Methods: Porcine bladders were harvested fresh from local abattoirs. Ex vivo bladders were prepared by intubation of vesicular arteries, ligation of ureters, and cannulation of the urethra with a urodynamics catheter. Microhook electrodes were placed on an isolated nerve to record the electroneurogram (ENG) (Figure 1A). ENG signal was sampled at 20kHz using AD Instruments PL2604 Power Lab. Data was then imported into Matlab for processing. Bladders were filled at a rate of 100 ml/min from 0 to 1000 ml. Filling was performed in a 1-minute off/on pattern for 20 minutes. Bladders were contracted with 50 ml of 1M KCl terminally. Firing rate was calculated as the sum of ENG peaks per minute.

Results: Nerve tissue was confirmed via anti-beta tubulin antibody (Abcam, ab15568) immunohistochemistry (Figure 1B). Five bladders were tested. ENG activity increased during filling (FIGURE 1C). Average bladder pressure, ENG amplitude and firing rate increased with bladder filling. The Pearson correlation coefficient between pressure and ENG amplitude was 0.92, and the correlation coefficient between pressures and ENG firing rate was 0.70 (Figure 1D).

Conclusions: This study demonstrated that an ex-vivo perfused porcine bladder can be used to assess afferent nerve signaling in response to filling. This novel model could be further used to study afferent nerve activity in response to biomechanical changes in the bladder wall due to filling.

Figure1: A) Microhook electrode placement around isolated nerve (green arrow); B) Nervous tissue identified with anti-beta tubulin antibody (brown staining); C) Example of increasing ENG signal during bladder filling; D) Normalized pressure, ENG, and firing rate

MP2-20

What is the Risk of Urinary Retention in Postoperative IPP Recipients?
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Introduction and Objective: Many implanters have transitioned penile implantation procedures from 23-hour observation stays to same-day discharge surgeries (SDS). Postoperative urinary retention (POUR) represents a potential barrier to successful SDS among inflatable penile prosthesis (IPP) recipients; however, its incidence and resolution have not been previously characterized. We rigorously characterized POUR in a large cohort of IPP recipients.

Methods: All eligible patients underwent planned void trial immediately following IPP. POUR was defined as any patient requiring a catheter immediately after IPP, a rising post-void residual (PVR) measured twice > 350cc or any patient with a bladder scan > 350cc who was unable to void. Demographic, intraoperative, and postoperative risk factors for POUR were assessed using univariable and multivariable analysis.

Results: 317 men were included of whom 86/317 (27.1%, mean age 61.5 +/- 9.6) experienced POUR. Rates of POUR in the 23-hour stay and SDS cohorts were not significantly different (27.1% vs. 18.0%, p = 0.11). Men experiencing POUR and those not in retention were essentially indistinguishable with respect to age, BMI, operative time, intraoperative narcotics, intraoperative anticholinergic use, IV fluids, and postoperative pain scores. Only use of maximal medical therapy for BPH was significantly associated with a greater risk of postoperative urinary retention, a finding maintained on adjusted analysis (aOR 10.1, 95% CI 2.06 to 49.8). POUR resolved without intervention in 3.5%, a single episode of CIC in 7.0% of patients, and repeated CIC or indwelling catheter placement with a successful delayed void trial in 88.4% of patients. No patient required outlet reduction due to retention, and the rate of infection in patients who experienced POUR was similar to those not experiencing retention (4.7% vs. 2.2% p = 0.26).

Conclusions: POUR is experienced in as many as 1 in 5 men undergoing IPP placement. Those with symptomatic BPH managed with maximal medical therapy may are at the greatest risk of urinary retention.

MP2-21

Predictors of Urinary Outcomes Following Robotic Assisted Laparoscopic Prostatectomy
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Introduction and Objective: Incontinence and urgency are common after prostatectomy and can contribute to patient distress. The UVA prostatectomy functional outcomes program (PFOP) was developed to comprehensively assess and optimize continence outcomes following robotic-assisted laparoscopic prostatectomy (RALP). Patients are evaluated by a FPMRS specialist at baseline, 3-months, 6-months, and 12-months following surgery. This study assessed for predictors of 6-month stress urinary incontinence (SUI) and urgency symptom outcomes following RALP.

Methods: We performed a post hoc review of patients from our PFOP receiving a minimum of 6-month follow-up. Lower urinary tract symptoms are prospectively assessed using the validated ICIQ-MLUTS questionnaire and daily pad use (PPD). Primary study outcomes included ICIQ-MLUTS SUI and urgency domain scores and PPD. Multivariable linear regression was performed to identify variables associated with outcomes at 6-months following RALP. Variables included patient, oncologic, and surgical factors. Each variable was run in a separate model with pelvic floor muscle therapy and surgeon to adjust for confounding and prevent overfitting.

Results: Forty men were included. Table 1 demonstrates multivariable linear regression results for primary outcomes. In assessment of 6-month ICIQ-MLUTS SUI domain score, BMI, hypertension, and estimated blood loss (EBL) were associated with higher (worse) scores, whereas bilateral nerve sparing technique was associated with lower (better) scores. For 6-month ICIQ-MLUTS Urgency domain scores, no covariates were statistically significant predictors. For 6-month PPD use, BMI was a positive predictor while preoperative use of BPH medication was a negative predictor.

Conclusions: Increased BMI, EBL, and the presence of HTN are associated with worsened SUI outcomes following RALP whereas bilateral nerve sparing technique and preoperative BPH medication are associated with improved SUI outcomes. Further follow-up is ongoing to comprehensively assess outcomes through 1-year follow-up.

TABLE 1. PREDICTORS FOR URINARY SYMPTOM OUTCOMES FOLLOWING RALP (6-MONTH)

RISK FACTOR	ICIQ-MLUTS SUI domain score		ICIQ-MLUTS Urgency domain score		Pads per day (n)	
	Coef	p-value	Coef	p-value	Coef	p-value
Patient/disease factors						
Age	0.031	0.26	0.0041	0.80	0.022	0.36
BMI (kg/m^2)	0.10	**0.026**	0.021	0.46	0.091	**0.022**
Smoking	0.057	0.92	0.026	0.94	0.071	0.90
Hypertension	1.10	**0.0025**	0.16	0.51	0.53	0.13
Preop BPH med use	-0.21	0.69	-0.38	0.21	-0.96	**0.027**
Prostate size (g)	0.0040	0.51	-0.0015	0.68	-0.0040	0.45
PSA (ng/mL)	-0.068	0.13	-0.018	0.51	-0.072	0.060
Adjuvant XRT	0.34	0.57	0.47	0.17	-0.55	0.29
Surgical factors						
EBL (mL)	0.0032	**0.026**	0.0	0.97	-0.00010	0.92
Nerve sparing (bilat)	-1.37	**0.027**	-0.28	0.47	-0.65	0.25
Nerve sparing (unilat)	-1.37	0.099	-0.40	0.44	-1.11	0.15
Retzius sparing	-0.88	0.11	-0.23	0.48	-0.014	0.98
Lymph n. dissection	0.63	0.30	-0.45	0.21	0.81	0.13

Multivariable linear regression for urinary symptom outcomes (ICIQ-MLUTS SUI domain score, ICIQ-MLUTS Urgency domain score, and Pads per day). Coefficients for each risk factor are controlled for surgeon and pelvic floor muscle therapy.
BMI, body mass index; BPH, benign prostatic hyperplasia; med, medication; PSA, prostate specific antigen; EBL, estimated blood loss; bilat, bilateral; unilat, unilateral; lymph n., lymph node.

MP3-01

Socioeconomic Implications of Tele-cystoscopy

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Introduction and Objective: We taught advanced practice providers to perform cystoscopy in real time with interpretation by a urologist on a telemedicine platform, termed "tele-cystoscopy". The goal was to expand the availability of cystoscopy to underserved rural areas. We have previously reported on the external validation of tele-cystoscopy with traditional cystoscopy. Herein we report on the demographics of the population and describe the socioeconomic implications of tele-cystoscopy.

Methods: Using an IRB approved protocol, patients were consented for dual, sequential cystoscopy wherein they experienced a standard of care cystoscopy along with tele-cystoscopy. Upon completion of the procedures, patients filled out a questionnaire. The questionnaire inquired about gender, age, insurance but also probed patients about travel burdens including travel time saved, time off work, and other inconveniences.

Results: There were 48 patients with a mean age of 55 consented for the study who completed the questionnaire after the dual cystoscopies. Thirteen patients (27%) were uninsured and 10 (20%) had Medicaid only demonstrating they were underinsured. The remainder had private insurance or Medicare. Table 1 shows the summary of demographics and travel burden patients would face without tele-cystoscopy. Seventeen patients would have had to drive 3-7 hours for a cystoscopy. Almost 20% of the patients would have lost a half day or more of work and 6 people would have had to inconvenience another party. Other benefits recorded in a free response section included 9 (19%) noting gas savings.

Conclusions: The study demonstrated that tele-cystoscopy may be a viable option to expand access to bladder cancer surveillance and would have socioeconomic benefits to underserved areas. Patients would have better access to healthcare and minimize disruptions to their life for needed bladder cancer surveillance.

Table 1 Patient demographics and travel burden avoided from tele-cystoscopy	
Demographics	
Age (mean [range])	55.6 [30,89]
Gender	
Male	21 (43.8%)
female	27 56.3%)
Insurance	
Uninsured	13 (27.1%)
Private	9 (18.8%)
Medicare	13 (27.1%)
Medicaid	10 (21.1%)
Medicare/Medicaid	2 (4.2%)
Travel Burden	
Travel Time Saved	
< 30 min	7 (14.6%)
30 min - 1 hr	6 (12.5%)
1-3 hr	4 (8.3%)
3-5 hr	13 (27.1%)
5-7 hr	2 (4.2%)
7 + hr	2 (4.2%)
Time off Work	
None, day off	17 (35.4%)
None, unemployed/retired	21 (43.8%)
< 4 hrs	5 (10.4%)
4-8 hrs	2 (4.2%)
> 8 hrs	2 (4.2)
Help with transportation	
Yes	6 (12.4%)
No	42 (87.5%)

MP3-02

Comparison of In-person FPMRS-Directed Pelvic Floor Therapy Program Versus Unsupervised Pelvic Floor Exercises Following Prostatectomy

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Introduction and Objective: Post-prostatectomy incontinence is common and associated with patient distress. The UVA prostatectomy functional outcomes program (PFOP) was developed to comprehensively assess and optimize continence outcomes following robotic-assisted laparoscopic prostatectomy (RALP). Enrolled PFOP patients complete in-person pelvic floor muscle training (PFMT) with a FPMRS specialist, at baseline, 3-months, 6-months, and 12-months following surgery, supplemented by a home exercise program. This study compared continence outcomes in PFOP patients versus those receiving unsupervised home pelvic floor exercise therapy (UPFE) directed by their urologic surgeon.

Methods: We performed a retrospective review of patients receiving PFOP versus UPFE with minimum 6-month follow-up. Incontinence and quality of life outcomes are prospectively assessed using validated ICIQ-MLUTS and IIQ-7 questionnaires. Additionally, daily pad use (PPD) and satisfaction are assessed. Primary outcomes included ICIQ-MLUTS SUI domain score and SUI cure (SUI domain score = 0).

Results: Analysis included 40 men with 6-month follow-up receiving PFOP versus UPFE. No difference in age (62 vs. 64 years), EBL (220 vs. 182 ml), adjuvant radiotherapy (15% vs. 10%), lymph node dissection (90% vs. 85%), or baseline SUI domain score (0.10 vs. 0.05) was seen between PFOP and UPFE cohorts (p = NS, all comparisons). Mean SUI domain scores across all time points are shown in Figure 1. At 6-month follow-up, PFOP patients demonstrated significantly improved SUI domain scores compared to controls (PFOP 0.75 (SD 1.06); UPFE 1.8 (SD 1.47))(p = 0.014). A higher proportion of PFOP patients reported SUI cure (PFOP 55%; UPFE 25%)(p = 0.055). Similar PPD was reported across cohorts (PFOP 0.80 (SD 1.01); UPFE 1.0 (SD 1.38)) (p = 0.60).

Conclusions: In-person, FMPRS-directed PFMT is associated with improved SUI outcomes following RALP at 6-month follow-up. Further follow-up is ongoing to comprehensively assess outcomes through 1-year follow-up.

MP3-03

Assessing MRI Accuracy in Prostate Cancer Staging at a Single Academic Institution: a Retrospective Study

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Introduction and Objective: Multiparametric Magnetic Resonance Imaging (mpMRI) has been increasingly utilized in prostate cancer (PCa) diagnosis and staging. While Level 1 data supports MRI utility in PCa diagnosis, there is less data on utility for staging.

Methods: Men who underwent radical prostatectomy (RP) for PCa in 2021 were identified. Chart review for mpMRI variables and surgical pathology was completed. We evaluated sensitivity, specificity, positive predictive value (PPV) and negative predictive value (NPV) of mpMRI in predicting pT2N0 organ confined disease (OCD), extracapsular extension (ECE), seminal vesicle invasion (SVI), lymph node involvement (LNI), and bladder neck invasion (BNI). We examined whether PCa risk stratification (RS), MRI institution (MRII), MRI strength (1.5 vs. 3T) (MRIS), and MRI timing (MRIT) (pre-biopsy vs. post biopsy) impacted parameter accuracy.

Results: 168 patients were identified (115 (68.5%) underwent pre-operative mpMRI). Table 1 summarizes the ability of pre-op MRI in predicting OCD, ECE, SVI, LNI, and BNI. While the specificity was adequate (89.1-100%), sensitivity (2.9-49.2%), PPV (40-100%), and NPV (56.3-94.3%) were poor. Of the factors examined, RS impact on SVI was the only significant association (Table 2). MRII, MRIS, and MRIT did not appear to have any impact on MRI accuracy.

Conclusions: Currently, pre-op MRI of the prostate does not appear to be accurate in predicting important pathologic outcomes at the time of radical prostatectomy and should be used cautiously as a local staging tool. MRI reporting accuracy varies greatly. More work is needed before MRI can be used as a reliable staging tool for PCa.

Pathological Outcomes	Eligible Patients (N)	Outcome (+)	Outcome (-)	MRI (+)	MRI (-)	Sensitivity (%)	Specificity (%)	PPV (%)	NPV (%)
Organ Confined Disease (pT2N0)	115	56	59	88	27	49.2	89.1	77.8	56.3
ECE	115	55	60	27	88	38.8	90.0	77.7	61.4
SVI	115	22	93	10	105	27.3	96.7	60.0	84.8
LNI	115	10	105	10	105	40.0	94.3	40.0	94.3
BNI	115	34	81	1	114	2.9	100.0	100.0	71.1

Table 1. Sensitivity, Specificity, PPV, and NPV of mpMRI in accurately predicting surgical pathology.

Table 2. Proportion of patients with an accurate MRI parameter interpretation by risk stratification.

	Favorable Intermediate (%)	Unfavorable Intermediate (%)	High (%)	p-value
ECE	68.6	62.5	63.2	0.815
BNI	78.4	62.5	68.4	0.31
LNI	94.1	87.5	84.2	0.306
SVI	100.0	62.5	71.1	<0.001

MP3-04

The Impact of COVID-19 and Telehealth Appointments on Patients from an Academic Multidisciplinary Genitourinary Clinic

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Introduction and Objective: The objective of this study is to compare patient factors, disease and treatment from before and after the outbreak of Sars-CoV-2 (COVID-19) and evaluate the potential relationship of telehealth appointments with these variables.

Methods: An IRB-approved database was created in REDCap to compare patient visits at an academic multidisciplinary genitourinary cancer clinic before and after March 13, 2020, the onset of the COVID-19 pandemic. Patients with adrenal, urothelial, kidney, prostate and testicular cancer were included. The database captures patient demographics, disease and treatment information, as well as appointment type.

Results: 564 appointments for genitourinary cancer management were documented between July 2019 and November 2020, eight months before and after the COVID-19 outbreak. 330 (58.5%) appointments were recorded prior to March 2020 and 234 (41.5%) afterwards. Before the pandemic, only 1 (0.3%) appointment was via telehealth; afterwards, 144 (62%) were remote visits. Women had a higher likelihood of having a telehealth appointment. Fewer patients post-COVID-19 selected definitive therapy at the time of their visit compared to before March 2020. Table 1 details patient demographics and cancer types. Table 2 compares in-person vs. telehealth patient demographics post-outbreak.

Conclusions: Numerous non-urologic studies have reported compromised cancer management as a result of the COVID-19 pandemic. We have observed similar trends, with delayed decision-making being statistically significant. Telehealth access did not compromise decision-making regarding treatment. Due to the paucity of data from genitourinary cancer centers regarding these differences, we hope that this study will encourage additional research on this topic.

	Pre-COVID-19 N (%)	Post-COVID-19 N (%)	P-value
Gender			
Male	313 (95%)	218 (93%)	0.401
Female	17 (5%)	16 (7%)	
TOTAL	330	234	
Age			
<65	124 (38%)	87 (37%)	0.924
≥65	206 (62%)	147 (63%)	
TOTAL	330	234	
Ethnicity			
Caucasian	220 (68%)	153 (66%)	0.666
Non-Caucasian	105 (32%)	79 (34%)	
TOTAL	325	232	
Cancer types			
Prostate	251 (76%)	178 (77%)	
Bladder	48 (15%)	38 (16%)	
Kidney	14 (4%)	10 (4%)	0.451
Ureteral	8 (2%)	1 (0.4%)	
Testicular	7 (2%)	5 (2%)	
Adrenal	1 (0.3%)	0	
TOTAL	329	232	
Treatment			
Treatment pursued	272 (84%)	158 (68%)	<0.001
No treatment selected	53 (16%)	75 (32%)	
TOTAL	325	233	

Table 1 – Observations of Patient, Cancer and Treatment Changes as a Result of COVID-19

	In-person N (%)	Telehealth N (%)	P-value
Gender			
Male	88 (98%)	130 (90%)	0.027
Female	2 (2%)	14 (10%)	
TOTAL	90	144	
Age			
<65	33 (37%)	54 (37.5%)	0.898
≥65	57 (63%)	90 (62.5%)	
TOTAL	90	144	
Ethnicity			
Caucasian	58 (64%)	95 (67%)	0.700
Non-Caucasian	32 (36%)	47 (33%)	
TOTAL	90	142	
Cancer types			
Prostate	76 (84%)	102 (72%)	
Bladder	10 (11%)	28 (20%)	
Kidney	2 (2%)	8 (6%)	0.218
Ureteral	0	1 (0.7%)	
Testicular	2 (2%)	3 (2%)	
TOTAL	90	142	
Treatment			
Treatment pursued	56 (63%)	102 (71%)	0.209
No treatment selected	33 (37%)	42 (29%)	
TOTAL	89	144	

Table 2 – Observations of Post-COVID-19 Patient, Cancer and Treatment Differences by Appointment Type

MP3-05

A Pilot Study for Validation of Clear Cell Likelihood Scores in cT1a Small Renal Masses With Multiparametric Magnetic Resonance Imaging
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Introduction and Objective: Active surveillance is a management strategy for small renal masses (SRM) due to their low metastatic potential. Clear cell renal carcinoma (ccRCC) has a more aggressive phenotype than other subtypes and the ability to distinguish ccRCC could expedite treatment of high-risk patients. A clear cell likelihood score (ccLS), a grading based on multiparametric magnetic resonance imaging (mpMRI), has been proposed as a possible alternative to biopsy for differentiating ccRCC. The objective of this pilot study is to validate the ccLS in cT1a masses and evaluate different ccLS cut points.

Methods: Published ccLS is reported as 1-5 with 5 being most likely ccRCC. Proponents of ccLS recommend biopsy at ccLS3, so we investigated sensitivity, specificity, positive-predictive value (PPV), and negative-predictive value (NPV) with two different cut points for defining ccRCC: ccLS3 and ccLS4. Using an IRB-approved SRM database, we reviewed patients with cT1a small renal masses who received a pre-treatment mpMRI and have a pathological tissue diagnosis at a single institution between 2015-2021. A blinded radiologist retrospectively assigned each renal mass a ccLS based on published algorithm.

Results: 27 mpMRIs were considered with 5 being ineligible to score (4 cystic, 1 macroscopic fat). Tissue diagnosis was determined by surgical removal (2) and biopsy (20). Among the 22 patients scored, a cut point of ccLS3 provided 100% sensitivity, 62.5% specificity, 82.3% PPV, and 100% NPV. A cut point of ccLS4 provided 71.4% sensitivity, 75% specificity, 83.3% PPV, and 60% NPV. None of the ccLS1 and ccLS2 patients were diagnosed with ccRCC.

Conclusions: ccLS based on mpMRI appears promising for guiding clinical decision making in SRMs. We confirmed radiologists can incorporate the ccLS into their interpretations of cT1a masses. With one reviewer, our summary statistics are consistent with published values. Next steps will include inter-rater reliability calculations between different radiologists on a larger sample of patients.

MP3-06

Performance of Targeted Biopsy in mpMRI PIRADS 4 and 5 Lesions and Evaluation of Adjacent Sextant Sampling
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Introduction and Objective: A combined systematic biopsy (SB) and targeted biopsy (TB) approach with multiparametric MRI (mpMRI) improves detection of clinically significant prostate cancer (csPCa). Recent studies suggest improved cancer detection from adding SB to TB may be related to increased sampling adjacent to the region of interest (ROI). This study aims to compare TB performance for PIRADS4 and 5 lesions and assess utility of ROI plus adjacent sextant sampling in prostate biopsy.

Methods: A single-institution database was queried for patients with PIRADS ≥ 4 lesions on mpMRI who underwent concurrent SB and TB from 2016-2021. Patients with Gleason Grade Group > 1 pathology were assessed for rates of upgrading between TB and SB. In cases where SB yielded index pathology, geographical partitioning analysis was performed to evaluate location of index lesion relative to targeted mpMRI ROI.

Results: 148 patients were identified, and csPCa was found in 49 (60%) and 61 (92%) patients with PIRADS4 and 5 lesions, respectively. Mean ROI core samples were 3.5 and 3.1 for PIRADS4 and 5 lesions, respectively. For the PIRADS4 cohort, TB yielded dominant gland pathology in 30 (61%) patients. Considering SB, 12 (24%) patients were upgraded from clinically insignificant to csPCa and index pathology came from the same or adjacent ROI sextant in 7 of these cases. For the PIRADS5 cohort, TB yielded dominant gland pathology in 49 (80%) patients. Considering SB, only 1 patient was upgraded from clinically insignificant to csPCa, with ROI and SB sextants identical. Overall, TB detected csPCa in 75.5% and 98.4% of patients with PIRADS4 and 5 lesions, respectively. Increased perilesional sampling may have detected csPCa in all of the PIRADS5 cohort, but ROI plus adjacent sextant sampling would have missed 10% csPCa in the PIRADS4 cohort.

Conclusions: TB plus adjacent sextant sampling may prove sufficient for PIRADS5 lesions. The high rate of missed csPCa even with addition of adjacent sextant sampling requires combined biopsy for PIRADS4 lesions.

MP3-07

Pivotal Trial of MRI-Guided Transurethral Ultrasound Ablation in Men With Localized Prostate Cancer: Three-Year Follow-up and Single-center Experience
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Introduction and Objective: We report three-year outcomes from the pivotal trial of MRI-guided transurethral ultrasound ablation (TULSA) for localized prostate cancer, and single-center outcomes for patients treated at our institution.

Methods: Across 13 centers, 115 men with localized prostate cancer (≤ T2b, PSA ≤ 15ng/mL, GG 1-2) underwent whole-gland ablation from 2016-2018, including 7 at our institution. Under the same protocol, 18 additional men were treated from 2020-2022, including 12 at our institution. Primary endpoints were PSA reduction and safety at 1-year. Secondary endpoints included MRI and 10-core biopsy, and quality-of-life, PSA, and salvage to 5-years.

Results: For the first 115 men, median PSA decreased 95% from 6.3ng/mL to 0.26ng/mL nadir, stable at 0.70ng/mL through 3 years. At 1-year, median prostate volume decreased from 37cc to 3cc, and GG2 disease was eliminated in 54/68 men (79%). By 3 years, 15 men (13%) received salvage treatment. The rate of Grade 3 adverse events was 8%, all resolved by 1 year. By 3 years, erections sufficient for penetration and pad-free continence were maintained by 38/50 (76%) and 56/61 (92%) men. For the 19 men treated at our institution, median PSA decreased 97% from 6.2ng/mL to 0.20ng/mL nadir. At baseline 15/19 men had GG2, which was absent in all 9 who completed 1-year biopsy. 2/19 (10%) received salvage treatment, both uncomplicated. 4 men incurred stricture and/or bladder neck contracture, managed endoscopically. A factor associated with these complications was the presence of calcifications in the beam path which may create a heat sink and induce boiling.

Conclusions: Three-year follow-up demonstrates durable disease control, low toxicity, and stable quality-of-life for whole-gland TULSA for localized prostate cancer, and feasibility of salvage treatment. Our institutional experience reinforces the safety and efficacy demonstrated in the pivotal study, and supports the importance of patient screening and treatment protocols to minimize complications.

MP3-08

Assessing the Safety and Efficacy of Extended VTE Prophylaxis in Patients Undergoing Radical Prostatectomy
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Introduction and Objective: Oncology patients undergoing radical prostatectomy (RP) and pelvic lymphadenectomy (PLND) are at an elevated risk for venous thromboembolism (VTE). Current evidence for or against the use of extended VTE prophylaxis (30-days post-operatively) post-RP is limited. We reviewed our institutional experience with extended VTE prophylaxis (eVTEP) following radical prostatectomy.

Methods: We reviewed Fox Chase Cancer Center's tumor registry for adult patients undergoing radical prostatectomy with and without a PLND between 2008 to 2020. Patient's that received eVTE were matched by age and BMI (within 5 units), and exactly matched on Gleason score (GS: 6 vs. 7 vs. > 7), pathologic T stage (pT2 vs. pT3/4), and PLND (yes vs. no) with patients that did not receive VTE prophylaxis (VTEP) during their hospitalization. We compared the incidence of 30-day symptomatic VTE, symptomatic lymphocele, or readmission for bleeding in patients with eVTEP vs. no VTEP using the McNemar's test.

Results: Of 312 patients with eVTEP and 739 controls no VTEP, we identified 307 matched pairs, yielding a cohort of 614 patients. Age and BMI were balanced between patients undergoing eVTEP and no VTEP (standardized difference < 0.1). We noted similar incidence of symptomatic VTE for patients with eVTEP (1.0%) compared with patients with no VTEP (1.6%, p=0.688). Additionally, we saw similar incidence of symptomatic lymphocele and readmission for bleeding among patients with eVTEP and no VTEP (3.3% vs.1.3%, p = 0.18 and 0.7% vs. 0.3%, p > 0.999, respectively).

Conclusions: Patients with eVTEP had similar incidence of 30-day post-op symptomatic VTE, lymphocele and readmission for bleeding when compared to matched patients who only received intraoperative prophylaxis. These preliminary data suggest eVTEP may represent overtreatment given the similar outcomes in patients that received eVTEP vs. no VTEP. Continued studies are needed to help guide the use of eVTE prophylaxis in patients undergoing RP.

Moderated Poster Session 3: Oncology 1

MP3-09

Longitudinal Assessment of Urgency Outcomes Following Robotic Prostatectomy
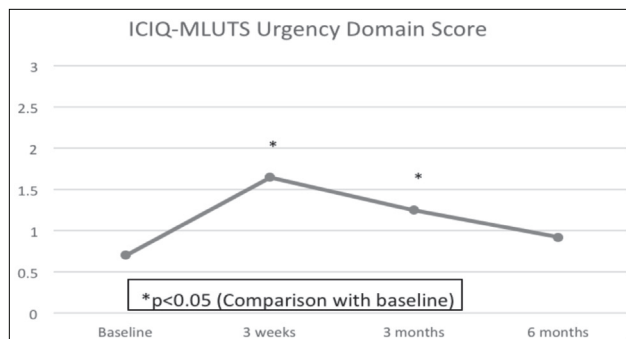
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Introduction and Objective: Stress urinary incontinence (SUI) is a well-known adverse outcome following robotic-assisted laparoscopic prostatectomy (RALP). As such, extensive investigation is available to understand SUI progression and treatment strategies. In contrast, little focus has been placed on understanding the natural history and impact of urgency symptoms following RALP. The UVA prostatectomy functional outcomes program (PFOP) was developed to assess functional outcomes following RALP. The present study was a post-hoc analysis focused on assessing urgency outcomes in this cohort.

Methods: We performed a single-center retrospective review of prospectively collected data on PFOP patients with a follow up of 6 months. Urgency and quality of life outcomes were assessed utilizing ICIQ-MLUTS, Urgency Perception Score (UPS), and IIQ-7 questionnaires. Primary study outcomes of our study included the ICIQ-MLUTS urgency domain score and UPS score. Covariates were assessed, including BMI, age, and the presence/absence of in-person pelvic floor physiotherapy.

Results: Analysis included 40 patients achieving 6-month follow-up. Mean patient age was 62.8 (±7.5) years. Mean ICIQ-MLUTS urgency domain scores over time are demonstrated in Figure 1 and demonstrate worsening urgency through 3-months, compared to baseline. The mean difference in ICIQ urgency score compared to baseline was 0.93 (±1.22) (p < .05), 0.53 (±1.24) (p < .05), and 0.18 (±1.14) (p = NS), at 3-weeks, 3-months, and 6-months. Similarly, statistically significant differences in UPS score compared to baseline were found at 3 weeks, but not at 3 or 6 months. These changes remained significant on multivariate analysis.

Conclusions: Our data demonstrate that a significant worsening of urgency as compared to baseline is seen following RALP. This deterioration persisted through 3-month follow-up, with improvement to baseline levels by 6-month assessment. These findings suggest that approaches to address short-term urgency may be helpful following RALP.

ICIQ-MLUTS Urgency Domain Score

*p<0.05 (Comparison with baseline)

MP3-10

Urinary Anastomosis Leak in Radical Cystectomy: Outcomes and Predictive Factors

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Introduction and Objective: Muscle-invasive bladder cancer (MIBC) represents approximately 25% of all bladder cancer and carries a significant risk of mortality with approximately 17,980 deaths in 2020. Neoadjuvant chemotherapy (NAC) and radical cystectomy (RC) are the standard of care for MIBC. There is a predicted ureteral anastomotic failure rate of 3% following radical cystectomy. Our objective was to identify risk factors for ureteral anastomotic breakdown following a radical cystectomy in the treatment of MIBC.

Methods: The 2020 National Surgical Quality Improvement Project (NSQIP) data was analyzed for cystectomy patients. 6103 patients were evaluated, 1854 patients met the inclusion criteria of MIBC treated with RC. Patients were divided into 2 groups: anastomotic leak vs. no leak. Additional variables were analyzed including: patient demographics, predictive factors and outcomes. Multivariable logistic regression model was used to identify the odds of urinary anastomotic leak.

Results: The overall urinary leak rate was 3.67%. Congestive heart failure was found to be significant predictor with odds ratio of 7.17 (p = 0.02). Risk factors significant for anastomotic leak included: chemotherapy within 90 days (95% CI, 1.17-3.41; p = 0.01), mean operation time (95% CI, 1.00-1.01; p < 0.01), deep surgical site infection (95% CI, 5.43-74.0; p < 0.01), organ surgical site infection (95% CI, 4.93-15.85; p < 0.01), pneumonia (95% CI, 1.73-9.11; p < 0.01), and renal insufficiency (95% CI, 1.79-10.26; p < 0.01).

Conclusions: Congestive Heart Failure and Neoadjuvant Chemotherapy prior to a radical cystectomy were found to be an indicator of increased anastomotic leak postoperatively. Patients with urinary anastomotic leak have statistically significant increased surgical site infection, total operating time, pneumonia, and renal insufficiency.

Table 1. Primary and Secondary Outcomes: Anastomotic Leak vs. No Anastomotic Leak Groups

Cofactor	Anastomosis Leak	No Anastomosis Leak	Odds Ratio	95% CI	P Value
Primary Outcome:					
Chemotherapy (Within 90 Days) (%)	35 (51.47%)	640 (35.87%)	2.00	1.1718 – 3.4189	0.01
Prior Pelvic Radiotherapy (%)	7 (10.30%)	157 (8.80%)	-	-	-
Secondary Outcomes:					
Mean Total Operation Time (Range)	387.30 (177 – 802)	324.82 (26 – 899)	1.00	1.0019 – 1.0060	< 0.01
Mean Length of Hospital Stay (Range)	11.5 (4 – 30)	7.7 (0 – 67)	-	-	-
Superficial Surgical Site Infection (%)	2 (2.94%)	85 (4.76%)	-	-	-
Deep Incisional Surgical Site Infection (%)	4 (5.88%)	11 (0.62%)	20.04	5.4300 – 74.026	< 0.01
Organ Space Surgical Site Infection (%)	28 (41.18%)	106 (5.94%)	8.85	4.9338 – 15.854	< 0.01
Pneumonia (%)	12 (17.65%)	48 (2.69%)	3.97	1.7302 – 9.1095	< 0.01
Progressive Renal Insufficiency (%)	10 (14.71%)	37 (2.07%)	4.29	1.7918 – 10.261	< 0.01
Pulmonary Embolism (%)	4 (5.88%)	17 (0.95%)	-	-	-
Post-Op Sepsis (%)	15 (22.06%)	126 (7.06%)	-	-	-
Unplanned Readmission (%)	27 (39.71%)	350 (19.62%)	-	-	-
Urinary Tract Infection (%)	12 (17.65%)	125 (7.00%)	-	-	-
DVT / Thrombophlebitis (%)	3 (13.64%)	38 (2.13%)	-	-	-
Acute Renal Failure (%)	4 (5.88%)	20 (1.12%)	-	-	-
Bleeding Transfusion (%)	33 (48.53%)	544 (30.49%)	-	-	-
Rectal Injury (%)	3 (4.41%)	29 (1.63%)	-	-	-
Prolonged NPO or NGT Use (%)	32 (47.06%)	279 (15.64%)	-	-	-

P Value represents variables with significant contribution to urinary anastomosis leak outcomes, determined by stepwise logistic regression analysis. Blank spaces represent variables without significant contribution to the prediction of urinary anastomosis leak outcomes excluded from the regression equation or variables without enough data to be included in statistical analysis.

Table 2. Patient Demographics and Post Operative Outcomes, Urinary Anastomotic Leak vs. No Urinary Anastomotic Leak Groups

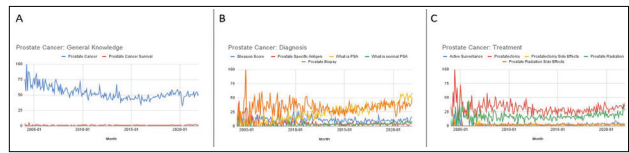| Cofactor	Total Cohort	Anastomotic Leak	No Anastomosis Leak	P Value
Total No. (%)	1852	68 (3.67%)	1784 (96.33%)	
Pt Characteristics:				
Mean yrs. age (Range)	69.57 (22-89)	66.93 (41-89)	69.66 (22-89)	P = 0.02
No. Pt gender male (%)	1495 (80.72%)	59 (86.76%)	1436 (80.49%)	
No. Pt Non-Caucasian race (%)	526 (28.40%)	22 (32.35%)	504 (28.25%)	
No. Pt current smoker (%)	412 (22.25%)	17 (25.00%)	395 (22.14%)	
Pre-Op Non-Functional Health Status (%)	1820 (98.3%)	66 (97.06%)	1754 (98.32%)	
10% Weight Loss (in past 6 months) (%)	90 (4.90%)	2 (2.94%)	88 (4.93%)	
Bleeding Disorder (%)	54 (2.9%)	2 (2.94%)	52 (2.91%)	
Currently on Dialysis (%)	10 (0.54%)	0 (0%)	10 (0.56%)	
Prior pelvic surgery (%)	904 (48.81%)	32 (47.05%)	872 (48.87%)	
Chemotherapy (within the past 90 days) (%)	675 (36.4%)	35 (51.47%)	640 (35.87%)	P < 0.01
Comorbid Conditions:				
Diabetes mellitus (w/ or w/o insulin) (%)	336 (18.14%)	19 (27.94%)	317 (17.77%)	P = 0.03
Congestive heart failure (%)	11 (0.59%)	2 (2.94%)	9 (0.50%)	P = 0.01
History of severe-COPD (%)	139 (7.51%)	7 (10.29%)	132 (7.40%)	
HTN (w/ medication) (%)	1073 (57.94%)	44 (64.71%)	1029 (57.68%)	
Steroid use for chronic conditions (%)	59 (3.19%)	1 (1.47%)	58 (3.25%)	
TNM Classification:				
Class T2 (T2, pT2a, pT2b) (%)	621 (33.53%)	21 (30.88%)	600 (33.63%)	
Class T3 (T3, pT3a, pT3b) (%)	860 (46.44%)	35 (51.47%)	825 (46.24%)	
Class T4 (T4, pT4a, pT4b) (%)	73 (3.94%)	4 (5.88%)	69 (3.87%)	
Class M0 (%)	1050 (56.70%)	38 (55.88%)	1012 (62.95%)	
Class M1 (%)	11 (0.59%)	2 (2.94%)	9 (0.50%)	
Class N0 (%)	1050 (56.70%)	43 (63.24%)	1123 (62.95%)	P < 0.01
Class N1 (%)	220 (11.88%)	10 (14.71%)	210 (11.77%)	

MP3-11

Long-term Characterization of Google Search Volumes and Trends from 2004 to 2021 for Prostate Cancer Knowledge, Diagnosis, and Treatment

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Introduction and Objective: The internet has become an important source of information for the general public and cancer patients alike. The primary objective of this study is to determine at which point in the management of prostate cancer do individuals seek information from the internet. Secondarily, to evaluate the changes in these search trends.

Methods: Monthly Google Trends data were collected from 2004 to 2021 for prostate cancer-specific search terms (ST). Temporal trends were analyzed by comparison of average search volumes indexes (aSVI) as well as analysis with Joinpoint software of six-month percent change (6mPC). Chloropleths were created for geographic pattern comparisons.

Results: ST associated with interventions demonstrated the highest aSV with ST such as "prostate biopsy" (aSVI: 33.59), "prostatectomy" (aSVI: 31.6) and "prostate radiation" (aSVI: 16.45) (figure 1). ST associated with treatment side effects are increasing with "radiation side effects" (21.4 6mPC, $p < 0.05$) and "prostatectomy side effects" (14.4 6mPC, $p < 0.05$) demonstrating strongly positive search trends. PSA-related ST also demonstrated a strong positive trend with "What is PSA?" (8.9 6mPC, $p < 0.05$), and "What is normal PSA?" (15.1, $p < 0.05$) (table 1). Geographic patterns demonstrated higher SV in the northeast, while the southern region demonstrated relatively higher SV for treatments and interventions.

Conclusions: The internet continues to be a growing part of the dynamics of diagnosing and treating prostate cancer with the internet being used more to understand the diagnosis and treatment plan. We found this most strongly demonstrated for information pertaining to PSA as well as procedures and interventions affecting the quality of life.

Variable	United States 2004-2021 Avg. 6mPC	CI	Period	Trend 1 6mPC	CI	Period	Trend 2 6mPC	CI	Period	Trend 3 6mPC	CI	Period	Trend 4 6mPC	CI
Prostate Cancer	-0.6*	-1.0, 0.3	1-23	-1.7*	-2.1, 1.4	24-36	1.2*	0.4, 2.1						
Prostate Cancer Survival	1.9	-3.3, 7.4	1-10	-1.5	-6.6, 3.8	10-13	25.3	25.3, 123.9	13-29	-2.9*	-5.3, 0.5	29-36	8.7*	0.6, 17.5
Gleason Score	2.2*	0.3, 4.2	1-3	59.4*	13.9, 123.1	3-36	-0.5*	-0.9, 0.0						
Prostate-specific antigen	0.8*	0.4, 1.3	1-22	-0.7*	-1.2, 0.2	22-36	3.2*	6.2, 4.1						
"What is PSA?"	8.9*	6.2, 11.7	1-36	8.9*	6.2, 11.7									
"What is Normal PSA?"	15.1*	6.5, 24.3	1-3	999.8*	437.8, 2149.0	3-8	-53.0*	-62.5, -41.1	8-11	196.2*	44.9, 505.8	11-36	2.6*	1.2, 4.1
Prostate Biopsy	0.7*	0.2, 1.2	1-36	0.7*	0.2. 1.2									
Active Surveillance	10	-0.5, 21.7	1-5	-5.4	(-33.7, 34.8)	5-8	195.6	-3.7, 807.2	8-36	1.1				
Prostatectomy - x	-0.2	-0.8, 0.5	1-25	-1.7*	-2.2, 1.1	25-36	3.3*	1.4, 3.5						
Prostate Radiation - x	1.22*	0.6, 1.9	1-36	1.22*	0.6. 1.9									
Prostatectomy Side Effects - o	14.4*	9.5, 19.6	1-36	14.4*	9.5, 19.6									
Radiation Side Effects - o	21.4*	13.1, 29.1	1-5	291.9*	130.6, 566	5-36	4.4*	1.9, 6.9						

*Indicates that the 6-Month Average Percent Change (6mPC) is significantly different from zero at the alpha = 0.05 level.

- The statistic could not be calculated.

x, o Indicates that the respective variables were compared to each other when determining SVI

MP3-12

Disparity in Length of Hospital Stay for Asians Post Radical Prostatectomy

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Introduction and Objective: Radical prostatectomy (RP) is the standard of care for localized prostate cancer. Often, length of stay (LOS) is used to compare outcomes of procedures, evaluating patient demographic or medical characteristics affecting postoperative courses. The goal of this study is to investigate whether LOS varied significantly between Asian and White post radical prostatectomy patients based on the American College of Surgeons NSQIP database. Additional patient demographics and medical characteristics were also analyzed.

Methods: The 2019 and 2020 NSQIP data was analyzed in a retrospective cohort study of RP patients. A total of 15,319 patients were evaluated, 9596 patients met the inclusion criteria of prostatectomy performed for localized prostate cancer. The groups were then divided by race into White (n = 9270) and Asian (n = 323) cohorts. T-tests were used for continuous variables and chi square analysis was used for categorical variables.

Results: The analysis found that the mean length of stay was (mean (SD)), 1.78 (1.7) in Asian population vs. 1.3 (0.9) days for White. Asians were older (64.8 vs. 63.7), found to have more preoperative open wounds (0.62% vs. 0.06%) and diabetics (19.8% vs. 9.19%). Asians were also less likely to be current smokers (4.6% vs. 8.9%) (table 1). Intraoperatively, Asian group had a longer mean operative time (231 vs. 206.9 minutes) (table 2).

Conclusions: The LOS following RP was half day(s) longer among Asians. Mean operative time was longer in Asians. Preoperatively, the Asian group was found to be older, and more likely to be diabetics treated taking oral medications.

Table 1. Patient Characteristics, Reported Asian Race vs White Race

	Total Cohort n = 9596		Asian n = 323		White n = 9273		P Value
Patient Demographics							
Mean Age (Range)	63.7	(39 – 89)	64.8	(45 – 83)	63.7	(39 – 89)	P < 0.01
Preoperative Considerations:							
Admitted from Other Than Home (%)	10	(0.1%)	1	(0.3%)	9	(0.1%)	
Preoperative ASA Classification Greater than 3 (%)	4105	(42.8%)	121	(37.5%)	3984	(43.0%)	
Preoperative Non-Functional Health Status (%)	8	(0.08%)	0	(0.0%)	8	(0.08%)	
Preoperative Open Wound or Wound Infection (%)	8	(0.08%)	2	(0.62%)	6	(0.06%)	P < 0.01
> 10% Decrease in Body Weight in 6 Months (%)	10	(0.1%)	0	(0.0%)	10	(0.1%)	
Prior Pelvic Surgery	1702	(17.7%)	49	(15.1%)	1653	(17.8%)	
Prior Pelvic Radiotherapy	56	(0.6%)	0	(0.0%)	56	(0.6%)	
Chemotherapy (within 90 days of surgery) (%)	86	(0.9%)	0	(0.0%)	86	(0.9%)	
Comorbidities:							
Transfusion within 72 hours of Surgery (%)	0	(0.0%)	0	(0.0%)	0	(0.0%)	
Hemodialysis Dependent (%)	19	(0.2%)	0	(0.0%)	19	(0.2%)	
Current Smoker (within past year) (%)	841	(8.8%)	15	(4.6%)	826	(8.9%)	P < 0.01
Diabetes Mellitus Treated with Insulin (%)	253	(2.6%)	9	(2.8%)	244	(2.6%)	
Diabetes Mellitus Treated with Oral Medication (%)	916	(9.6%)	64	(19.8%)	852	(9.19%)	P < 0.01
Congestive Heart Failure (%)	11	(0.1%)	0	(0.0%)	11	(0.1%)	
Severe COPD (%)	157	(1.64%)	2	(0.6%)	155	(1.67%)	
Hypertension (Treated with Medication) (%)	4859	(50.6%)	175	(54.2%)	4684	(50.5%)	
Steroid Use for Chronic Medical Condition (%)	200	(2.08%)	7	(2.2%)	193	(2.1%)	
Dyspnea (%)	207	(2.16%)	6	(1.9%)	201	(2.2%)	
Bleeding Disorder (%)	97	(1.0%)	3	(0.9%)	94	(1.01%)	
TNM Classification							
T1	31	(0.3%)	1	(0.3%)	30	(0.3%)	
T2	5433	(56.6%)	178	(55.1%)	5255	(56.7%)	
T3	4116	(42.9%)	142	(44.0%)	3974	(42.9%)	
T4	16	(0.2%)	2	(0.6%)	14	(0.2%)	
N0	7341	(76.5%)	247	(76.5%)	7094	(76.5%)	
N1	561	(5.9%)	23	(7.1%)	538	(5.8%)	
M0	4442	(46.3%)	116	(35.9%)	4326	(46.7%)	
M1	19	(0.2%)	0	(0.0%)	19	(0.2%)	

P Value represents T-test or Chi-Square, Outcomes with statistical significance are bolded.
ASA = American Society of Anesthesiologists, COPD = Chronic Obstructive Pulmonary Disorder

Table 2. Postoperative Outcomes Frequency Table, Reported Asian Race vs White Race

	Total Cohort n = 9596		Asian n = 323		White n = 9273		P Value
Primary Outcome							
Mean Length of Hospital Stay (Range)	1.29	(0 – 30)	1.78	(0 – 10)	1.28	(0 – 30)	P < 0.01
Secondary Outcomes							
Readmission (Any Reason) (%)	377	(3.9%)	9	(2.8%)	368	(4.0%)	
Colonic Anastomotic Leak (%)	111	(1.2%)	2	(0.6%)	109	(1.2%)	
Urinary Anastomotic Leak (%)	134	(1.4%)	2	(0.6%)	132	(1.4%)	
Blood Transfusion (%)	256	(2.7%)	8	(2.5%)	248	(2.7%)	
Mean Operative Time in Minutes (Range)	207.7	(33 – 704)	231	(61 – 593)	206.9	(33 – 704)	P < 0.01
Superficial Surgical Infection (%)	73	(0.8%)	0	(0.0%)	73	(0.8%)	
Deep Surgical Infection (%)	3	(0.03%)	0	(0.0%)	3	(0.03%)	
Organ Space Surgical Infection (%)	95	(1.0%)	2	(0.6%)	93	(1.0%)	
Post Op Sepsis (%)	54	(0.6%)	3	(0.9%)	51	(0.6%)	
Post Op Septic Shock (%)	6	(0.06%)	0	(0.0%)	6	(0.06%)	
Post Op DVT (%)	188	(2.0%)	3	(0.9%)	185	(2.0%)	
Post Op UTI (%)	62	(0.6%)	2	(0.6%)	60	(0.7%)	
Lymphocele or Lymphatic leak (%)	170	(1.8%)	4	(1.2%)	166	(1.8%)	
Progressive Renal Insufficiency (%)	21	(0.2%)	0	(0.0%)	21	(0.2%)	

P Value represents T-Test for continuous variables and Chi-Square for categorical variables.
UTI = Urinary Tract Infection, PNA = Pneumonia, CVA = Cerebrovascular accident, CPR = Cardiopulmonary resuscitation, DVT = Deep Vein Thrombosis, SNF = Skilled Nursing Facility, NPO = Nothing by mouth, NGT = Nasogastric Tube

MP3-13

Identifying Care Gaps in ADT Treatment Among Prostate Cancer Patients: An Institutional Retrospective Study

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Introduction and Objective: Androgen deprivation therapy (ADT) for prostate cancer can be administered by multiple departments. Traditionally, ADT was managed by urology, but in our and other institutions, ADT management includes multidisciplinary management by Medical Oncology. This can present care gaps when patients are co-managed. The objective of this study is to identify patients' missed ADT appointments and patterns in management.

Methods: Patients receiving ADT from July 2019 until June 2021 treated at a single academic institution were included in the analysis, separated into 3 one-year cohorts. Demographic factors, department, treatment year, and documentation of care plan information were collected. Chi Square analysis was done to determine impact of year, demographics, and department on care plan documentation.

Results: 385 patients with ages 38-92 years were included in this study. 262 (68.1%) were managed by Medical Oncology, and 123 (31.9%) were managed by Urology. There were 141 (36.6%) patients with no care plan documented, 51 (13.2%) had missed doses, and 5 (1.3%) were lost to follow up. Patients treated in 2019 or 2020 or managed by medical oncology were more likely to have undocumented care plans (P < 0.001) (Table 1). We noted that patients treated after the onset of the COVID-19 Pandemic (13.3% N = 223) had a higher proportion of missed doses than those treated prior (12.3%, N = 162).

Conclusions: Our findings show a considerable proportion of patients do not have well-documented ADT regimens and have missed treatments. Treatment year and service managing ADT treatment appeared to have a significant impact on a documented care plan being present. Our results highlight the importance of careful tracking and documentation of ADT treatment in a multidisciplinary setting to ensure quality care.

Treatment Year	Care Plan Absent N (%)	P Value	Missed Doses N (%)	P Value
2021	8 (8.0)		16 (12.3)	
2020	36 (33.0)	<0.001*	15 (14.3)	0.894
2019	97 (55)		20 (10.6)	
Service managing				
Medical Oncology	112 (42.7)	<0.001*	38 (14.5)	0.262
Oncology	29 (23.6)		13 (10.5)	
Race				
White	84 (35.5)		24 (10.1)	
Black	41 (34.2)	0.055	21 (17.5)	0.145
Asian	9 (45.0)		4 (20.0)	
Hispanic	7 (44.4)		2 (22.2)	
Treatment Duration				
Continuous	4 (3.8)		15 (14.3)	
Intermittent	0 (0)		1 (5.3)	
Long Duration	0 (0)	0.201	9 (10.8)	0.202
Short Duration	2 (5.3)		1 (2.68)	

Table 1. Number and Proportion of Patients with absent care plan and missed doses relative to treatment year, service, race, and treatment duration. A P value of <0.05 represents a significant difference.

MP3-14

Major Adverse Cardiovascular Events After Androgen Deprivation Therapy in Prostate Cancer Patients with Diabetes

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Introduction and Objective: Prostate cancer (PCa) patients treated with androgen deprivation therapy (ADT) may experience major adverse cardiovascular events (MACE). However, it is not clear whether MACE is caused by ADT itself. One risk factor is diabetes. A meta-analysis found that diabetes independently confers ~two-fold excess risk for a wide range of vascular diseases (e.g., coronary heart disease, ischaemic stroke). This study aims to evaluate the association between diabetes and MACE risk after ADT initiation using real-world data.

Methods: Clinical data were collected from a repository comprised of U.S. Medical and Pharmacy claims and Electronic Healthcare Records. Medical records (2010 to 2020) of PCa patients (n = 44,851) receiving LHRH agonist/antagonist injections were evaluated for rate of MACE-free survival in patients with and without diabetes. 178,388 LHRH injection entries and 965 MACE were identified. Exclusion criteria included MACE within six months prior to ADT initiation. MACE was defined as myocardial infarction, stroke, and death from any cause. Kaplan-Meier event-free survival curves compared MACE risk between patients with and without diabetes, with statistical significant differences evaluated by log-rank test.

Results: Overall MACE risk was 1.0% at one year after ADT initiation. MACE risk was higher for diabetes patients (1.2% vs. 0.9% at one year; 4.6% vs. 3.4% at four years, p < 0.001). (Figure 1)

Conclusions: MACE risk was lower than previously reported, potentially due to underreporting, but analysis of data over ten years from > 44,000 PCa patients likely reflects real-world trends accurately. Consistent with data from the general population, diabetes increased MACE risk. The difference between populations started at one year after ADT initiation. Clinicians should focus on monitoring and treating comorbidities to reduce MACE risk in PCa patients on ADT.

MACE[1] Risk by Diabetes[2] in PCa Patients After ADT Start[3]
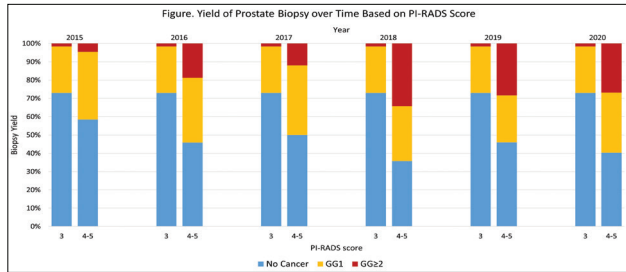
MP3-15

Longitudinal Experience with MRI-Guided Biopsy for the Detection of Higher Grade Prostate Cancer in a Large Active Surveillance Program

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Introduction and Objective: We examined our institutional experience over time in the detection of clinically significant prostate cancer using magnetic resonance imaging (MRI)-guided biopsy for men enrolled in active surveillance (AS).

Methods: At our institution, MRI has been incorporated for men in AS since 2015. Our study examined AS patients with grade group (GG) 1 disease undergoing surveillance biopsy after a positive MRI (PI-RADS ≥ 3) from 2015 to 2020. The transperineal (TP) biopsy approach was introduced at our institution in 2018, and urologists have used either the TP or transrectal (TR) approach at their discretion. Comparative and time series statistical methods were used for analysis.

Results: A total of 856 MRI-guided biopsies were performed, of which 186 (21.7%) were TP. The proportion of TP biopsies increased from 14.7% in 2018 to 61.3% in 2020 (P < 0.001). The presence of prostate cancer was confirmed in 326 MRI-positive lesions, of which 108 (33.1%) had GG ≥ 2 disease. Among patients with PI-RADS 4-5 lesions, there was an increase in the detection of GG≥2 over time, from 4.6% in 2015 to 26.9% in 2020 (P < 0.001) [Figure]. In TR biopsies, the detection of GG ≥ 2 disease in PI-RADS 4-5 lesions increased from 4.6% in 2015 to 21.4% in 2020 (P = 0.01). In TP biopsies, the yield of PI-RADS 4-5 lesions for GG≥2 disease was high at inception in 2018 at 42.9% and did not change over time (P = 0.43).

Conclusions: The detection of GG≥2 prostate cancer in PI-RADS 4-5 lesions in our AS population has increased significantly between 2015 and 2020. Both increased targeting experience and incorporation of TP biopsies likely contribute to improved detection of clinically significant prostate cancer over time.

Figure. Yield of Prostate Biopsy over Time Based on PI-RADS Score

MP4-01

Neoadjuvant Chemotherapy as a Risk Factor for Urinary Anastomotic Leak in Patients Undergoing Radical Cystectomy

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Introduction and Objective: Muscle-invasive bladder cancer (MIBC) represents approximately 25% of all bladder cancer and carries a significant risk of mortality. Neoadjuvant chemotherapy (NAC) and radical cystectomy (RC) is the standard of care for MIBC. One complication associated with RC is ureteral anastomotic leak with a predicted rate of 3%. The objective of this National Surgical Quality Improvement Project (NSQIP) database analysis is to determine if correlations exist between RAD and/or NAC before RC and anastomotic leak in the treatment of MIBC.

Methods: The 2019 and 2020 NSQIP data was analyzed for cystectomy patients. A total of 6103 patients were evaluated with 1852 meeting inclusion criteria of MIBC (T Stage = T2, T2a, T2b, T3, T3a, T3b, T4, T4a, T4b) treated with RC. Patients were divided into 4 groups: RC only, RC+NAC, RC+RAD, RC+NAC+RAD with NAC being given within 90 days of RC. Additional variables such as age, comorbidities, operative time, and others were also analyzed (table 1). One tailed two proportion Z test was used to calculate the rate of urinary leaks between the different groups.

Results: Overall urinary leak rate was 3.67%. 1075 patients underwent RC alone, 102 patients received RC+RAD, 613 patients received RC+NAC, and 62 patients received RC+NAC+RAD; anastomotic leak rates were 2.88% (p = 0.98), 1.96% (p = 0.83), 4.89% (p = 0.02), and 8.06% (p = 0.03) respectively (table 2).

Conclusions: We conclude that there is an increased rate of urinary anastomotic leak in the RC+NAC group and RC+NAC+RAD group compared to other groups.

Table 1. Patient Demographics and Post Operative Outcomes, Groups A – D

Table 2. Comparison of Anastomotic Urinary Leak Rate Between Groups A - D

	No. Pt with Urinary Anastomosis Leak (%)	No. Pt Without Urinary Anastomosis Leak (%)	p Value
RC Only	31 (2.88%)	1044 (97.11%)	p = 0.98
RC + Rad	2 (1.96%)	100 (98.03%)	p = 0.82
RC + NAC	30 (4.89%)	583 (95.10%)	**p = 0.02**
RC + NAC + Rad	5 (8.06%)	57 (91.93%)	**p = 0.03**

P Value represents two sample proportion z-test, normal distribution (right-tailed), significant values are bolded.

Moderated Poster Session 4: Oncology 2

MP4-02

Use of the Novel Platinum Analog Dicycloplatin in Treatment of Urothelial Carcinoma of the Bladder

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Introduction and Objective: Platinum-based chemotherapies are an important component of standard-of-care regimens for high grade and recurrent low grade urothelial carcinoma (UC) of the bladder in both the neoadjuvant and adjuvant settings. However, these nephrotoxic drugs are often dose-limiting in such regimens. Cisplatin and carboplatin are most used. However, dicycloplatin (DCP) has better solubility and stability, giving it comparable efficacy and better tolerability. Case reports suggest use of DCP as an effective primary treatment for high-grade, non-muscle invasive bladder cancer. We exposed grade II-IV TCC cell lines to DCP in vitro to demonstrate comparable efficacy to other platinum analogs.

Methods: Our high grade (IV) in vitro bladder UC cell line (TCCSUP) was exposed to varying concentrations of cisplatin (0-600 ug/mL), carboplatin (0-600 ug/mL), oxaliplatin (0-4.0 ug/mL), and DCP (0-350 ug/mL). Further, our grade II-IV cell lines were exposed to varying concentrations of DCP (0-350 ug/mL) to assess time and concentration dependence of growth inhibition. Percent growth inhibition was determined following exposures of 24, 48, and 72 hours using exposure to MTT, a tetrazolium dye, at the given time intervals to assess mitochondrial dehydrogenase activity with an absorbance assay.

Results: At the tested concentrations, DCP, cisplatin, and carboplatin were effective in achieving > 90% cell-kill rates at 72 hours exposure. It appears that concentrations of 325 ug/mL DCP, 50 ug/mL cisplatin, and 600 ug/mL carboplatin are sufficient for > 90% cell-kill, with cisplatin boasting the highest kills at the lowest concentration and time intervals. Dose- and time-dependent cell-kill were demonstrated at varying concentrations of DCP in grade II-IV cell lines.

Conclusions: Our results show in vitro cell-kill efficacy of DCP in a time and concentration-dependent manner in grade II-IV UC cell lines, showing promise for its IV, PO, and intravesical use for TCC of the bladder in the primary and adjuvant/neoadjuvant setting. Washout studies are ongoing.

MP4-03

Assessment of Variability in Radiologists' Interpretation of Prostate MRIs with Targeted Biopsy in Comparison to Standard Biopsy Outcomes in Michigan Area Practices

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Introduction and Objective: Prostate multiparametric magnetic resonance imaging (MRI) and MRI guided biopsies are used to diagnosis clinically significant prostate cancer. Though the Prostate Imaging Reporting and Data System (PI-RADS) version 2.1 was established to standardize the collection and interpretation of prostate MRIs, there continues to be inaccurate interpretations. We evaluated the positive predicative value of prostate MRIs in detecting clinically significant prostate cancer in the Michigan area practices.

Methods: Using the Michigan Urological Surgery Improvement Collaborative (MUSIC) registry, we identified 2995 patients who underwent prostate cancer evaluation with prostate MRIs. We assessed prostate MRI interpretations done by 64 radiologists and compared the histopathological results from standard core and targeted biopsies. Descriptive and comparative statistical analyses were performed using Microsoft Excel with an alpha level of 0.05.

Results: Of the 64 radiologists, 91% (58/64) had at least one result that was upgraded to high grade after a standard 12 core biopsy. There was no statistical significance in the number of MRI readings upgraded or variation across radiologists. Prostate MRI results were upgraded to a PI-RADS 3 by 93.8% (30/32), PI-RADS 4 by 96.2% (50/52), and PI-RADS 5 by 100% (29/29) of radiologists after a targeted biopsy. Significant variation was observed in the number of prostate MRIs upgraded to PI-RADS 3, 4, and 5 (p < 0.001). The more aggressive the prostatic lesion, the greater the difference in PI-RADS score distribution amongst radiologists.

Conclusions: If prostate MRIs and MRI-targeted biopsies are done properly and read correctly, they can improve detection of clinically significant prostate cancer in academic and community centers. However, proper quality assurance programs and training should be mandated for radiologists and urologists to prevent erroneous results and harmful consequences to patients.
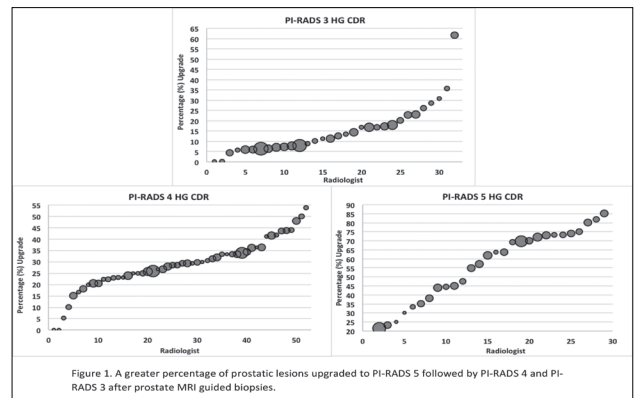

Figure 1. A greater percentage of prostatic lesions upgraded to PI-RADS 5 followed by PI-RADS 4 and PI-RADS 3 after prostate MRI guided biopsies.

MP4-04

Role of Histology in Influencing Outcomes after Cytoreductive Nephrectomy for Metastatic Renal Cell Carcinoma
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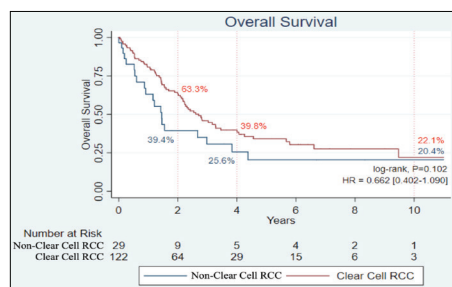[1]The Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Penn Presbyterian Medical Center, Philadelphia, PA, USA

Introduction and Objective: Due to the predominance of clear cell renal cell carcinoma (ccRCC), the role of cytoreductive nephrectomy (CN) in patients with non-clear cell RCC (nccRCC) is not well understood. We sought to characterize survival outcomes among patients who underwent CN for metastatic RCC based on histologic subtype.

Methods: We identified patients who underwent CN for metastatic RCC between 1996-2021 at our institution and stratified by histology. Baseline clinicopathologic characteristics were compared, and overall survival (OS) was assessed using the Kaplan-Meier method and Log-rank tests. Cox multiple regression analysis was used for univariate analyses.

Results: Of 155 patients identified, 126 (81%) had ccRCC, and 29 (19%) had nccRCC. Among patients with nccRCC, 12 (41%) had papillary RCC. Compared to ccRCC, patients with nccRCC were more likely to be Black (27.6 vs. 3.2%, p < 0.001) and present with preoperative symptoms (51.7% vs. 21.4%, p = 0.004). There was no observed difference in Charlson Comorbidity Index scores (p = 0.68), pathological tumor size (p = 0.47), tumor grade (p = 0.39), and sarcomatoid features (p = 0.68). OS was similar between ccRCC and nccRCC patients undergoing CN (Figure 1), and there was no difference in estimated blood loss (p = 0.34), intraoperative complications (p = 0.50), length of hospital-stay (p = 0.07), or 90-day readmission rates (p = 0.27), controlling for other factors.

Conclusions: nccRCC histology does not negatively impact survival outcomes after CN for metastatic RCC compared to those with ccRCC. While patient selection remains paramount to determine eligibility for CN, our results suggest that histologic subtype should not be an exclusionary factor when performing CN at high-volume, experienced centers.

MP4-05

Evaluation of the Growth Rate and Rate of Spontaneous Bleeds of Angiomyolipomas
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Introduction and Objective: Angiomyolipoma (AML) is a benign renal tumor that is classified as sporadic or tuberous sclerosis (TSC) related. Although most AMLs are diagnosed incidentally and are asymptomatic, some require treatment. Historically, the recommended threshold for intervention is 4 cm due to fear of hemorrhage and rupture. However, many patients with sporadic AML are asymptomatic at sizes > 4 cm. The aim of this study was to evaluate the rate of spontaneous bleeding of AMLs at Geisinger Health System to determine the need for intervention at 4 cm.

Methods: All patients with an AML from 1998-2021 were included. Clinical data were obtained and retrospectively analyzed.

Results: A total of 193 patients were included. Forty-three (22%) patients had an AML with initial size > 4 cm. Fourteen (7%) patients had a bleeding event, all were > 4 cm, with mean of 9 cm. 43% (6/14) patients with a bleeding event had a diagnosis of TSC. 4/19 patients with AMLs 4-6 cm had a bleeding episode. 74% (14/19) of patients with AML 4-6 cm underwent embolization or surgical intervention electively due to size. Of the remainder patients without any intervention, no patients had a bleeding episode. 10/24 patients

MP4-06

Wound Complication Rates After Inguinal Lymph Node Dissection for Penile Cancer
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Introduction and Objective: Inguinal lymph node dissection (ILND) is used for staging and treatment of penile cancer. However, ILND is characterized by a high morbidity and wound complication rate. We aimed to characterize wound complication rates of ILND in penile cancer patients.

Methods: The National Surgical Quality Improvement Program (NSQIP) database was queried for ILND procedures performed from 2005-2018 for penile cancer. 30-day complications and readmission rates were identified. Multivariable logistic regression was performed with covariates including age, ASA, BMI, smoking history, diabetes, and concomitant penectomy or pelvic lymph node dissection (PLND).

Results: We identified 92 penile cancer patients who underwent ILND. The median length of stay was 3 days, and the median operative time was 195 minutes (Table 1). Concomitant PLND was performed in 36 (39.1%) patients and 11 (12.0%) had a concomitant penectomy. Any complication occurred in 24 (26.1%) patients experienced, including 12 (13.0%) with wound complications. Readmission occurred for 9 (9.8%) patients. On multivariable logistic regression, wound complications were associated with BMI ≥ 30 (OR 6.759, 95% CI 1.073-42.594) and smoking history (OR 12.235, 95% CI 1.915-78.152) (Table 2); conversely penectomy was not associated with increased complications (OR 0.873, 95% CI 0.085-8.983).

Conclusions: Wound related complications remain prevalent after ILND for penile cancer. Predictors of wound complications after ILND include BMI and smoking history, while concomitant penectomy does not increase wound complications. Modern efforts to decrease ILND complication rates, including minimally invasive techniques and perioperative pathways to optimize nutritional and functional recovery may be specially considered for those with increased complication risks.

Table 1 – Characteristics of Penile Cancer Patients Undergoing ILND (n=92)

Patient Characteristics	Median (IQR)/n(%)
Age	62 (54-72)
Operative Time (mins)	195 (154-308)
Length of stay (days)	3 (2-5)
ASA ≥ 3	64 (69.6%)
BMI ≥ 30	42 (45.7%)
Diabetes History	27 (29.3%)
Smoking History	17 (18.5%)
Concomitant PLND Performed	36 (39.1%)
Concomitant Penectomy Performed	11 (12.0%)
Any Complication (%)	24 (26.1%)
Wound Complication (%)	12 (13.0%)

Table 2 - Multivariate Logistic Regression of Risk Factors Associated with Wound Complications

	OR	95% CI	p-value
Age	0.982	0.925 - 1.043	0.552
ASA ≥ 3	2.376	0.367-15.401	0.364
BMI ≥ 30	6.759	1.073-42.594	**0.042**
Smoking History	12.235	1.915-78.152	**0.008**
Diabetes History	1.953	0.415-9.188	0.397
Concomitant PLND	1.794	0.430-7.481	0.423
Concomitant Penectomy	0.873	0.085-8.983	0.909

that had AMLs > 6 cm bled, with mean size 10.9 cm. 93% of patients didn't require any intervention. 88% of those patients had follow-up within the last 2 years with no complications from their AML. Range of clinical and imaging follow-up was 278 and 277 months, respectively.

Conclusions: Recent studies have questioned the historic AML intervention threshold of 4 cm. Our data suggest that intervention can potentially be delayed for AMLs at larger sizes. Further studies are needed to further delineate intervention criteria at specific sizes and surveillance of sporadic AMLs.

Number of patients with spontaneous bleeds and elective interventions based on AML size group

AML Size	Total Number of Patients	Spontaneous Bleed	Elective Intervention
< 4 cm	150	0	9
4-6 cm	19	4	14
> 6 cm	24	10	4

Moderated Poster Session 4: Oncology 2

MP4-07

Comparing Use of Suprapubic Tube to Urethral Cather for Urinary Management After Magnetic Resonance Imaging-Guided Whole Gland Transurethral Ultrasound Ablation (TULSA)
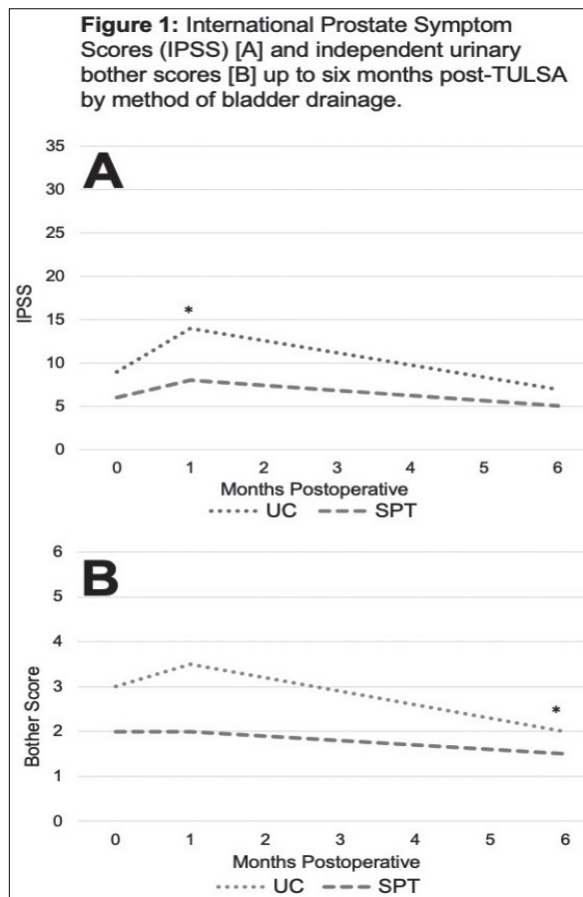M. Rabinowitz[1], N. Haney[1], A. Meyers[2], C. Dora[2], C. Pavlovich[1]
[1]Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Mayo Clinic in Florida, Jacksonville, FL, USA

Introduction and Objective: We aimed to evaluate urinary outcomes after magnetic resonance imaging-guided whole gland transurethral ultrasound ablation (TULSA) of the prostate, comparing postoperative suprapubic tube (SPT) to indwelling urethral catheter (UC). The ideal method for post-TULSA bladder drainage via SPT versus UC has not been established.

Methods: Two-institution, retrospective analysis of whole gland TULSA for men with grade group 1 and 2 prostate cancer. One institution placed SPT at the time of TULSA with clamp trials (day 10) and removal once voiding. The second placed UC until void trial (day 7). Outcomes included IPSS, urinary bother score, catheter reinsertion, strictures, clean intermittent catheterization (CIC), and incontinence.

Results: Forty-five patients (median age: 67) were analyzed. The UC cohort (N = 26) was older (P = 0.007) than the SPT cohort (N = 19) but with similar baseline prostate volumes, IPSS and bother scores. There was no significant difference between IPSS scores at six months and baseline, regardless of urinary management strategy, although UC patients experienced more severe urinary symptoms at one month. Patients receiving UC had fewer days with catheter (P = 0.013). Rates of infection were similar between groups. Six strictures were observed with non-significant distribution (4/19 [21.1%] SPT; 2/26 [7.7%] UC). At 6 months, incontinence rates were low and similar between groups (2/19 [10.5%] SPT; 4/26 [15.4%] UC) and only one patient (UC) required CIC.

Conclusions: We observed no difference in 6-month urinary outcomes or complications associated with bladder drainage strategy (SPT vs. UC). Our findings suggest that both SPT and UC are viable options for bladder drainage following whole gland TULSA.

Figure 1: International Prostate Symptom Scores (IPSS) [A] and independent urinary bother scores [B] up to six months post-TULSA by method of bladder drainage.

MP4-08

Delaying Surgery in Favorable-Risk Prostate Cancer Patients: An NCDB Analysis of Outcomes
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Introduction and Objective: Concern for overtreatment in very low-, low-, and favorable intermediate-risk prostate cancer has promoted a more conservative approach through active surveillance (AS). We analyzed the National Cancer Database (NCDB) to determine if delaying radical prostatectomy greater than six months is associated with increase in the rate of secondary treatment (adjuvant or salvage) and/or adverse pathology at radical prostatectomy.

Methods: Within the NCDB, 40 to 75 year old men with very low-, low-, and favorable-intermediate risk prostate cancer, defined by the National Comprehensive Cancer Network, were identified from January 2010 to December 2016. These individuals received radical prostatectomy either before or after 6 months following diagnosis. Clinical, demographic, and pathologic characteristics were obtained. Adverse surgical outcomes were defined as pT3-4N0-1. Multiple logistic regression models were used to predict delay in treatment, adverse surgical outcomes, and receipt of secondary therapy. Survival analysis was performed using Cox Proportional Hazards Model and the Kaplan-Meier Method.

Results: Of the 95,425 patients that met inclusion criteria, only 5,776 patients received surgery 6 months after diagnosis. The median time of delay was 7.4 months compared to 2.3 months in the immediate treatment group. Delaying surgery had no statistically significant impact on adverse surgical outcomes, regardless of risk category. Patients who had delayed surgery, however, were less likely to receive additional therapy (either adjuvant or salvage) (OR 0.64, 95% CI 0.51-0.78, P < 0.001). Survival analysis showed that both groups fared well, with 5-year survival of 97% for both groups. Treatment group was not predictive of survival.

Conclusions: Delaying surgery more than 6 months following diagnosis showed no impact on adverse surgical outcomes or overall survival. These patients were also less likely to require secondary therapy. The results suggest that even patients who "fail" AS and require subsequent surgery have comparable positive outcomes to those who receive immediate treatment.

Table 1: Baseline characteristics, postoperative urinary outcomes, and adverse events of patients receiving Suprapubic Tube (SPT) or Urethral Catheter (UC) at time of TULSA. Median values reported with interquartile ranges, *n* reported with percentage. Statistically significant *P*-values at α =0.05 are bolded. IPSS= International Prostate Symptom Score. BNC = bladder neck contracture; CIC = clean intermittent catheterization.

	Suprapubic Tube (SPT)	Urethral Catheter (UC)	Total Cohort	*P*-value
Baseline and Preoperative Characteristics				
Number of Patients (%)	19 (42.2%)	26 (57.8%)	45 (100%)	-
Age at Treatment	66 (52-76)	71 (61-82)	67 (63-72)	**0.007**
Prostate Volume (cc)	37 (30-44)	41 (33-57)	39 (30-50)	0.2
Baseline IPSS	6 (4-8)	9 (4.3-17)	7 (4-12)	0.13
Baseline Bother	2 (0-3)	3 (2-3.8)	2 (1-3)	0.09
Baseline PSA (ng/mL)	6.1 (4.5-7.1)	7.95 (5.7-11)	6.8 (5.0-8.6)	**0.003**
Postoperative Urinary Outcomes				
Follow Up in Months	13 (9.5-49)	11 (4-12)	11 (5-14)	0.09
Most Recent PSA (ng/mL)	0.2 (0-0.75)	0.5 (0.1-1.4)	0.4 (0.1-1.3)	0.8
1-month IPSS	8 (5.5-18)	14 (10-20)	12 (7-18)	0.1
1-month Bother	2(1-4)	3.5 (2-5.8)	3 (2-5)	0.2
6-month IPSS	5 (3-13)	7 (4.5-12)	6 (3-12)	0.6
6-Month Bother	1.5 (1-2)	2 (0.5-3)	2 (1-2)	0.9
Catheter Duration and Adverse Events				
Total Days catheterized	12 (11-15)	7 (7-14)	11 (7-14)	**0.013**
Number of Patients catheterized greater than 14 days	5 (26.3%)	7 (26.9%)	12 (26.7%)	0.96
Catheter Reinsertion Rate	4 (21.1%)	9 (34.6%)	13 (28.9%)	0.3
Genitourinary Infection Rate	7 (36.8%)	11 (42.3%)	18 (40.0%)	0.8
Urethral stricture/BNC Rate	4 (21.1%)	2 (7.7%)	6 (13.3%)	0.2
Required CIC, any time	2 (10.5%)	1 (3.8%)	3 (6.7%)	0.4
Required CIC at 6 months	0 (0%)	1 (3.8%)	1 (2.2%)	NS
Required Pad Use, any time	6 (31.6%)	4 (15.4%)	10 (22.2%)	0.2
Requiring Pads at 6 months	2 (10.5%)	4 (15.4%)	6 (13.3%)	0.6

MP4-09

Comparing Treatment Options for High-Risk Prostate Cancer Patients: An NCDB Analysis of Outcomes

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Introduction and Objective: The current standard therapy for high-risk prostatic adenocarcinoma is either radical prostatectomy (RP) or the combination of radiotherapy (XRT) with androgen deprivation therapy (ADT). We analyzed the National Cancer Database (NCDB) to compare patient characteristics and survival outcomes between treatment options to determine if there's an optimal strategy.

Methods: Within the NCDB, men with high-risk prostate cancer, defined by the National Comprehensive Cancer Network, were identified from January 2010 to December 2016. These individuals received either RP or XRT + ADT as their initial treatment course. XRT + ADT was defined as beam radiation to the pelvis with ADT initiated within 90 days. Clinical, demographic, and pathologic characteristics were obtained. Survival analysis was performed using Cox Proportional Hazards Model and the Kaplan-Meier Method. A multiple logistic regression model was used to predict receipt of secondary therapy (adjuvant or salvage) among RP patients.

Results: A total of 58,415 men were analyzed; 63% underwent RP first and 37% underwent XRT + ADT first. In a multivariable logistic regression model predicting treatment, the XRT + ADT group was more likely to have higher PSA, higher clinical stage, and higher Gleason score (all P < 0.001). Median follow-up was 3.33 years. Survival analysis showed that the RP group fared better (96.6% OS at median follow-up versus 90.1%), even while controlling for patient demographics and disease characteristics. The resulting hazard ratio for the XRT + ADT group compared to RP was 2.0 (95% CI 1.90-2.17, P < 0.001). Within the RP group, 5,273 (9%) received secondary therapy (XRT ± ADT) with a median time of 3.3 months from date of surgery.

Conclusions: These findings suggest that while each modality has its own risks and benefits, RP provides better survival outcomes over XRT + ADT when used as the primary definitive treatment course in well-selected high-risk patients.

MP4-10

Variability in Baseline Comorbidity Profiles in Men Undergoing Radical Prostatectomy: Experience from over 6000 Patients in the Pennsylvania Urologic Regional Collaboration (PURC)

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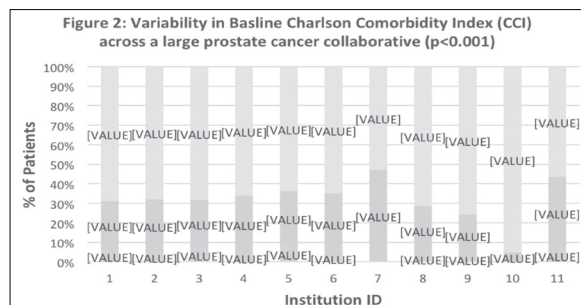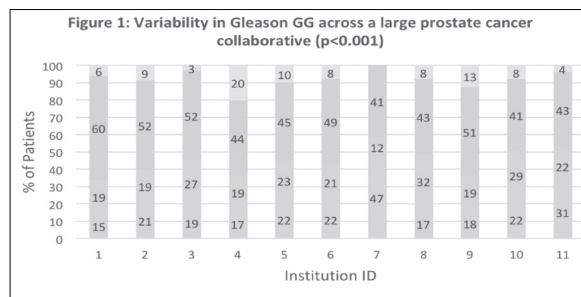[1]Pennsylvania Urologic Regional Collaborative (PURC), Philadelphia, PA, USA; [2]Penn State Health Milton S. Hershey Medical Center, Hershey, PA, USA

Introduction and Objective: Radical prostatectomy (RP) is one treatment option for clinically localized prostate cancer. Beyond disease characteristics, patient specific parameters may play a role in determining the optimal management approach. Ideally, surgical candidates will have a low comorbidity profile thereby reducing the risk of adverse perioperative events. We review data from a large statewide database to identify comorbidity and Grade Group variations in patients undergoing RP and implications on perioperative outcomes.

Methods: PURC is a physician-led quality collaborative established in 2015 between 11 participating practices. The database was reviewed for patients undergoing RP between 2015-2022. Datapoints of interest were Grade groups (GG) and baseline Charlson Comorbidity Index (CCI) were calculated, and patients were stratified into 4 groups. Variations between practices were recorded.

Results: 6175 patients who underwent RP were included. Across the cohort, when stratified by Grade group, the distribution included 475 (8%) GG1, 3195 (52%) GG2, 1395 (23%) GG3, and 1110 (18%) GG ≥ 4. CCI distribution revealed that 4267 (69%) were low risk (CCI 0), 1617 (26%) intermediate (CC 1-2), and 291 (5%) high-risk (CCI > 3). Significant variation was reported between different practices in GG (Figure 1) and CCI scores (Figure 2) for RP patients (p < 0.001 for both).

Conclusions: Substantial variation in RP patient comorbidities and pathologic findings were observed among different practices. Strategies to better standardize the optimal surgical prostate cancer patient may improve outcomes.

Figure 1: Variability in Gleason GG across a large prostate cancer collaborative (p<0.001)

Figure 2: Variability in Basline Charlson Comorbidity Index (CCI) across a large prostate cancer collaborative (p<0.001)

MP4-11

Intraoperative Lactic Acidosis is not Predictive of Morbidity or Mortality in Patients Undergoing Radical Cystectomies for Muscle Invasive Bladder Cancer

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Introduction and Objective: Radical cystectomy (RC) is the gold standard of treatment for muscle-invasive bladder cancer in eligible patients. At our institution, intraoperative lactate (LA) is often drawn during RCs and often found to be minimally elevated, but the clinical utility of this value remains unclear. Currently, there are no studies investigating perioperative LA in RCs. We aim to evaluate the association between perioperative LA levels and post-surgical morbidity and mortality after RC.

Methods: Relevant metrics and early (30-day) post-operative outcomes were collected retrospectively on patients with intraoperative LA values. Baseline patient and operative characteristics were stratified by intraoperative lactate level, and comparisons between these groups were analyzed by student's t-tests and chi-square analyses. Kaplan-Meier method was used to assess overall survival (OS) based on LA. Multivariate logistic regression analysis was performed for early postoperative complication.

Results: Of the 156 patients with intraoperative LA values, 52 (33%) had elevated LA. There was no statistically significant difference in baseline patient characteristics or operative parameters, and there was no difference in OS between patients with and without elevated intraoperative LA. On multivariate logistic regression, there was no significant relationship between intraoperative LA and early major postoperative complications, defined as myocardial infarction, sepsis, ileus, or hemorrhage within 30 days of surgery. Only Charlson Comorbidity Index (CCI) 3+, compared to CCI-2, was significant for any 30-day complication.

Conclusions: Our results suggest that intraoperative lactic acidosis is not predictive of early-postoperative complications. While the etiology of elevated LA remains unclear, further investigation of the pathophysiologic basis may be warranted.

Table 1 Baseline patient demographics, and operative characteristics

	Overall	Intraoperative Lactic Acid, mmol/L		
		≤2	>2	p-value
Patients, n	156	105	52	
Age, years, median (IQR)	71.1 (65.0-78.5)	73.2 (65.8-79.6)	69.7 (62.8-76.3)	0.6190
Race, n (%)				0.7266
White or caucasian	96 (65.8%)	63 (60.6%)	33 (63.5%)	
Non-white or other	50 (34.2%)	41 (39.4%)	19 (36.5%)	
Charlson Comorbidity (CCI), n (%)				0.1262
2	89 (56.7%)	64 (61.0%)	25 (48.1%)	
3+	68 (43.3%)	41 (39.0%)	27 (51.9%)	
Approach, n (%)				0.6477
Robotic	111 (71.6%)	74 (70.5%)	37 (74.0%)	
Open	44 (28.4%)	31 (29.5%)	13 (26.0%)	
Operative time, min				0.1940
Mean (±SD)	490 (±113)	480 (±113)	507 (±112)	
Median (IQR)	481 (415-549)	484 (391-559)	481 (444-541)	
Estimated blood loss, cc				0.9503
Mean (±SD)	614 (±665)	611 (±634)	619 (±733)	
Median (IQR)	400 (250-650)	400 (250-687.5)	500 (263-638)	
Length of stay, days				
Mean (±SD)	8.0 (±6.4)	8.4 (±7.0)	7.3 (±5.0)	0.1522
Median (IQR)	6 (5-8)	6 (5-9)	6 (5-7)	

Table 4 Multivariable logistic regression of early postoperative complications

	Any 30-Day Complication			Early MI			Early Sepsis			Early Ileus			Early Hemorrhage		
	OR	(95% CI)	p	OR	(95% CI)	p	OR	(95% CI)	p	OR	(95% CI)	p	OR	(95% CI)	p
LA, >2 mmol/L (ref. ≤2)	0.796	(0.378 - 1.673)	0.5449	0.499	(0.0522 - 4.769)	0.5226	1.989	(0.627 - 6.308)	0.2463	0.702	(0.182 - 2.704)	0.6024	0.769	(0.378 - 1.673)	0.7564
Age, per year	0.986	(0.951 - 1.022)	0.4466	1.002	(0.908 - 1.1506)	0.9656	0.960	(0.908 - 1.016)	0.1621	0.940	(0.880 - 1.004)	0.0606	0.986	(0.951 - 1.022)	0.504
Race, Non-White (ref. White)	1.247	(0.624 - 2.492)	0.5326	2.186	(0.345 - 13.858)	0.4011	1.675	(0.537 - 5.221)	0.3753	1.386	(0.405 - 4.741)	0.6036	1.247	(0.624 - 2.492)	0.1416
CCI, 3+ (ref. 2)	**2.753**	**(1.361 - 5.568)**	**0.0042**	1.949	(0.2997 - 12.678)	0.4793	1.038	(0.318 - 3.392)	0.9505	**3.995**	**(1.004 - 15.885)**	**0.0383**	2.753	(1.361 - 5.568)	0.9619
Approach, Open (ref. Robotic)	1.315	(0.622 - 2.779)	0.4738	1.617	(0.257 - 10.181)	0.6152	0.687	(0.175 - 2.690)	0.5798	0.792	(0.193 - 3.255)	0.7432	1.315	(0.622 - 2.779)	0.2062

MP4-12

The Utilization of Perfused Cadaver Simulation in Urologic Training

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Introduction and Objective: Today's residents are tasked with learning a broader skillset than ever before. This had led to concern that residents are not prepared for independent practice after residency. The objective of this study was to determine if participating in a surgical training session using perfused fresh human cadavers (PFHC) had a positive effect on urology residents' confidence in performing open and endoscopic procedures.

Methods: Urology residents at our institution participated in a surgical training session in the West Virginia University Fresh Tissue Training Program, which utilized fresh, never frozen cadavers with vascular perfusion. The session consisted of performing different urologic procedures (open and endoscopic) on the PFHCs. Residents were given a survey to rate their confidence in different urologic procedures before, after, and 6 months after the session. Each procedure on the survey had 3-6 questions associated with it, with scores ranging from 0 (no confidence) to 4 (great confidence). Scores for each procedure before and after the session were compared.

Results: Six residents participated in the session. There was an increase in the score for every procedure performed after the session. Scores at 6 month follow up remained higher than the pre-session scores. Residents believed the session was a true simulation of the conditions of live surgery and would increase their confident in handling future intra-operative consults.

Conclusions: PFHCs offer an excellent opportunity to teach a wide variety of urologic procedures to residents. Incorporation of PFHCs may be very useful in urologic training, and further studies on its use are warranted.

MP4-13

Pelvic Lymph Node Dissection in Non-Muscle Invasive Bladder Cancer, Factors and Outcomes

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Introduction and Objective: Non-muscle invasive bladder cancer (NMIBC) accounts for approximately 75% of new bladder cancer diagnoses. Pelvic lymph node dissection (PLND) has been shown to have a therapeutic benefit in NMIBC with radical cystectomy (RC). The aim of this data analysis was to determine the factors and outcomes for LN positive patients undergoing PLND with RC.

Methods: A total of 6103 patients were evaluated, 1245 patients met the inclusion criteria of LN (lymph node) evaluation post RC for NMIBC (T1, Ta, Tis). The groups were then subcategorized to LN positive (n = 53) and LN negative (n = 1119) The LN positive groups were defined as N1, N2, N3 and the LN negative groups were defined as N0 and Nx. Fisher's exact tests for continuous variables and Chi-squared analysis categorical variables were performed.

Results: The overall rate of LN involvement was 4.53%. In the LN positive group, N1, N2, N3 groups were distributed, 54.7%, 30.2%, 15.1%. The average number of LN evaluated were 22.8 and 18.9 in the LN positive and the LN negative groups. The average age of the cohort [mean (SD)] 67.6 (8.51) and 68.8 (9.3) for LN positive and LN negative. There was a statistically significant difference in chemotherapy within 90 days, 58.5% and 31.2% (p < 0.01) (Table 1). The outcome variables were compared between the LN positive and LN negative groups (Table 2).

Conclusions: The LN positive group had 3.9 more LN evaluated during PLND than the LN negative group. The LN positive group had greater rectal injury, return to the operating room, and wound disruption.

Table 1. Patient Characteristics, Lymph Node Positive vs Lymph Node Negative

	Total Cohort n = 1171	Lymph Node Positive n = 53	Lymph Node Negative n = 1118	P Value
Patient Demographics				
Mean Age in Years (Range)	67.6 (30 – 89)	67.6 (37 – 79)	68.8 (30 – 89)	
Male Gender (%)	919 (78.5%)	40 (75.5%)	879 (78.6%)	
Non-Caucasian Race (%)	294 (25.1%)	18 (34.0%)	276 (24.7%)	
Hispanic Ethnicity (%)	36 (3.1%)	1 (1.9%)	35 (3.1%)	
Preoperative Considerations				
Preoperative ASA Classification Greater than 3 (%)	903 (76.7%)	47 (88.7%)	856 (76.6%)	
Preoperative Non-Functional Health Status (%)	14 (1.1%)	0 (0.0%)	14 (1.3%)	
> 10% Decrease in Body Weight in 6 Months (%)	20 (1.7%)	1 (1.9%)	29 (1.7%)	
Preoperative Mechanical Bowel Prep (%)	256 (21.9%)	12 (22.6%)	244 (21.8%)	
Preoperative Oral Antibiotic Prep (%)	79 (6.7%)	2 (3.8%)	77 (6.9%)	
Prior Pelvic Surgery (%)	569 (48.6%)	29 (54.7%)	540 (48.3%)	
Prior Pelvic Radiotherapy (%)	80 (6.8%)	3 (5.7%)	77 (6.9%)	
Chemotherapy (within 90 days of surgery) (%)	380 (32.5%)	31 (58.5%)	349 (31.2%)	P < 0.01
ASA Classification:				
Class 1 (%)	4 (0.3%)	0 (0.0%)	4 (0.4%)	
Class 2 (%)	264 (22.5%)	6 (11.3%)	258 (23.1%)	
Class 3 (%)	839 (71.6%)	41 (77.4%)	798 (71.4%)	
Class 4 (%)	1 (0.09%)	0 (0.0%)	1 (0.09%)	
Comorbidities:				
Currently on Hemodialysis (%)	8 (0.7%)	0 (0.0%)	8 (0.7%)	
Current Smoker (within past year) (%)	228 (19.5%)	11 (20.8%)	217 (19.4%)	
Diabetes Mellitus Treated with Insulin (%)	250 (21.3%)	44 (83.0%)	902 (80.7%)	
Diabetes Mellitus Treated with Oral Medication (%)	164 (14.0%)	5 (9.4%)	159 (14.2%)	
Disseminated Cancer (%)	21 (1.8%)	1 (1.9%)	20 (1.8%)	
History of Severe COPD (%)	69 (5.9%)	4 (7.5%)	65 (5.8%)	
Hypertension (Treated with Medication) (%)	697 (59.5%)	28 (52.8%)	669 (59.8%)	
Steroid Use for Chronic Medical Condition (%)	36 (3.1%)	2 (3.8%)	34 (3.0%)	
Dyspnea (%)	64 (5.5%)	5 (9.4%)	58 (5.2%)	
Bleeding Disorder (%)	31 (2.6%)	3 (5.7%)	28 (2.5%)	

P Value represents T-test for continuous variables or Chi-Square for categorical variables.
ASA = American Society of Anesthesiologists, COPD = Chronic Obstructive Pulmonary Disorder, BUN: Blood urea nitrogen

Table 2. Postoperative Outcomes, Lymph Node Positive vs Lymph Node Negative

Outcome Variable	Total Cohort n = 1171	Lymph Node Positive n = 53	Lymph Node Negative n = 1118	P Value
Total Operation Time (Minutes) (Range)	332.6 (90 – 765)	351.4 (172 – 603)	331.7 (90 – 765)	
Length of Hospital Stay (Days) (Range)	7.0 (0 – 29)	7.3 (2 – 25)	7.0 (0 – 29)	
Acute Renal Failure (%)	15 (1.3%)	0 (0.0%)	15 (1.3%)	
Pt Requiring Bleeding Transfusion (%)	250 (21.3%)	16 (30.2%)	234 (20.9%)	
Bowel Anastomosis Leak (%)	39 (3.3%)	2 (3.8%)	37 (3.3%)	
Urinary Anastomosis Leak (%)	52 (4.4%)	4 (7.5%)	48 (4.3%)	
Cardiac Arrest Requiring CPR (%)	9 (0.8%)	0 (0.0%)	9 (0.8%)	
CVA/Stroke with Neurological Deficit (%)	4 (0.3%)	0 (0.0%)	4 (0.4%)	
Clostridium Difficile Colitis (%)	26 (2.2%)	1 (1.9%)	25 (2.2%)	
Discharge to Care Facility (%)	108 (9.2%)	5 (9.4%)	103 (9.2%)	
Drains (%)	1124 (96.0%)	50 (94.3%)	1074 (96.1%)	
Lymphocele/Lymphatic Leak (%)	73 (6.2%)	3 (5.6%)	70 (6.3%)	
Superficial Incisional Surgical Site Infection (%)	57 (4.9%)	2 (3.8%)	55 (4.9%)	
Deep Incisional Surgical Site Infection (%)	3 (0.3%)	0 (0.0%)	3 (0.3%)	
Organ Space Incisional Surgical Site Infection (%)	85 (7.3%)	3 (5.7%)	82 (7.2%)	
DVT/Thrombophlebitis (%)	24 (2.0%)	1 (1.9%)	23 (2.1%)	
Myocardial Infarction (%)	14 (1.2%)	0 (0.0%)	14 (1.3%)	
Pneumonia (%)	33 (2.8%)	0 (0.0%)	33 (3.0%)	
Prolonged Postoperative NPO or NGT Use (%)	191 (16.3%)	8 (15.1%)	183 (16.4%)	
Progressive Renal Insufficiency (%)	30 (2.6%)	1 (1.9%)	29 (2.6%)	
Pulmonary Embolism (%)	17 (1.5%)	2 (3.8%)	15 (1.3%)	
Rectal Injury (%)	10 (0.8%)	1 (1.9%)	9 (0.8%)	P = 0.02
Return to OR (%)	50 (4.3%)	6 (11.3%)	44 (3.9%)	P < 0.01
Sepsis (%)	98 (8.4%)	4 (7.5%)	94 (8.4%)	
Septic Shock (%)	25 (2.1%)	1 (1.9%)	24 (2.1%)	
Unplanned Intubation (%)	18 (1.5%)	0 (0.0%)	18 (1.6%)	
Urinary Tract Infection (%)	108 (9.2%)	7 (13.2%)	101 (9.0%)	
Pt on Ventilator Greater than 48 Hours (%)	9 (0.8%)	0 (0.0%)	9 (0.8%)	
Wound Disruption (%)	23 (2.0%)	3 (5.7%)	20 (1.8%)	P = 0.04
Unplanned Readmission (%)	263 (22.5%)	14 (26.4%)	249 (22.3%)	

P Value represents T-Test for continuous variables and Chi-Square for categorical variables.
UTI = Urinary Tract Infection, PNA = Pneumonia, DVT = Deep Vein Thrombosis, NPO = Nothing by mouth, NGT = Nasogastric Tube

MP4-14

The Effect of Antithrombotic Medication on Staging at Bladder Cancer Diagnosis

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Introduction and Objective: Wallis et al (JAMA 2017) demonstrated use of antithrombotic medications (ATMs) is associated with increased prevalence of hematuria-related complications and subsequent bladder cancer diagnosis (BCa) within 6 months.2 Stage of diagnosis was lacking in this highly publicized study. We examine the association of ATM use on BCa stage at the time of diagnosis.

Methods: We completed a retrospective chart review of patients with a BCa diagnosis at our institution. Patient demographics and BCa work-up information were assessed. Patients were stratified based on use of ATMs at time diagnosis. Descriptive statistics were completed to identify association between ATM use and stage of BCa diagnosis: non-muscle invasive bladder cancer [NMIBC] (pTa/Tis/T1) vs. muscle invasive bladder cancer [MIBC] (pT2-4).

Results: 1052 patient charts were reviewed. 844 were included 208 excluded due to unavailability of diagnosis history. Patient demographic detailed in Table 1. At diagnosis, 357 patients were taking ATMs and 487 were not. Patients on ATMs presented with NMIBC at similar rates as patients not taking ATMs (ATM: 290 NMIBC, 67 MIBC; Non-ATM: 379 NMIBC, 108 MIBC; p = 0.23). Subgroup analysis by class of ATMs used demonstrated no statistically significant difference (Table 2).

Conclusions: While Wallis et al established that patients on blood thinners who present with hematuria are more likely to be diagnosed with GU pathology, it does not appear to enable an earlier diagnosis of bladder cancer. However, further work needs to be done to assess hematuria at presentation (gross, microscopic), type of blood thinners, and low vs. high risk NMIBC presentation.

Table 4 Multivariable logistic regression of early postoperative complications

	Any 30-Day Complication OR (95% CI)	p	Early MI OR (95% CI)	p	Early Sepsis OR (95% CI)	p	Early Ileus OR (95% CI)	p	Early Hemorrhage OR (95% CI)	p
LA, >2 mmol/L (ref. ≤2)	0.796 (0.378 - 1.673)	0.5449	0.499 (0.0522 - 4.769)	0.5226	1.989 (0.627 - 6.308)	0.2463	0.702 (0.182 - 2.704)	0.6024	0.769 (0.378 - 1.673)	0.7564
Age, per year	0.986 (0.951 - 1.022)	0.4466	1.002 (0.908 - 1.1506)	0.9656	0.960 (0.908 - 1.016)	0.1621	0.940 (0.880 - 1.004)	0.0606	0.986 (0.951 - 1.022)	0.504
Race, Non-White (ref. White)	1.247 (0.624 - 2.492)	0.5326	2.186 (0.345 - 13.858)	0.4011	1.675 (0.537 - 5.221)	0.3753	1.386 (0.405 - 4.741)	0.6036	1.247 (0.624 - 2.492)	0.1416
CCI, 3+ (ref. 2)	2.753 (1.361 - 5.568)	0.0042	1.949 (0.2997 - 12.678)	0.4793	1.038 (0.318 - 3.392)	0.9505	3.995 (1.004 - 15.885)	0.0383	2.753 (1.361 - 5.568)	0.9619
Approach, Open (ref. Robotic)	1.315 (0.622 - 2.779)	0.4738	1.617 (0.257 - 10.181)	0.6152	0.687 (0.215 - 2.690)	0.5798	0.792 (0.193 - 3.255)	0.7432	1.315 (0.622 - 2.779)	0.2062

		NMIBC	MIBC	p-value
Overall cohort	ATM	290	67	0.23
	No ATM	379	108	
Subset 1: ASA 81	ASA 81	168	39	0.33
	No ATM	379	108	
Subset 2: DAPT	DAPT	34	7	0.56
	No ATM	379	108	
Subset 3: Heparin	Heparin	5	2	0.65
	No ATM	379	108	
Subset 4: DOAC	DOAC	19	3	0.44
	No ATM	379	108	
Subset 5: Warfarin	Warfarin	14	6	0.42
	No ATM	379	108	
Subset 6: ASA 325	ASA 325	19	2	0.28
	No ATM	379	108	

Table 2. Statistical Analysis of ATM Use and BCa Staging at Diagnosis

MP4-15

Demographic and Clinical Factors Affecting Adequate BCG Treatment of Patients With Non–Muscle-Invasive Bladder Cancer

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Introduction and Objective: In this study, we aim to investigate demographic and clinical factors that contribute to adequate BCG treatment.

Methods: We conducted a retrospective, electronic chart review of 226 patients diagnosed with intermediate- or high-risk NMIBC between 2012 and 2020 who underwent intravesical BCG treatment at a community practice with multiple urological oncologists. Patients were divided into two groups: "Adequate" and "Not Adequate." "Adequate" was defined in concordance with the FDA definition: at least 5 of 6 induction instillations plus 2 additional instillations within a 6-month time frame. Data collected included demographics as well as distance from our treatment center, insurance status, and clinical trial participation.

Results: 15 patients were excluded from the study for inadequate documentation of treatment dates, leaving 211 patients in the analysis. 171 patients (81.0%) were male and 40 (19.0%) were female, with no significant association found between gender and the rate of adequate treatment (p = 0.28). We observed a high rate of adequate BCG therapy overall, with a total of 191 patients (90.5%) receiving an adequate treatment course. Patients who were part of a clinical trial were found to receive an adequate course of BCG significantly more frequently than patients who were not involved in a clinical trial (96.8% vs. 85.6%, p = 0.006). Analysis of correlations between race (p = 0.94), distance from treatment site (p = 0.52), insurance status (p = 0.10), and risk classification (p = 0.84) were not associated with adequate BCG course.

Conclusions: In our study, clinical trial inclusion was the only factor significantly associated with increased rates of adequate BCG treatment, despite analysis of multiple factors. Additionally, overall rate of adequate BCG therapy was high, which may be reflective of the high number of patients enrolled in clinical trials at our center. Further investigation is needed to better predict patients likely to complete adequate BCG therapy.

MP4-16

Presentation and Predictors of Metastatic Testicular Cancer: A Contemporary Population-Based Analysis

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Introduction and Objective: Testicular cancer (TC) is the most common solid malignancy in males aged 14-44, with incidence rising globally, although few risk factors exist besides cryptorchidism. While 12% of patients have metastases, patterns of presentation remain unclear. This study analyzes the population-based SEER database to elucidate patient-specific clinical and social predictors of metastatic TC.
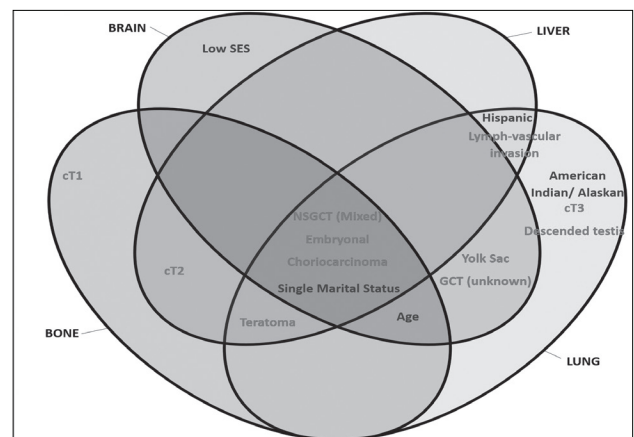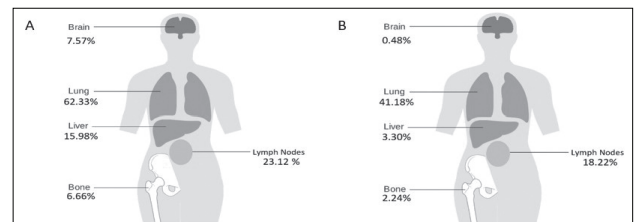
Methods: 16,528 TC patients diagnosed from 2010-2016 were identified. Descriptive variables included demographics, insurance, marital status, and socioeconomic status (SES). Disease-specific variables included tumor staging, grade, histology, laterality, and size; metastasis presence and location; and overall and cancer-specific survival.
Two-tailed Fisher's exact test, Pearson chi-square test, and multivariate logistic regression hazards analysis (MVA) were performed.

Results: Study patients had a mean age of 35.23 ± 11.67 and represented a national distribution of race, ethnicity, and region. Of 16,474 patients with available metastasis data, 1,877 (11.39%) had metastases at diagnosis. Such patients more commonly featured disease-specific and demographic variables associated with inferior health outcomes (all p < 0.001).
Lung metastases were the predominant site of synchronous (Figure 1A) and solitary metastasis (Figure 1B). Site frequencies were largely consistent across non-seminomas with some variation by subtype. Conversely, seminoma metastases predominantly presented at distant lymph nodes.
On MVA, disease-specific predictors of any metastasis included tumor stage, histology, size; lymphovascular invasion; and cryptorchidism. Patient-specific predictors included age, geography, ethnicity, race, marital status, and SES. Predictors of specific metastatic sites were also described (Figure 2).

Conclusions: Insights into predictors and distribution of TC metastasis can inform patient counseling and management, improving outcomes while reducing overtreatment and associated toxicities.

MP4-17

A Multi-Institutional, Statewide Review of Disparities in the Diagnosis and Treatment of Squamous Cell Carcinoma of the Penis in West Virginia
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[1]*West Virginia University Department of Urology, Morgantown, WV, USA;* [2]*University of Florida Department of Urology, Gainesville, FL, USA;* [3]*West Virginia University School of Medicine, Morgantown, WV, USA;* [4]*Charleston Area Medical Center Department of Urology, Charleston, WV, USA*

Introduction and Objective: Known disparities exist amongst HPV-related cancer outcomes in urban vs. rural populations, including squamous cell carcinoma (SCC) of the penis. Appalachia as a whole, and West Virginia specifically, present a unique opportunity for analysis of penile cancer in underserved areas with few tertiary care centers and large distances between centers. This study examines differences in penile cancer TNM stage, grade, and treatment between rural and urban populations in West Virginia.

Methods: Following approval from institutional review boards, 81 patients with SCC of the penis treated at Charleston Area Medical Center and West Virginia University over a fourteen-year period (2007-2021) were studied. Distance and travel time from the tertiary care centers were collected based on zip code, and rural definitions were obtained from the US Census Bureau. T-stage, clinical node positivity, grade, risk factors, and treatment modality were analyzed. Appropriate statistical tests were performed using SPSS.

Results: Patients who lived closer to tertiary care centers in terms of distance and travel time were more likely to receive chemotherapy as part of treatment for their malignancy (p = 0.03). Those that live in counties classified as "Urban" were more likely to undergo a penile-preserving primary treatment (p = 0.01). Interestingly, no difference exists in stage or grade at diagnosis suggesting convenience as a contributing factor to the decision to undergo chemotherapy as primary or adjunctive therapy. No difference exists in risk factors (smoking status, circumcision), surgical modality, clinically palpable lymph nodes, radiation therapy use, symptom duration, or timing of therapy based on distance or travel time.

Conclusions: Our results suggest that distance and travel time from tertiary care center influence a patient's decision to undergo chemotherapy as primary or adjunctive therapy for SCC of the penis and that patients residing in Urban counties are more likely to undergo penile-preserving therapy as primary treatment.

MP4-18

Diagnosis of Bladder and Kidney Cancer Increases With Medicare Eligibility at Age 65
T. Shu[1], M. Prunty[1,2], D. Omil-Lima[1,2], A. Castro Bigalli[3], L. Bukavina[3], A. Calaway[2], S. Markt[1]
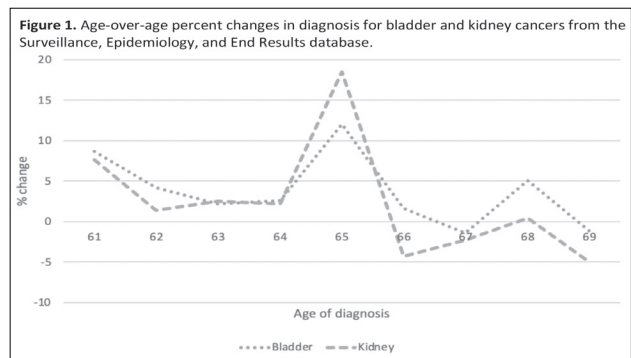[1]*Case Western Reserve University School of Medicine, Cleveland, OH, USA;* [2]*Urology Institute, University Hospitals Cleveland Medical Center, Lyndhurst, OH, USA;* [3]*Fox Chase Cancer Center, Philadelphia, PA, USA*

Introduction and Objective: Patients are known to have greater healthcare utilization starting at age 65, the threshold for Medicare eligibility, resulting in increase in cancer diagnoses and decrease in cancer-specific mortality for lung, breast, colon, and prostate cancers at this age. Our objective is to determine if a similar "Medicare effect" of increased diagnosis and improved survival exists for bladder and kidney cancer at age 65.

Methods: We identified patients aged 60-69 years diagnosed with bladder or kidney cancer from 2000-2017 in the Surveillance, Epidemiology, and End Results database. Using previously validated methodology, we calculated age-over-age (AoA) percent changes with: [(cancer diagnoses at age n) – (cancer diagnoses at age n-1)]/(cancer diagnoses at age n-1). Using AoA percent changes, we characterized trends in diagnosis overall and stratified by stage. We measured 5-year cancer-specific mortality for bladder and kidney cancer and assessed for differences in mortality by age.

Results: 63,960 patients with bladder cancer and 52,316 with kidney cancer were identified. AoA percent change in diagnosis was greatest for patients 65 years of age compared to all other ages for bladder (12.0%, p < 0.001) and kidney cancer (6.5%, p < 0.001) (Figure 1). AoA percent change in diagnoses at age 65 was significantly higher for in situ, localized, and regional bladder cancer, and localized kidney cancer. Kidney cancer patients had lower 5-year cancer-specific mortality at age 65 compared to 64 (16% vs. 18%, p = 0.006), while bladder cancer patients did not have a significant difference in cancer-specific mortality between ages 65 and 64.

Conclusions: The threshold for Medicare eligibility of 65 years of age is associated with an increase in bladder and kidney cancer diagnosis and a decrease in kidney cancer-specific mortality.

Figure 1. Age-over-age percent changes in diagnosis for bladder and kidney cancers from the Surveillance, Epidemiology, and End Results database.

Moderated Poster/Video Session 5: Surgical/Technology/Imaging/Video

MP5-01

1-Year Results for the ROBUST III Trial Evaluating the Optilume Drug Coated Balloon for Anterior Urethral Strictures

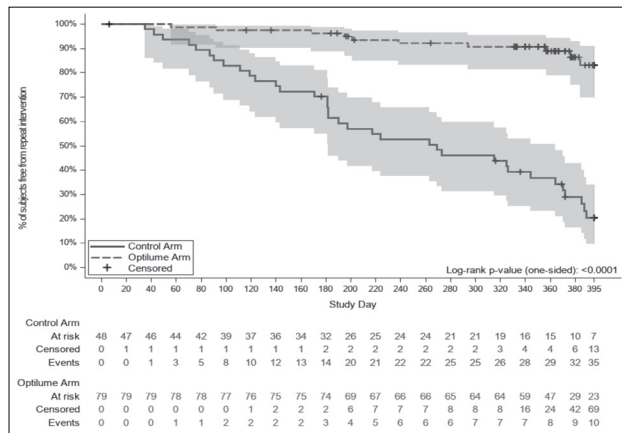S. Elliott[1], R. Virasoro[2], J. DeLong[2], K. Coutinho[3], R. D'Anna[4], B. Erickson[5], K. Robertson, III[6]
[1]University of Minnesota, Minneapolis, MN, USA; [2]Eastern Virginia Medical School, Norfolk,, VA, USA; [3]New Jersey Urology,, Millburn, NJ, USA; [4]Arkansas Urology Research Center,, Little Rock, AR, USA; [5]University of Iowa,, Iowa City, IA, USA; [6]Chesapeake Urology Research Associates, Hanover, MD, USA

Introduction and Objective: When treating urethral stricture, multiple interventions lead to progressively worse outcomes. The Optilume® drug coated balloon is an alternative intended to reduce recurrence. The ROBUST III study is a randomized, single blind trial evaluating the safety and efficacy of Optilume against standard of care endoscopic management of recurrent anterior urethral strictures.

Methods: 127 male subjects with anterior strictures ≤ 3 cm and ≥ 2 prior treatments were enrolled at 23 sites. Subjects with previous urethroplasty or unresolved confounding etiologies were excluded. The primary study endpoint compared stricture free rate at 6 months. Secondary endpoints included freedom from reintervention, International Prostatic Symptom Score (IPSS), and peak flow rate (Qmax). The primary safety endpoint included freedom from serious procedure related complications.

Results: Baseline characteristics were similar between groups, with a study average of 3.6 prior treatments and stricture length of 1.7 cm. Stricture free rate for Optilume was significantly improved after 6 months (76% vs. 27%, p < 0.001), as was freedom from reintervention. Outcomes were consistent regardless of control treatment. Immediate symptom and functional improvements were observed in both groups, with more sustained benefit in the Optilume group. No subjects experienced a serious device related complication. The most common adverse events included urinary tract infection, post-procedural hematuria, and dysuria.

Conclusions: The Optilume Urethral DCB exhibited a significant improvement in both objective and subjective outcomes through 1-year post treatment compared to standard of care and represents a potential breakthrough in the endoscopic management of anterior urethral strictures. Long term follow-up is planned through 5 years to monitor durability of the results.

MP5-02

Favorable Perioperative and Functional Outcomes after Robotic-Assisted Laparoscopic Bladder Diverticulectomy

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Introduction and Objective: Robotic-assisted laparoscopic bladder diverticulectomy (RALBD) has recently emerged as a management option for patients with problematic bladder diverticula due to recurrent urinary tract infections (rUTI) or incomplete emptying. Previous literature has shown favorable outcomes for RALBD when combined with other procedures such as robotic-assisted laparoscopic simple or radical prostatectomy (RASP/RALP), but none have assessed RALBD as a stand-alone procedure. The purpose of this study is to present the largest case series of stand-alone RALBD and report perioperative and functional outcomes.

Methods: A retrospective analysis of all RALBDs at a single institution from 2012-2021 was performed, and the subset of stand-alone RALBDs was isolated. The primary outcome of interest was the change in AUA Symptom Score (AUA-SS) and post-void residual (PVR) after stand-alone RALBD.

Results: A total of 70 patients underwent RALBD, 16 of which were stand-alone RALBD (23%) (Table 1). Indications for RALBD included rUTI (5/16, 31%), incomplete emptying (13/16, 81%), and diverticular tumors (2/16, 13%). The median age was 70.5 and BMI was 29.7. Median operative time was 139 minutes, and none had Clavien 3 or greater complications within 90 days. Eleven patients (69%) had a staged outlet procedure, either before or after RALBD. At median 1 year follow up, there were significant improvements in AUA-SS (21.5-6, p < 0.001), PVR (452-20, p = 0.01), number of patients that were catheter dependent (13-2, p < 0.001), and number with UTIs (5-0, p = 0.04) (Table 2).

Conclusions: RALBD is safe and effective as a stand-alone procedure, with long-term improvement in incomplete emptying and reduction of UTIs.

Table 1: Demographics of Patients Undergoing Stand-alone RALBD

	Median (range) or N (%)
No. total RALBD	70
No. stand-alone RALBD	16 (23)
No. w/ RASP	44 (63)
No. w/ RALP	9 (13)
No. w/ TURP	1 (1)
Age	70.5(36-84)
Sex - Male	16 (100)
BMI	29.69 (20.72-40)
Indication	
rUTI	5 (31)
Incomplete emptying	13 (81)
Tumor	2 (13)
No. diverticula per patient	
1	9 (56)
2	4 (25)
3	3 (19)
No. with staged outlet procedure	11 (69)
Pre Endoscopic Surgery (TURP, Urolift, Greenlight)	10 (63)
Post Endoscopic Surgery (TURP)	1 (6)
Prostate size (g)	41 (11-60)

Table 2: Long-term Follow Up Outcomes after RALBD (median 12 months)

	Pre-op	Post-op	p-value
AUA-SS	21.5 (7-27)	6 (0-20)	**<0.001**
AUA-SS – Quality of Life	5 (2-6)	1 (0-5)	**<0.001**
PVR (ml)	452 (56-3000)	20 (0-350)	**0.01**
No. catheter dependent	13 (81)	2 (13)	**<0.001**
No. w/ UTI	5 (31)	0 (0)	**0.04**

MP5-03

Experience of Surgeon-Controlled Robotic Stapling During Intracorporeal Ileal Conduit Creation

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Introduction and Objective: During minimally invasive radical cystectomy, one method for intracorporeal ileal conduit formation is use of an assistant-controlled endoscopic stapling device. However, a skilled assistant and multiple port sites are required due to limitations in articulation. With robotic stapling devices, bowel anastomosis can be completed under complete surgeon control with greater precision. The objective of this study was to report our initial experience comparing endoscopic and robotic stapling with regard to perioperative variables, complications, and cost.

Methods: A retrospective chart review was performed for 40 patients who underwent robotic-assisted radical cystectomy with intracorporeal ileal conduit utilizing either endoscopic stapling or robotic stapling from May 2016 to September 2019. These procedures were performed by a single, fellowship-trained surgeon. Univariable and multivariable logistic/linear regression analyses assessed 30-day complication rates, time to return of bowel function, operating room time, estimated blood loss, length of stay, and 30-day readmission rates.

Results: There were 20 patients each in the endoscopic and robotic stapling arms. Regression analysis demonstrated no significant differences between use of either stapler for the above mentioned outcomes. More specifically, robotic stapler demonstrated equivalent outcomes for total complication rate (OR 1.00 (95% CI: 0.29-3.45), p = 0.998), major complication rate (OR 1.89 (95% CI: 0.38-9.27), p = 0.433), and days to flatus (Coefficient -0.35 (95% CI: -1.31-0.61), p = 0.464).

Conclusions: Use of robotic stapling devices is a safe and feasible option when compared to endoscopic stapling and offers equivalent outcomes. Both options come with their own technical and cost considerations. Further research on utilization of robotic stapling in urology is needed to validate our findings.

MP5-04 – video

Robotic Intracorporeal Orthotopic Neobladder (Hautmann) Formation

M. Lee, J. Jeong, J. Sykes, D. Eun
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MP5-05 – video

Robotic Augmented Anastomotic Appendiceal Onlay for Ureteral Stricture

N. Jones[1], C. Fakes[1], U. Zareef[1], M. Mikhail[1], A. Kaldany[2], H. Patel[2], S. Elsamra[2]
[1]Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, New Brunswick, NJ, USA; [2]Division of Urology, Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, New Brunswick, NJ, USA

MP5-06 – video

Robot Assisted Heminephrectomy in Dorsal Lithotomy Using a Modified Prostate Approach

C. Robey[1], D. Kelly[1,2]
[1]Eastern Virginia Medical School, Norfolk, VA, USA; [2]Urology of Virginia, Virginia Beach, VA, USA

MP5-07 – video

Robotic Right Radical Nephrectomy and Ureteroduodenal Fistula Repair

M. Lee, G. Limardo, N. Houston, D. Eun
Temple University Hospital, Philadelphia, PA, USA

MP5-08 – video

Use of Handheld SPY During Open Pyeloplasty to Evaluate for Anastomotic Leak

K. Maciolek, J. Farhi, N. Kern
University of Virginia, Charlottesville, VA, USA

MP5-09 – video

Complex Foley Catheter Placement after Radical Prostatectomy

G. Prillaman, M. Tuong, C. Yeaman, J. Farhi, K. Greene
University of Virginia, Charlottesville, VA, USA

MP5-10 – video

Single Position Robotic Assisted Laparoscopic Right Ileal Ureter Interposition

L. Khizir[1], J. Kim[1], C. Fakes[1], A. Kaldany[1], H. Patel[1], J. Khan[2], S. Elsamra[1]
[1]Rutgers Robert Wood Johnson Medical School, Piscataway, NJ, USA; [2]Seton Hall University, South Orange, NJ, USA

MP6-01

Increasing Bladder Mucosal Violations Negatively Impact Bladder Neck Closure Outcomes in Patients With Classic Bladder Exstrophy: The Mucosal Violation Index (MVI)

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Introduction and Objective: Restoration of genitourinary anatomy with functional urinary continence is the reconstruction aim is the exstrophy-epispadias complex (EEC). In patients who do not achieve urinary continence or those who are not a candidate for bladder neck reconstruction (BNR), bladder neck closure (BNC) is considered. The aim of this study was to review classic bladder exstrophy (CBE) patients who underwent BNC to identify predictors of BNC failure.

Methods: CBE patients who underwent BNC were reviewed for predictors of failed BNC which was defined as bladder fistula development. Predictors included prior osteotomy, interposing tissue layer use and number of previous bladder mucosal violations (MV). A MV was defined as a procedure when the bladder mucosa was opened or closed for: exstrophy closure(s), BNR, augmentation cystoplasty or ureteral re-implantation. Kaplan Meier curve and long-rank test performed to evaluate MVs on fistula development. Predictors were evaluated using multivariate logistic regression.

Results: A total of 192 patients underwent BNC of which 23 failed. Patients were more likely to develop a fistula with a wider diastasis at time of primary exstrophy closure (4.4 vs. 4.0, p = 0.0016), have failed exstrophy closure (p = 0.0084), or have 3 or more MVs before BNC (p = 0.0004). Significant difference in fistula-free survival (p = 0.0002) with increasing MVs (Figure 1). MVs remained significant on multivariate logistic regression analysis with a per-violation odds ratio of 5.1 (p < 0.0001).

Conclusions: This study conceptualized MVs and their role in bladder viability. Increased MVs confer an increased risk of failed BNC. When considering BNC, CBE patients with 3 or more MVs may benefit from a pedicled muscle flap to prevent fistula development.
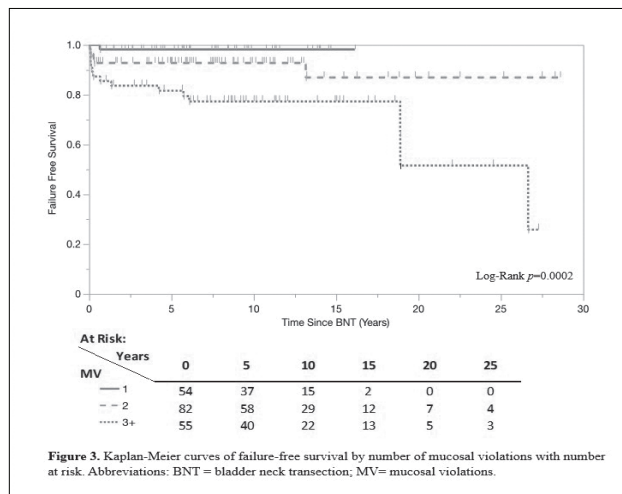

Figure 3. Kaplan-Meier curves of failure-free survival by number of mucosal violations with number at risk. Abbreviations: BNT = bladder neck transection; MV= mucosal violations.

MP6-02

Evolution of Telemedicine Utilization for Pediatric Urology During the COVID-19 Pandemic and Beyond: A Single Center Experience
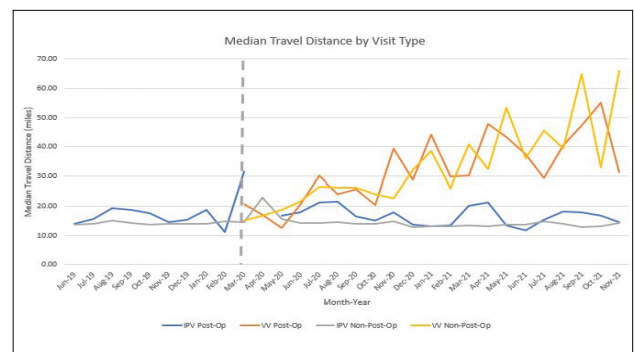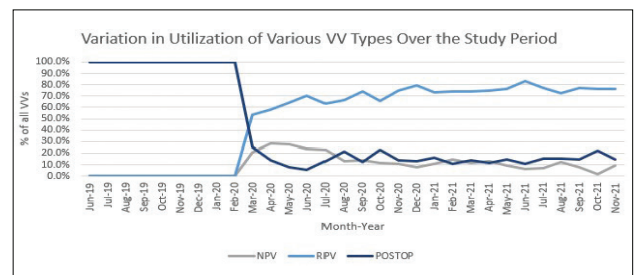
Z. Gan[1,2], Y. Shah[2,3], N. Plachter[2], D. Weiss[2], J. Van Batavia[2], S. Zderic[2], A. Shukla[2], A. Srinivasan[2], T. Kolon[2], M. Zaontz[2], D. Canning[2], C. Long[2]
[1]University of Pennsylvania, Philadelphia, PA, USA; [2]Children's Hospital of Philadelphia, Philadelphia, PA, USA; [3]Thomas Jefferson University, Philadelphia, PA, USA

Introduction and Objective: Telemedicine utilization rapidly expanded throughout the COVID-19 pandemic and yielded numerous unexpected benefits. However, its future remains uncertain, hence limiting further institutional investments. We evaluated trends in telemedicine visit volume and associated patient factors throughout the pandemic to inform the future role of telemedicine in pediatric urology.

Methods: An IRB-approved registry of pediatric urology outpatients at a single institution was queried from 6/2019-11/2021. Variables of interest included demographics, travel distance for care, insurance status, primary diagnosis, and visit type (in-person visits, IPVs; video visits, VVs). IPVs and VVs were further categorized as new patient (NPVs), return patient (RPVs), and post-operative (post-ops). Monthly trends in descriptive variables were summarized.

Results: 51,605 pediatric urology outpatient visits occurred during the study period. Patients had a median age of 5 years (IQR 1-11) and were predominantly male (71.6%), white (61.6%), and held private insurance (69%). VVs increased substantially from 0% in February 2020 to 100% in April 2020 and then subsequently decreased through November 2021, although total visit volume increased throughout. As the pandemic progressed, compared to IPVs, VVs increasingly included RPVs (80% vs. 50-60%) and longer median travel distance (30+ vs. 14 miles). VVs were less commonly covered by subsidized insurance (20-30% vs. 50-70%).

Conclusions: Telemedicine usage has decreased since the peak of the pandemic, although it has stabilized upwards of pre-pandemic levels. Usage is increasingly associated with RPVs, longer travel distance, and private insurance. Further work is required to elucidate the optimal role of telemedicine and its effects on access to care in pediatric urology.

MP6-03

Characterizing Sexual Health in Transgender Individuals: A Learning Opportunity for Medical Providers

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Introduction and Objective: Providers may be unfamiliar with the sexual health needs of transgender patients. This hinders chances to provide comprehensive care, as many patients require prompting to discuss sensitive sexual issues. To increase awareness of these issues, we aimed to describe the sexual experiences and preferences of transfeminine individuals.

Methods: IRB approval was obtained to develop (with transgender community feedback) a questionnaire assessing urinary and sexual health. Sexual preferences, symptoms, and quality of life (QOL) responses were compared among vaginoplasty (VP) and non-vaginoplasty (NVP) groups. NVP respondents were evaluated based on the International Index of Erectile Function (IIEF) categories: erectile function (EF), orgasmic function (OF), and sexual desire (SD).

Results: 53 transfeminine individuals (11 vaginoplasty, 10 orchiectomy, 32 no procedure) with mean age of 40 years (range 21-80) participated. Sexual QOL was similar for both groups (Table 1). NVP respondents were likelier to have sexual activity with others and penetrative anal sex (p < 0.05). Among NVP respondents, 38 (90.4%) of whom were undergoing hormone therapy, 23 (55%) indicated penile function was important to them. NVP IIEF EF, OF, and SD categories mean scores were 13.3, 5.8, and 5.6, respectively, compared to 25.8, 9.8, and 7.0 from the cis-gender controls in the initial IIEF study. 5 (11.9%) individuals used oral medications for erectile assistance, while 1 (2.3%) had a prosthesis.

Conclusions: When comparing VP and NVP respondents, we found similarities in sexual QOL while noticing differences in sexual preference, highlighting the diversity of this population. While many NVP respondents reported importance of penile function and presence of erectile dysfunction, only a minority were on treatment. This highlights an opportunity for providers to discuss sexual health with transfeminine patients and offer appropriate treatments.

Question	Vaginoplasty N (%)	Non-Vaginoplasty N (%)	P-Value
How satisfied are you with your overall sex life?			
Very dissatisfied	2 (18.2)	5 (11.9)	
Moderately dissatisfied	2 (18.2)	10 (23.8)	
Equally satisfied & dissatisfied	4 (36.4)	13 (31.0)	0.911
Moderately satisfied	3 (27.3)	12 (28.6)	
Very satisfied	0 (0)	2 (4.8)	
How big of a problem has sexual function been?			
No Problem	2 (40.0)	15 (35.7)	
Very small problem	1 (20.0)	9 (21.4)	
Small problem	0 (0)	12 (28.6)	0.293
Moderate problem	2 (14.0)	4 (9.5)	
Big problem	0 (0)	2 (4.8)	
How big of a problem has sexual desire been?			
No Problem	3 (60.0)	19 (45.2)	
Very small problem	0 (0)	4 (9.5)	
Small problem	1 (20.0)	7 (16.7)	0.898
Moderate problem	1 (20.0)	9 (21.4)	
Big problem	0 (0)	3 (7.1)	
How big of a problem has orgasm been?			
No Problem	3 (60.0)	24 (57.1)	
Very small problem	0 (0)	6 (14.2)	
Small problem	0 (0)	6 (14.2)	0.417
Moderate problem	2 (40.0)	5 (11.9)	
Big problem	0 (0)	1 (2.4)	
If you were to spend the rest of your life with your sexual function the way it is now, how would you feel about that?			
Completely satisfied	3 (27.3)	3 (7.1)	
Very satisfied	2 (18.2)	4 (9.5)	
Somewhat satisfied	3 (27.3)	7 (16.7)	
Neither satisfied nor dissatisfied	0 (0)	5 (11.9)	0.269
Somewhat dissatisfied	1 (9.1)	11 (26.2)	
Very dissatisfied	0 (0)	4 (9.5)	
Completely dissatisfied	2 (18.2)	7 (16.7)	

MP6-04

Clinical Management of Scrotal Pyoceles: A Case Series of a Rare Urologic Emergency

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Introduction and Objective: Scrotal pyoceles are described as a urologic emergency, requiring urgent surgical intervention. Scrotal pyoceles are purulent collections within the potential space of the tunica vaginalis surrounding the testicle, which can lead to Fournier's gangrene. The management of this rare finding is poorly described. The objective of this study was to analyze the clinical management of scrotal pyoceles that presented in our institution in the past decade. We hypothesize conservative management is effective in select cases.

Methods: Retrospective review of all patients treated for ultrasound-confirmed scrotal pyoceles between 2010-2020 at our institution. Vitals at presentation, microbiology, and inpatient course were collected. We assessed for a presentation of systemic inflammatory response syndrome (SIRS) using the American College of Chest Physicians criteria.

Results: We identified 16 patients meeting criteria (Table 1). The most common chief complaint was acute testicular pain (69%). Five patients (31%) were diagnosed while previously hospitalized from other causes. Only eight patients (50%) formally met criteria for SIRS upon presentation. All 16 patients were initially treated with broad-spectrum antibiotics and observation; 11 (69%) responded to this management. Five patients (31%) eventually required surgical drainage and debridement due to concerns for persistent infection in the setting of an immunocompromising condition and/or antibiotic resistance. Two patients (13%) who received surgery subsequently required unilateral orchiectomy.

Conclusions: We report the largest database of scrotal pyoceles to date and describe our clinical approach to management. While pyoceles have traditionally been treated with upfront surgical drainage or orchiectomy, our case series supports the use of broad-spectrum antibiotics and inpatient observation as a first-line strategy for the uncomplicated patient to abate surgical morbidity. Future investigations, including multi-institutional data, will be necessary to validate our findings.

Table 1: Characteristics, treatment, and outcomes of patients with scrotal pyocele; IQR= Interquartile Range; Abx= Antibiotics

Characteristic	Patients (n, %)	Median (IQR)
Age (at diagnosis)	16 (100%)	47.5 (30,65)
Chief Complaint		
Testicular Pain	11 (69%)	-
Altered Mental Status	2 (13%)	-
Burn	1 (6%)	-
Bone Marrow Transplant	1 (6%)	-
Dysuria	1 (6%)	-
Inpatient/Outpatient Onset		
Outpatient	11 (69%)	-
Inpatient	5 (31%)	-
Vitals at Presentation		
Temperature (C)		36.5 (36,37)
Hyperthermic (>38)	0 (0%)	-
Hypothermic (<36)	3 (19%)	-
Heart Rate (bpm)		89 (87, 111)
Tachycardic (>90)	7 (44%)	-
Respiratory Rate (breath/min)		18 (16,18)
Tachypneic (>20)	2 (13%)	-
Blood Pressure (mmHg)		
SBP		123 (111,138)
DBP		78 (71,82)
Hypotensive (MAP <65)	0 (0%)	-
White Blood Count (/mm³)		15.6 (9,22)
Leukocytosis (>12,000)	10 (63%)	-
Leukopenia (<4,000)	0 (0%)	-
Meets SIRS Criteria	8 (50%)	-
Clinical Management		
Growth on Urine Culture	10 (63%)	-
E.Coli	3 (19%)	-
Enterococcus	1 (6%)	-
ESBL-Producing	1 (6%)	-
S. Aureus	1 (6%)	-
Serratia	1 (6%)	-
Pseudomonas	1 (6%)	-
N. gonorrhoeae, T. Chlamydia	1 (6%)	-
Mixed	1 (6%)	-
Initial Management		
Antibiotic Treatment	16 (100%)	-
Surgical Drainage	0 (0%)	-
Antibiotic Coverage*		
Ceftriaxone/Cefepime	9 (56%)	-
Fluroquinolone	7 (44%)	-
Tetracycline	4 (25%)	-
Sulfa Drug	1 (6%)	-
Ampicillin-Sulbactam	1 (6%)	-
Carbapenem	1 (6%)	-
Fosfomycin	1 (6%)	-
Surgery Drainage indicated	5 (31%)	-
Persistent Infection despite Abx	4 (25%)	-
Uncontrolled HIV	1 (6%)	-
Required Orchiectomy	2 (13%)	-
Length of Hospital Stay		4.5 (3,5)
≥30 Days	1 (6%)	-
≤3 Days	4 (25%)	-
Complicated by Fournier's Gangrene	0 (0%)	-

*Patients were often treated with multiple antibiotics, or narrowed upon results of cultures

MP6-05

Prescription Opioid Use in a Pediatric Population for the Management of Acute Renal Colic: Clinical Practice Patterns and Implications
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Introduction and Objective: We sought to examine the practice patterns of pain management in the emergency room (ER) for acute renal colic and the impact of opioid prescriptions on return visits and persistent opioid use in a pediatric population.

Methods: TriNetX is a collaborative research enterprise which collects real-time data from over 87 million patients located in 58 healthcare organizations nationwide. We queried TriNetX for pediatric patients (< 18 years) who visited the ER between 2010 and 2021 for urolithiasis, stratified by the receipt of oral opioid prescriptions (opioid vs. non-opioid). We compared clinicodemographic characteristics between the two groups and calculated the risk ratio (RR) of patients returning to the ER within 14 days and persistent opioid use ≥6 months from the initial visit. Propensity score matching was performed to control for confounders.

Results: We identified 2,536 pediatric patients who visited the ER for urolithiasis, of whom 390 (15.4%) were prescribed oral opioids. Patients receiving opioids were more likely to be older (11.5 years vs. 9.6 years, P < 0.001), female (56.4% vs. 43.6%, P = 0.03), and have a prior history of urolithiasis (31.3% vs. 18.8%, P < 0.001), anxiety (15.9% vs. 8.9%, P < 0.001), and opioid use (42.8% vs. 22.9%, P<0.001). Black patients were less likely than all other races to receive opioid prescriptions (P < 0.001). On unmatched analysis, the opioid group demonstrated an increased risk of return ER visits (RR 1.82, P < 0.001) and persistent opioid use (RR 7.28, P < 0.001) than the non-opioid group. On matched analysis (n=377 in each group), patients who were prescribed opioids remained at increased risk of a return ER visit (RR 1.69, P = 0.02) and persistent opioid use (RR 7.55, P < 0.001) compared to patients who were not prescribed opioids.

Conclusions: Administration of opioids for urolithiasis in a pediatric population is associated with an increased risk of return ER visits and long-term opioid use, even after matching for potential confounders.

MP6-07

Simplify the Time of Testing to Determination Efficacy of an Oral Testosterone Undecanoate Softgel (JATENZO®) in Hypogonadal Men
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Introduction and Objective: A novel, first-in-class testosterone (T) replacement therapy (TRT), oral testosterone undecanoate (TU) was approved by the U.S. FDA for the treatment of male hypogonadism. A single total T value 6 hrs after the morning oral TU dose best corresponds to Cavg. A reliable conversion factor was derived to help HCPs monitor a patient's serum T concentration at times other than 6 hrs after oral TU administration.

Methods: Hypogonadal men, age 18-65 y/o, were recruited into a randomized, open-label, multicenter, dose-titration trial. Overall, 166 men were randomized into the oral TU arm. Dose titration was based on Cavg calculated from serial pharmacokinetic (PK) samples. There were three pre-designated PK visits, to individualize the appropriate TU dose and to achieve a eugonadal T Cavg at final study visit. Ratios between different timepoints and Cavg were determined for PK samples following morning drug administration.

Results: Overall, 87.3% (95% CI: 81.3%, 92.0%) of hypogonadal men had a final Cavg in the eugonadal range, with a mean serum total T = 488.7 ± 154.5 ng/dL (16.95 ± 5.37 nmol/L). Pooled values from all PK days demonstrated a linear relationship (p < 0.0001). Visit and time of sampling interaction were not statistically significant (p >> 0.50). A conversion factor was determined to approximation of Cavg: 1/[1.870-0.14 x (hours after AM dose)]. See Table.

Conclusions: A sample drawn at 4 hrs after the morning oral TU dose would be multiplied by 0.75; while one drawn at 8 hrs would be multiplied by 1.33. Hence, T Cavg can be approximated after morning JATENZO administration if a blood sample cannot be collected precisely 6 hrs thereafter.

Hours after Dose Oral TU Administration	Conversion Factor to Normalize T Value to C_{avg}
4	0.76
4.5	0.81
5	0.85
5.5	0.91
6	0.97
6.5	1.04
7	1.12
7.5	1.22
8	1.33
8.5	1.47
9	1.64

MP6-06

Short and Long-term Renal Outcomes in Clinically Matched Cohorts of Newborns with PUV Managed by Primary Vesicostomy Versus Primary Valve Ablation
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Introduction and Objective: Controversy exists whether primary valve ablation (PVA) or primary vesicostomy (PVES) provides superior drainage in neonates with posterior urethral valves. Progressive urethral dilation (PUD) allows PVA in low-birth weight and preterm neonates, who otherwise require PVES. PUD provides a novel opportunity for comparative analysis between similar cohorts with fewer clinical confounders. In this multi-institutional study, the objectives were to determine short- and long-term renal outcomes in clinically matched cohorts of neonates with PVES versus PVA.

Methods: In this retrospective study, Institution A performs PUD to achieve PVA in all neonates. Institution B performs PVES when PVA is unfeasible. Patients were matched by creatinine at intervention and secondarily by gestational age, ablation age, and ablation weight. Children with intervention beyond 9 months of age were excluded.

Results: 24 patients (12 PVES, 12 PVA) were included with mean follow up 98.8 (+/- 15.9) months. Creatinine nadir within 6 weeks (p = 0.823) and 1 year (p = 0.561) of intervention was not significant between groups (PVES 1.4 and 1.2 mg/dL; PVA 1.3 and 0.9 mg/dL). Time-to-event analysis demonstrated no difference in the long-term distribution of ESRD outcomes (p = 0.819).

Conclusions: In these clinically matched cohorts comparing PVA to PVES, there was no significant difference in renal outcomes 6 weeks or 1 years after primary intervention. Long-term results show no significant difference in ESRD outcomes. Although based on a small sample, this is the first study to provide insight into the effect of primary intervention on renal outcomes while reducing critical biases of inherently heterogeneous cohorts.

	Primary Vesicostomy	Primary Ablation	Total	p-value
Number of Patients	12	12	24	
Gestational Age (mean weeks +/- SE)	37.30 +/- 0.68	36.0 +/- 0.39	36.62 +/- 0.41	0.127
Weight at Intervention (mean kg +/- SE)	3.44 +/- 0.31	3.59 +/- 0.54	3.52 +/- 0.31	0.807
VUR on initial VCUG, No. (%)	11 (91.7%)	8 (66.7%)	19 (79.2%)	0.131
Creatinine at intervention (mean mg/dL +/- SE)	2.19 +/- 0.64	2.18 +/- 0.68	2.19 +/- 0.46	0.994
Creatinine nadir within 6 weeks (mean mg/dL +/- SE)	1.41 +/- 0.49	1.27 +/- 0.34	1.34 +/- 0.29	0.823
Creatinine nadir within 1 year (mean mg/dL +/- SE)	1.24 +/- 0.49	0.89 +/- 0.28	1.06 +/- 0.28	0.561
ESRD/Transplant, No. (%)	3 (25%)	4 (33.3%)	7 (58.3%)	0.653
Follow Up (mean months +/- SE)	86.6 +/- 26.7	110.9 +/- 17.7	98.8 +/- 15.9	0.455

MP6-08

Do Patients with Peyronie's Disease Perceive Penile Curvature Differently than the General Population?

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Introduction and Objective: Perception of penile curvature (PC) varies widely. We sought to investigate if patients with Peyronie's Disease (PD) had differing opinions on correction of PC compared to general andrology (AD) patients without PD and general urology (URO) patients.

Methods: A cross-sectional survey was administered to adult patients in andrology and general urology clinics at 3 geographically separate institutions. Patients were grouped with having PD vs. AD vs. URO conditions. The survey consisted of unlabeled images of penis models with varying degrees of PC (range 10-90°). Respondents selected the images they would want surgically corrected. Univariable and multivariable analyses were performed to identify demographic variables associated with willingness to consider correction.

Results: Ninety-four PD, 106 AD, and 302 URO patients were recruited. Seven percent of PD, 12% of AD, and 20% of URO patients chose not to surgically correct any degree of PC (p = 0.001). Among those who endorsed willingness to surgically correct PC, the average threshold for correction was 52.5° (SD 13) for PD, 37.2° (SD 29.5) for AD, and 51.0° (SD 19.9) for URO patients. No difference in the decision to surgically correct was found when comparing groups: PD with AD (p = 0.42), PD with URO (p = 0.46) and PD+AD vs. URO (p = 0.67).
No demographic factors among PD and AD groups were found to have an impact on willingness to undergo PC correction on both univariable and multivariable analysis (Table 1).

Conclusions: No significant differences were seen in the decision to surgically correct PC when comparing the perspectives of patients with PD, AD, and URO. Despite having PC, no demographic differences were seen among PD patients' willingness to correct PC.

Table 1.
PD Demographics & Univariable Analysis

Study Characteristics	N (%)	Minimum Degree of Correction, Mean (95% CI)	p-value
Gender			0.99
Female	0 (0)	--	
Male	94 (100)	52.5 (49.9-55.1)	
Age			
18 to 24	3 (3)	50.0 (25.2-74.8)	0.71
25 to 34	3 (3)	60.0 (35.1-84.8)	0.28
35 to 44	5 (5)	48.0 (25.8-70.2)	0.39
45 to 54	14 (15)	53.6 (50.7-56.4)	0.73
55 to 64	39 (41)	52.4 (48.6-56.1)	0.91
≥ 65	30 (32)	52.5 (45.9-59.1)	0.98
Relationship Status			0.38
Single	8 (9)	42.9 (31.3-54.4)	
In a relationship	13 (14)	47.5 (41.4-53.6)	
Married	72 (77)	54.8 (52.0-57.7)	
Divorced	2 (2)	40.0 (-87.1-167)	
Sexual Orientation			0.86
Heterosexual	88 (94)	52.5 (50.7-54.3)	
LGBTQ	5 (5)	54.3 (45.9-62.7)	
Works in healthcare			0.78
No	17 (18)	52.4 (49.5-55.2)	
Yes	77 (82)	53.3 (45.9-60.8)	

AD Demographics & Univariable Analysis

Study Characteristics	N (%)	Minimum Degree of Correction, Mean (95% CI)	p-value
Gender			0.36
Female	6 (6)	--	
Male	100 (94)	37.2 (31.6-42.8)	
Age			
18 to 24	2 (2)	--	0.26
25 to 34	17 (16)	47.6 (33.5-61.8)	0.07
35 to 44	15 (14)	37.9 (22.6-53)	0.85
45 to 54	6 (6)	38.4 (6.2-70.4)	0.87
55 to 64	29 (27)	27.2 (18.9-35.5)	**0.03**
≥ 65	37 (35)	39.4 (28.6-50.2)	0.46
Relationship Status			0.15
Single	16 (15)	49.4 (31.7-67.0)	
In a relationship	15 (14)	30.7 (19.5-41.8)	
Married	70 (66)	34.4 (27.7-40.9)	
Divorced	5 (5)	44 (1.34-86.6)	
Sexual Orientation			0.77
Heterosexual	96 (90)	36.3 (30.6-42.1)	
LGBTQ	10 (10)	39.0 (21.0-56.9)	
Works in healthcare			0.96
No	95 (90)	37.0 (13.14-60.85)	
Yes	10 (9)	36.6 (30.9-42.2)	
Unsure	1 (1)	--	

MP6-09

Long-Term Bladder Outcomes Using Symptomatology Scoring System for Posterior Urethral Valves

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Introduction and Objective: Urinary drainage for posterior urethral valves can be achieved with valve ablation (VA) or diversion by vesicostomy (VES) or cutaneous ureterostomy (CU). The effect of these interventions on long-term bladder function remains debated, and voiding symptomatology after VES or CU reversal has been poorly characterized. Herein, we examine prevalence and scope of retention or incontinence symptomatology among PUV patients undergoing these interventions and determine rates of progression to augmentation.

Methods: This is a single-institution retrospective cohort study. Retention Scores (R) were calculated 1 point for: retention behavior (double/timed void), alpha-blocker, intermittent catheterization, or overnight foley. Incontinence Scores (I) were calculated 1 point for: incontinence behavior (double/timed void), oral medication, or botox. Patients with R score above 3 or I score above 2 were deemed to have severe retention or incontinence symptomatology respectively. End stage bladder (ESB) was defined as need for bladder augmentation.

Results: We identified 77 patients between 5-40 years old with median follow-up of 176 (54-485) months. Overall progression to ESB occurred in 11.8% of patients at a median age of 4.8y after diagnosis. There was no difference in the rates of severe retention or incontinence symptomatology between VA versus VES/CU (Table 1). There was also no significant difference in rate of ESB by intervention category VA (9.4%) versus VES/CU (17.4%; p = 0.441).

Conclusions: Long-term bladder outcomes for valve patients demonstrated similar voiding symptomatology and progression to end-stage bladder regardless of diversion status. Patients went on to ESB approximately 5 years after diagnosis at similar rates between groups.

	Total Patients (N= 76)	VA (N= 53)	VES/CU (N= 23)	p
Severe Retention (R Score 3+)	11 (14.5%)	7 (13.2%)	4 (17.4%)	0.726
Severe Incontinence (I Score 2+)	6 (7.9%)	5 (9.4%)	1 (4.3%)	0.661
ESB	9 (11.8%)	5 (9.4%)	4 (17.4%)	0.441

MP6-10

Virtual Interviews and Decision-making for Urology Residency Applicants during the 2021-2022 Application Process
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Introduction and Objective: Though virtual residency interviews have decreased interview-related costs, they have led to challenges for applicants in making informed decisions about residency programs. We conducted a survey-based study to clarify this trade off and assess applicant understanding of residency programs. We aimed to (1) determine the most important factors for applicants to urology programs, (2) understand whether applicants were able to assess these factors virtually, and (3) obtain applicant feedback on virtual interviews.

Methods: We emailed an anonymous, web-based 44 question survey after the 2022 Urology Residency Match to all qualified applicants to our institution who met initial screening criteria.

Results: Of 283 applicants receiving the survey, 102 (36%) responded. On average, respondents applied to 87 programs, received 15 interviews and ranked 13 programs. 82% of participants matched, and on average matched number 3 on their rank list. As shown in Table 1, participants chose goodness of fit within the program (38%), program location (28%), or resident happiness (23%) as the most important factor when making their rank lists. Participants felt faculty interviews and resident happiness were well-replicated virtually, but program location was not. Over 40% of participants found virtual resident Q&As and pre/post-interview socials helpful in assessing resident happiness. Applicant feedback included adding virtual tours, interactive maps, and "day in the life" social media posts or allowing for in-person second-look days.

Conclusions: Perceived resident happiness and program location are key variables for applicants evaluating urology residency programs. Applicants found virtual events helpful in assessing resident happiness. If interviews remain virtual in the future, programs should continue to offer virtual events and attempt to provide applicants with a better understanding of program location using media or optional second-look days.

Table 1. Virtual Interview Data (n=102)

Which of the following factors was most important to you when choosing a urology residency program?

Factor	Number of participants (%)
Perceived goodness of fit within program	39 (38%)
Program location	28 (27%)
Perceived resident happiness	23 (23%)
Reputation of program	7 (7%)
Resident-faculty dynamics	3 (3%)

On a scale from 1 to 5, how well were each of the following interview components replicated virtually?

Interview Component	Mean score
Faculty interviews	3.92
Resident happiness/camaraderie	3.42
Resident-faculty dynamics	2.77
Physical location/city feel	2.10

Which of the following were helpful to you when assessing a residency program?

Interview Component	Number of participants (%)
Resident Happiness	
In-person rotation	45 (44%)
Virtual resident Q&A	45 (44%)
Virtual pre/post-interview social	44 (43%)
Virtual resident interview	36 (35%)
Information from friend	22 (22%)
Virtual open house	13 (13%)
Program Location	
In-person rotation	46 (45%)
Independent visit	29 (28%)
Information from friend	23 (23%)
Virtual resident Q&A	19 (19%)
Virtual tour	5 (5%)

Sample Applicant Suggestions

"Pre-recorded short videos with walking tours of the hospital and surrounding areas"
"Use of Google Earth and interactive maps that include housing, dining, social activities, etc."
"Day in the life style vlogs on social media"
"Interviews should remain virtual with the option for second-look days"

MP6-11

Implementation of Opioid-free and Opioid-reduced Protocols for Postoperative Pain Management After Penile Prosthesis Surgery
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Introduction and Objective: Postoperative pain management after (PP) penile prosthesis is challenging and it has traditionally required opioid medication. In light of the ongoing nationwide opiate epidemic and in an effort to reduce the risk of postoperative opioid dependence, urologic prosthetic surgeons have sought to establish opioid-free and/or opioid-reduced protocols (OFP, ORP respectively) for PP postoperative pain management. This study seeks to investigate the adoption of OFP or ORP among surgeons who perform PP surgery and potential barriers to their implementation.

Methods: A 13-question survey was sent to members of the Sexual Medicine Society of North America (SMSNA) via email. T-test was used to analyze survey responses.

Results: 43 urologists responded to the survey, with representation from every American Urologic Association geographic section. Most respondents (73.18%) performed penoscrotal PP and 43% of respondents performed more than 30 PP per year. OFP was used most of the time by 24.39% of respondents and ORP was used most of the time by 73.18%. No significant relationship was found between use of OFP/ORP and geographical region, number of implants performed per year, surgical approach or location of reservoir placement. Among respondents using an ORP, 100% prescribed 10 doses of opioid medication or less upon discharge. 41.51% of respondents used an OFP/ORP from published literature and 9.43% consulted their local anesthesia or pain management department. The most commonly used modalities of non-opioid analgesia were: non-steroidal anti-inflammatories (95.1%), acetaminophen (87.8%), dorsal penile block (80.4%), gabapentin (46.3%) and pudendal block (43.9%). Following initiation of an ORP/OFP, 9.3% reported an increase in phone calls and 11.6% reported an increase in refill requests. There were no reports of increased patient dissatisfaction. Most respondents (65.8%) were extremely satisfied with their protocols.

Conclusions: OFP/ORP after PP surgery appear to be widely adopted by the urologic prosthetic community without a significant increase in patient or surgeon dissatisfaction.

MP6-12

Outpatient Penile Implant Surgery During the Covid Era: Do Outcomes Suffer Compared to Patients Undergoing Observation Stays?

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Introduction and Objective: Shifting elective procedures to the same-day/outpatient setting (SDS) became a necessity during the COVID-19 pandemic. We characterize pain control, management of postoperative urinary retention (UR), and scrotal hematoma rates in a cohort of patients undergoing inflatable penile prosthesis (IPP) insertion during the Covid era compared to a historic cohort undergoing 23-hour observation stays (OBS).

Methods: All IPPs placed between January 2014 to December 2020 were identified. Patients who underwent IPP placement prior to March 2020 and had undergone 23-hour observation were labeled "pre-COVID" (OBS) while patients undergoing IPP following March 2020 were discharged same day and termed "post-COVID" (SDS). Demographic, intraoperative, and postoperative variables were collected and compared while univariate and multivariable analysis was performed.

Results: 267 patients were analyzed prior to COVID-19 (23-hour observation) while 50 patients were assessed post-COVID (SDS). Differences were noted in operative time (111 vs. 88.5 min, p = 0.001), intraoperative total morphine equivalents (TME) (20.3 vs. 15.0, p < 0.001), anticholinergic use (43% vs. 12%, p < 0.001), and postoperative narcotic use (TME) (23.0 vs. 2.0, p < 0.001), all of which were lower in the SDS group. No differences were noted in UR (p = 0.124), postoperative pain scores (p = 0.162), and re-presentation to the ER between the two groups (p = 0.266).

Conclusions: In our large volume assessment of IPP recipients, patients receive similar and acceptable care whether they undergo 23-hour observation or SDS. Perioperative improvements in pain management and OR time are, however, important findings in the Covid era that should be further characterized in larger scale evaluations.

MP6-13

Evaluation of Vasectomy and Opioid Prescription Trends Using TriNetX, a Global Database
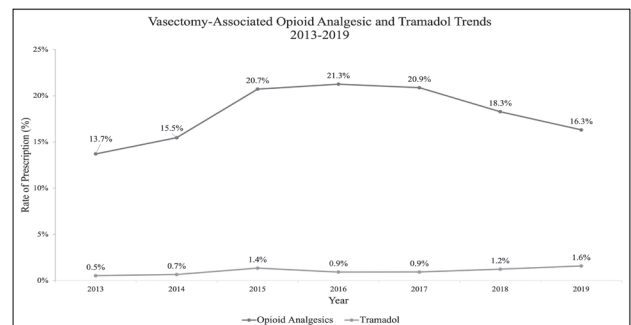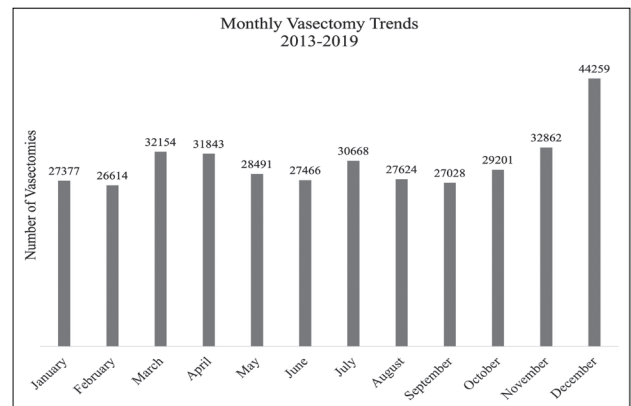
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Introduction and Objective: Vasectomy is a widely used surgical procedure for male contraception. Overutilization of opioid prescriptions for outpatient ambulatory procedures has contributed to the opioid epidemic. The objective of this study was to use TriNetX, a third-party database, to evaluate demographic and temporal trends in vasectomies in the United States from 2013-2019. Specifically, we tested the hypothesis that opioid prescriptions associated with vasectomies have decreased in recent years.

Methods: Vasectomy data were collected on male patients aged 18-100 between January 2013 and December 2019. Cohorts were built by month and by year using Current Procedural Terminology (CPT) and International Classification of Diseases (ICD-10) codes. Analytics were performed via TriNetX on demographic data and incidence of opioid and tramadol prescriptions within 7 days of vasectomy.

Results: The average age was 38.5 ± 6.5 (n = 365,587). The most popular months for vasectomies from 2013 to 2019 were December (12.1%), November (9.0%), and March (8.8%). Opioid prescriptions within 7 days of vasectomy increased from 2013-2016 (+7.5%) and decreased from 2016-2019 (-5.0%). Tramadol was rarely prescribed for post-vasectomy pain, with a maximum prescription rate of 1.6% in 2019.

Conclusions: March, November, and December are popular months for vasectomy. Opioid prescriptions within 7 days of vasectomy have fluctuated over the past decade and have declined in recent years. This follows a national trend as more has been published by the Center for Disease Control discouraging prescription of opioids for minimally invasive ambulatory procedures.

Monthly Vasectomy Trends 2013-2019

Vasectomy-Associated Opioid Analgesic and Tramadol Trends 2013-2019

Moderated Poster Session 6: Andrology, Pediatrics & Education

MP6-14

Penile Constriction Ring Injury: A Review of the Literature
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Introduction and Objective: Penile strangulation is a rare urologic emergency that requires prompt evaluation and provider creativity. Metal constriction rings pose a unique challenge for removal and may require the use of heavy equipment or surgery. The objective of this study is to perform a literature review of the cases reported in the past 50 years involving penile strangulation due to a metal constriction ring. The data will then be synthesized in order to provide information regarding the ideal approach given different durations of injury and metallic rings applied.

Methods: The PubMed database was queried using the search terms "constriction ring," "penile incarceration," and "penile strangulation." A narrative review of available literature published after 1970 was completed. Manuscripts in languages other than English were excluded.

Results: Four methods are routinely employed to remove metal constriction rings: the string and aspiration technique, non-power cutting tools, power cutting tools, and degloving. The string and aspiration technique is preferable for strangulation for less than 24 hours. If available, industrial bolt cutters are often successful. If the ring is made of hardened metal or the ring cannot be placed within the bolt cutter, a power tool such as an angle grinder, or orthopedic saw may be used in conjunction with a barrier and cold water irrigation. Degloving should be a last resort. Complications vary from minor scarring to septic shock and death.

Conclusions: Several techniques may be employed to address penile strangulation. Before choosing a technique, providers should consider patient stability, time since strangulation, ring thickness, and ring material.

Article	Age	Object	In Place	Technique Used for Removal	Failed Techniques	Anesthesia	Outcomes
Liang et al. (2021)	51	2 metal nuts with a diameter of 2 cm and thickness of 1.5 cm	24 hours	String (plastic wrap) and aspiration (5 ml syringe)	None	Nerve block	Laceration requiring suture with full recovery
Sarkar et al. (2019)	42	Metal plumbing pipe 4 cm in length	6 hours	String (10 Fr Foley) and aspiration (16G needle)	None	Spinal	Loss of epidermis and need for skin grafting
Mansoor (2017)	22	1.5 cm metal ring	4 hours	String (IV tubing) and aspiration (18G needle)	None	General	Full recovery
Alkizim et al. (2015)	26	0.5 cm metal ring	12 hours	String (nylon tape) and aspiration (No. 15 blade)	Cutting	Nerve block	Loss of glans sensation and morning erections
Dong et al. (2013)	64	Metal ring	12 hours	String (0-0 silk) and aspiration (22G needle)	None	Local	Full recovery
Weinstein et al. (2021)	43	Metal ring 1 cm in diameter	48 hours	Orthopedic bolt cutter with a malleable retractor backboard	None	General	Superficial skin necrosis with a full recovery
Laik (2021)	25	Gold-plated platinum metal ring 1 cm wide and 0.25 cm thick	2 hours	Orthopedic jumbo cutter with Bard Parker handle backboard and pliers	Orthopedic motorized cutting tool	?	Skin abrasions with a full recovery
Patel et al. (2018)	74	Metal ring	48 hours	Industrial grade bolt cutter	None	?	Scrotal necrosis, septic shock, and death
Lu et al. (2017)	49	2 cm thick metal ring	48 hours	Manual orthopedic saw with metal tongue depressor backboard	Bone cutter and wire cutter	Nerve block and sedation	Minor abrasions with a full recovery
Chennamsetty et al. (2014)	49	5 to 7 mm thick metal ring	9 days	Orthopedic pin cutter with tongue depressor backboard	Manual and electric ring cutters	Sedation	Soft tissue damage with a full recovery
Rahmita et al. (2020)	40	1.5 cm thick metal bolt	12 hours	Angle grinder with a metal clamp and wet gauze	Manual release	Nerve block and sedation	Soft tissue damage with a full recovery
Singh et al. (2018)	33	2 steel ball bearings	2 weeks	Industrial electric marble cutter with Allis forceps for stabilization and irrigation	String and aspiration	General	Necrosis and fistula formation
Zhang et al. (2017)	28	Steel ring 2 mm thick with 3 cm diameter	7 hours	Hydraulic cable cutter	None	Nerve block	Scarring with a full recovery
Paonam et al. (2017)	47	Metal iron ring (wheel bearing)	48 hours	Dental micromotor with wheel shape bur with irrigation	None	None	Scarring with a full recovery
Etetafia and Nwajei (2014)	30	Metal ring 8 mm wide and 2 mm thick with a 2.2 cm diameter	16 hours	Diamond bur in a dental handpiece with irrigation	Orthopedic saw and pliers	Sedation	Full recovery
Trivedi et al. (2013)	35	2.5 x 1 cm metal nut with 6 cm outer and 4 cm inner diameter	8 hours	Degloving	Manual removal	?	Wound closure with a full recovery
Gan et al. (2012)	19	1.5 cm thick metal axletree with 2.1 cm inner and 5.1 cm outer diameter	14 days	Degloving	Aspiration technique	Epidural	Required skin flap with a full recovery
Wasadikar (1996)	35	Metal ring with 3.2 cm outer and 1.4 cm inner diameter	1 month	Degloving	Aspiration technique	Spinal	Required split-thickness skin grafting with good cosmetic results
Klein & Smith (1987)	65	Steel ball bearing	7 days	Degloving	String technique	Spinal	Required debridement and skin grafting
Schell-hammer & Donnelly (1973)	69	Cast iron piping	7 days	Degloving	Saw and hammer	General	Required split-thickness skin grafting with good cosmetic results

MP6-15

Does Gender Impact Quality of Training in Urology Residency?
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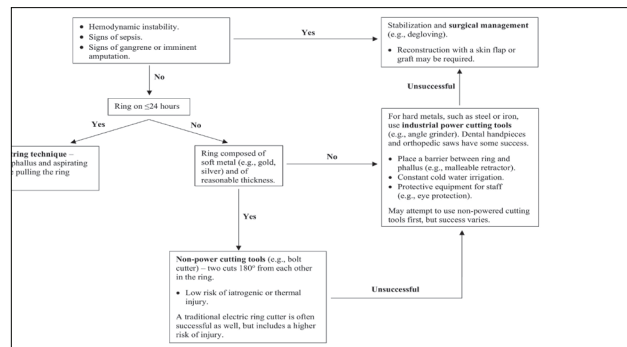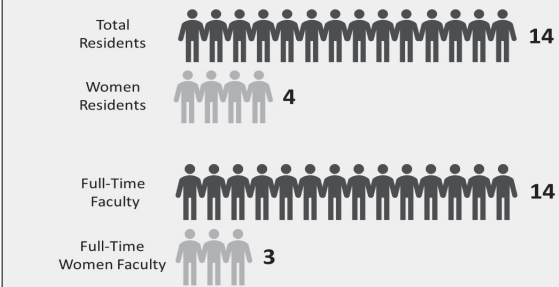
Introduction and Objective: Past studies suggest men receive more operative autonomy than women during residency and that trainees received different types of feedback based on their gender. Female urology residents, specifically, are less confident in their negotiating skills and have significantly lower salary expectations upon residency completion. Given its potential influence, we asked current urology residents to characterize gender's role in their training.

Methods: After institutional review board approval, a 10-item questionnaire was sent by the Society of Academic Urologists to program directors for distribution to current urology residents; all were eligible for inclusion. A 5-point Likert Scale to measure agreement with questionnaire statements was collapsed to two levels for analysis. Logistic regression was performed to test associations with opinions. Individuals who did not disclose gender were excluded from analysis.

Results: 94 residents completed the survey; 92 (60% male) met inclusion criteria. 47% were senior level (≥ PGY4.). See figure for median program data. 90% of respondents felt gender did not impact the overall quality of training. However, 54% felt male and female trainees were treated differently, and 33% reported witnessing gender discrimination. On multivariable analysis, senior level resident status (p = 0.004) and number of female co-residents (p = 0.025) were independently associated with an increased likelihood of reporting differential treatment.

Conclusions: Although gender did not impact the overall perceived quality of training, a majority of residents reported gender-based differential treatment or discrimination in their program. Our finding that the number of female co-residents and senior resident status directly correlated with reporting differential treatment suggests that increased exposure to interprofessional dynamics may allow for increased recognition of these understated patterns. Earlier interventions that educate peers about implicit biases should be considered to improve inclusivity.

Median Demographic Makeup of Survey Respondents' Training Programs

Total Residents — 14
Women Residents — 4
Full-Time Faculty — 14
Full-Time Women Faculty — 3

MP6-16

The Fate of the Unmatched Urology Applicant

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Introduction and Objective: Urology remains a competitive surgical sub-specialty. In the 2022 American Urological Association (AUA) match, approximately 1 in 3 applicants did not secure a urology residency position. Each year a cohort of competitive applicants go unmatched and are faced with the decision to reapply the following cycle while doing a research fellowship or a preliminary internship in the interim or choose a different specialty altogether. We investigated the outcomes and eventual career paths for unmatched applicants in Urology by evaluating a cohort of unmatched applicants.

Methods: The 2008-2014 AUA urology match lists were obtained from the Society of Academic Urologists. 730 unique applicants were identified with at least one unmatched result during this period. Additional information such as preliminary training and eventual specialty choice were obtained from publicly available sources. Comparative analysis with univariable and mutivariable analysis were performed between eventual urologists and those who chose alternative career paths.

Results: Overall, 43.4% (317/730) of unmatched urology applicants subsequently reapplied to Urology and 77.6% (246/317) of initially unsuccessful applicants eventually became urologists. Males (80.9%, p = 0.01), Doctor of Osteopathy (DO) degree (62.5%, p =< 0.001), and those undergoing a research year compared to a preliminary surgery year (85.2% vs. 72.3% respectively, p = 0.042) had an increased likelihood of successfully matching in Urology. The most common alternative specialty choices of unmatched urology applicants were Internal Medicine (13.8%), General Surgery (12.9%) and Anesthesiology (11.9%).

Conclusions: Approximately 3 in 4 unmatched Urology applicants who reapply will obtain a residency position. However, only 33.7% of students who do not match the first time ultimately choose Urology as their career. Reapplicants can take several pathways to obtain a Urology residency position. Successful reapplication is associated with the male gender, DO degree, and a research year.

MP6-17

Patient Demand for Urologists in the United States: A Google Trends Analysis

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Introduction and Objective: Facing a shortage of urologists in the United States, geographic quantification of patient demand will help determine how to best meet healthcare needs across the nation. With Americans increasingly seeking health information online, analysis of Google Trends affords a novel methodology by which we can assess demand for urologic care. The objective of this study is to quantify patient demand for urologists on a state-by-state basis.

Methods: Google Trends data was analyzed from 2004-2019 to determine the average relative search volume (RSV) for the term "urologist" in each state. The 2019 American Urological Association Census was used to determine the number of practicing urologists per state. A per capita concentration of urologists was calculated by dividing the number of providers by the estimated population in each state as reported by the 2019 Census Bureau. RSV values were then divided by the concentration of urologists to estimate a physician demand index (PDI) for each state scaled 0-100.

Results: The PDI was highest in Mississippi (100), Nevada (89), New Mexico (87), Texas (82), and Oklahoma (78). The concentration of urologists per 10,000 people was greatest in New Hampshire (0.537), New York (0.529), and Massachusetts (0.514), and lowest in Utah (0.268), New Mexico (0.248) and Nevada (0.234). RSV was highest in New Jersey (100.00), Louisiana (91.67), and Alabama (87.67), and lowest in Wisconsin (31.17), Oregon (29.17), and North Dakota (28.50).

Conclusions: The findings of this study suggest that demand is greatest in the Southern and Intermountain regions of the United States. Amidst a shortage in the urology workforce, this data may aid physicians and policymakers in focusing interventions. These findings may further aid in future job allocation and practice distribution.

MP6-18

Are There Gender Gaps in Urologic Training? A Survey of Urology Residents

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Introduction and Objective: Well-established gender gaps exists within urology. Female urologists earn less than age-matched male counterparts regardless of practice characteristics and remain underrepresented in academic urology, accounting for only 16% of full-time faculty last year. Women also publish fewer papers than their male counterparts and are less likely to be promoted. We aimed to investigate gender gaps at the residency level and assessed how current urology residents perceived gender to impact their training.

Methods: After institutional review board approval, a 10-item questionnaire was sent by the Society of Academic Urologists to urology residency program directors for distribution to current urology residents; all were eligible for inclusion. A 5-point Likert Scale to measure agreement with questionnaire statements was collapsed to two levels for analysis. Statistical analyses were performed using 2-sided tests with a p value of < 0.05 meeting significance. Individuals who did not disclose gender were excluded from final analysis.

Results: 94 individuals completed the survey; 92 met inclusion criteria. 60% were male. Survey findings are displayed in the graph.

Conclusions: It is encouraging that most urology residents do not perceive gender to impact the comprehensive quality of their residency training. Differences in how men and women experience their workplace and learning environment deserve further investigation, however, as a majority of respondents felt that men and women were treated differently in their programs. Women were significantly more likely to report this differential treatment in addition to exclusion from networking opportunities on the basis of gender. Given the increasing number of women entering urology, it is important for future work to examine how these themes may persist beyond residency training and affect career planning or a physician's practice.

Responses of Gender Cohorts

Physician Demand Index by State