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PRESIDENT'S MESSAGE

Dear Section Members and Guests,

On behalf of the Program Chair, Dr. Robert C. Kovell, the Program Committee and the Board of the Directors of the Mid-Atlantic Section of the AUA (MA-AUA), I am delighted to share the abstracts scheduled for presentation at the 83st Annual Meeting September 11-213, 2025 in beautiful Niagara Falls, New York.

The MAAUA Annual Meeting will be held in Niagara Falls, an iconic natural wonder which is comprised of three waterfalls: Horseshoe Falls, American Falls and Bridal Veil Falls. Visitors can experience the falls up close on the Maid of the Mist boat tour. For nature lovers who wish to venture out a bit, Niagara Falls State Park (the nation's oldest state park) offers many great hiking trails, gardens and viewpoints. The city of Niagara Falls has many great attractions including the Niagara Falls Underground Railroad Heritage Center and Old Falls Street for dining. We have multiple social events planned including our Welcome Reception and Resident's Bowl on Thursday, a Street Fair Theme Night on Friday and the President's reception on Saturday evening. Our educational program will be a full 3 days, during which we have distinguished invited speakers, over incredible panel and plenary sessions, concomitant poster sessions, and a full-day program for the APP members of our section. Our named speakers are Mark Schoenberg from Montefiore as our Hugh Hampton Young Lecturer and Jay Raman from Penn State as our Paul Schellhammer Lecturer.

I would like to thank CJU International for their continued relationship with the MA-AUA and their commitment to support our academic efforts through publication of these abstracts. I look forward to personally welcoming you to Niagara Falls to see these works presented and discussed in person.

Sincerely,

Thomas J. Guzzo, MD, MPH
MA-AUA President

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FRI-1415

Multi-Institutional Outcomes of Robotic Ureteral Reconstruction for Endometriosis-Induced Strictures

M. Lee[1], S. Saxena[2], L. Shumaker[1], M. Stifelman[2], L. Zhao[3], R. Lee[1], D. Eun[1]

[1]Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA; [2]Hackensack University Medical Center, Hackensack, NJ, USA; [3]New York University Langone Health, New York, NY, USA

Introduction and Objective: We investigate outcomes of robotic ureteral reconstruction in females with ureteral strictures caused by extrinsic compression from endometriosis lesions.

Methods: We retrospectively reviewed our multi-institutional Collaborative of Reconstructive Robotic Ureteral Surgery (CORRUS) database to identify all consecutive patients undergoing RUR for surgical management of ureteral strictures between 01/2017 and 12/2022. Indications for surgery included female patients with strictures secondary to extrinsic compression from endometriosis with associated flank pain, recurrent urinary tract infections and/or decreasing renal function on renal scan. We performed a descriptive analysis of perioperative outcomes in patients who met inclusion criteria. Surgical success was defined as freedom from additional interventions for recurrent ureteral stenosis.

Results: Overall, 19 patients were included in the analysis (Table 1). Ureteral strictures were located in the middle ureter in 4 (21.1%) patients and in the distal ureter in 15 (78.9%) patients. Four (21.1%) patients underwent prior ureteral stricture intervention. Median operative time was 197.0 (IQR 154.0–217.0) minutes and median estimated blood loss was 50.0 (IQR 37.5–55.0) milliliters. Robotic ureteral reconstruction techniques included refluxing reimplantation (47.4%), side-to-side reimplantation (21.1%), ureteroureterostomy (21.1%), and buccal mucosa graft ureteroplasty (10.5%). There was one (5.3%) major postoperative complication (Clavien > 2) in which a patient developed an intrabdominal abscess requiring drainage by interventional radiology. At a median follow-up of 22.5 (IQR 11.7–41.5) months, 18 (94.7%) patients were surgically successful.

Conclusions: Robotic ureteral reconstruction techniques may be safe and effective in the management of patients with ureteral strictures secondary to endometriosis.

Table 1: Perioperative Outcomes of Robotic Ureteral Reconstruction for Endometriosis-Induced Strictures

Variable	N=19
Preoperative	
Median Age (IQR), Years	39.0 (30.0-42.5)
Median Body Mass Index (IQR), kilograms/meters^2	26.1 (20.4-29.7)
Stricture Location	
Middle Ureter (%)	4 (21.1%)
Distal Ureter (%)	15 (78.9%)
Prior Ureteral Stricture Intervention	
Endoscopic (%)	3 (15.8%)
Surgical (Laparoscopic/Robotic/Open) (%)	1 (5.3%)
Intraoperative	
Median Operative Time (IQR), Minutes	197.0 (154.0-217.0)
Median Estimated Blood Loss (IQR), Milliliters	50.0 (37.5-55.0)
Median Stricture Length (IQR), Centimeters	2.0 (2.0-3.0)
Robotic Ureteral Reconstruction Performed	
Refluxing Reimplantation (%)	9 (47.4%)
Side-to-Side Reimplantation (%)	4 (21.1%)
Ureteroureterostomy (%)	4 (21.1%)
Buccal Mucosa Graft Ureteroplasty (%)	2 (10.5%)
Median Length of Stay (IQR), Days	1.0 (1.0-1.0)
Postoperative	
Median Follow-Up (IQR), Months	22.5 (11.7-41.5)
Major Complications (Clavien>2) (%)	1 (5.3%)
Surgical Success (%)	18 (94.7%)

FRI-1425

Incidental Prostate Cancer after Holmium Laser Enucleation of the Prostate: Incidence and Associated Factors

S. Pursnani[1], E. Mohr[2], A. Majeed[1], M. Hsu[1], E. Zook[1], N. Ahmad[1], J. Gurovich[2], R. Cañas[2], E. Lehman[1], R. Ledezma[2] and J. Raman[1]

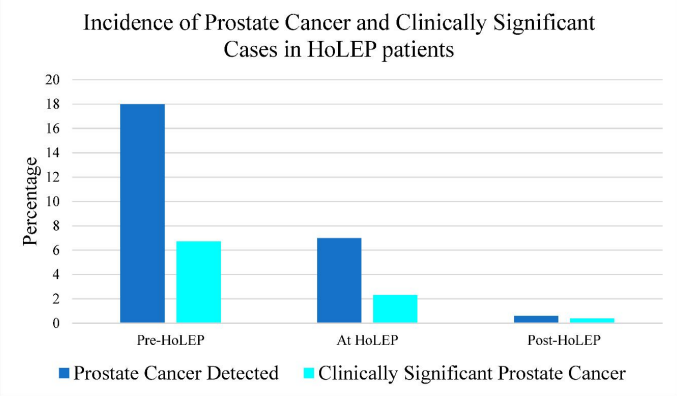
[1]Penn State Health Milton S Hershey Medical Center, Hershey, PA, USA; [2]Clinical Hospital of the University of Chile, Independencia, Chile

Introduction and Objective: Holmium laser enucleation of the prostate (HoLEP) can lead to detection of incidental prostate cancer (iPCa), with previous data showing an incidence of 5.64%–23.3%. This study aims to provide a recent estimate of the incidence and analyze predictive factors of iPCa.

Methods: A retrospective, multi-institutional, multi-national cohort analysis of patients who underwent HoLEP between 2021–2024 was performed. Data collected included patient demographics, preoperative laboratory results and imaging, operative reports, biopsy findings, and postoperative outcomes. Analysis was performed to establish associations with PCa diagnosis.

Results: Data from 579 HoLEP cases between 2021–2024 at two institutions was collected, of which 19 patients were excluded due to a preoperative diagnosis of PCa. Of the 560 remaining HoLEP patients, 39 (7.0%) patients were found to have *de novo* PCa on HoLEP specimens of which 13 (2.3%) had clinically significant cancer (Figure). There was no clinically significant difference in age, BMI, and co-morbidities between patients who were diagnosed with iPCa at HoLEP. Mean IPSS score (3.49 vs 3.29, *p*-value = 0.074) and preoperative mean PSA (9.39 vs 5.63, *p*-value = 0.007) were observed to be higher in those with iPCa. Of those with csPCa, the prevalence of ischemic heart disease (46.2% vs 19.3%, *p*-value = 0.016) and ASA grade 3/4/5 (46.3% vs 22.6%, *p*-value < 0.001) was significantly higher. Preoperative PSA was significantly higher in csPCa (12.27 vs 5.73, *p*-value = 0.032).

Conclusions: In an international HoLEP cohort, PCa was detected in 7.0% of patients, with only 2.3% harboring clinically significant (≥GG2) disease. Ischemic heart disease, ASA grade, and preoperative PSA were associated with csPCa at HoLEP. These data are valuable for appropriate preoperative patient counseling.



FRI-1435

Predictive Power of the Social Vulnerability Index on Readmission Rates after Radical Cystectomy for Muscle-Invasive Bladder Cancer

F. Sun, S. Ghosal, T. Krupski and J. Lobo

University of Virginia, Charlottesville, VA, USA

Introduction and Objective: Readmission rates following radical cystectomy (RC) for muscle-invasive bladder cancer (MIBC) remain high despite broad advances. While individual-level Social Determinants of Health (SDOH) influence urologic disease severity, community-level impacts are less documented. The Social Vulnerability Index (SVI) measures community resilience through socioeconomic, demographic, and housing data. This study investigates the link between SVI and readmission rates post-RC for MIBC.

Methods: A review of an IRB-approved database examined 147 patients who underwent RC for cT2-stage MIBC. Readmission rates at 30 and 60 days were modeled using logistic regressions. Predictors included age, sex, race, smoking status, seminal vesicle invasion (SVI), neoadjuvant chemotherapy (NAC) history, Charlson Comorbidity Index (CCI), and total travel time to UVA. Final models for each time point were selected based on the covariate set that minimized the Akaike Information Criterion (AIC).

Results: Cohort median age was 68 years (IQR: 61–75), and 76% were male. The median SVI was 0.26 (IQR: 0.21–0.43), with 69% receiving NAC. Readmission following RC occurred in 24% of patients. SVI was significantly higher in readmitted patients (0.41 [IQR: 0.25–0.50]) than in non-readmitted patients (0.25 [IQR: 0.21–0.42], $p < 0.006$). SVI was a significant predictor of readmission at 30 days (OR: 6.00, 95% CI: 1.02–36.0, $p = 0.047$), 60 days (OR: 7.29, 95% CI: 1.23–46.8, $p = 0.031$). Age also predicted 30-day readmission (OR: 1.04, 95% CI: 1.00–1.09, $p = 0.047$). Fig. 1 illustrate predictors of readmission at 30 and 60 days by SVI.

Conclusions: This study underscores the significant impact of SVI on readmission rates following RC for MIBC, highlighting the need for targeted interventions and broader health equity strategies in urologic care.

FRI-1445

Cancer-Testis Antigens in Urological Malignancies

B. Wilson, R. Fogg, M. Dozmorov, M. Manjili, G. Guruli

Virginia Commonwealth University Health System, Richmond, VA, USA

Introduction and Objective: Cancer testis antigens (CTA) are a group of highly immunogenic tumor-associated antigens which have attracted interest as potential targets of immunotherapy. They are aberrantly expressed in various tumors, including urologic malignancies. Decreased expression of these antigens might confer low immunogenicity, allowing tumors to escape immune monitoring. In this study, we evaluated the expression of various CTAs in urological malignancies.

Methods: We obtained data from different cohorts of patients from The Cancer Genome Atlas (TCGA). Expression of 13 different CTAs (ACRBP, AKAP4, CCNA1, CEP55, CTCFL, MAGE-A4, ODF4, PAGE4, SPA17, SSX2, TEX14, TEX15, TSGA10) was evaluated. There were 538 patients with renal cell carcinoma (with 72 corresponding normal renal tissue samples), 411 patients with urothelial carcinoma (19 corresponding normal urothelial tissue samples) and 502 patients with the adenocarcinoma of the prostate (with 52 samples of the normal prostate).

Results: Evaluation of the data from TCGA demonstrated different expressions of the CTAs in different tumors. In kidney cancer samples, the levels of seven out of 13 CTAs were decreased, while 4 were unchanged and only 2 were increased in comparison to normal renal tissue. In bladder cancer samples, the expression of only one CTA (TEX15) decreased, while 6 were increased and 6 were unchanged. Concerning prostate adenocarcinoma samples, the level of 4 CTAs was decreased, 4 unchanged and 5 increased. CEP55 was one CTA which demonstrated significantly increased expression in all urological malignancies examined.

Conclusions: Our results showed decreased expression of examined CTAs in some human cancer tissues, which may help cancer cells avoid detection by host immune system. Use of hypomethylating agents, which can increase the expression of CTAs, may have therapeutic value in these patients. The constantly elevated expression of CEP55 in all malignancies examined was a find which needs future evaluation.

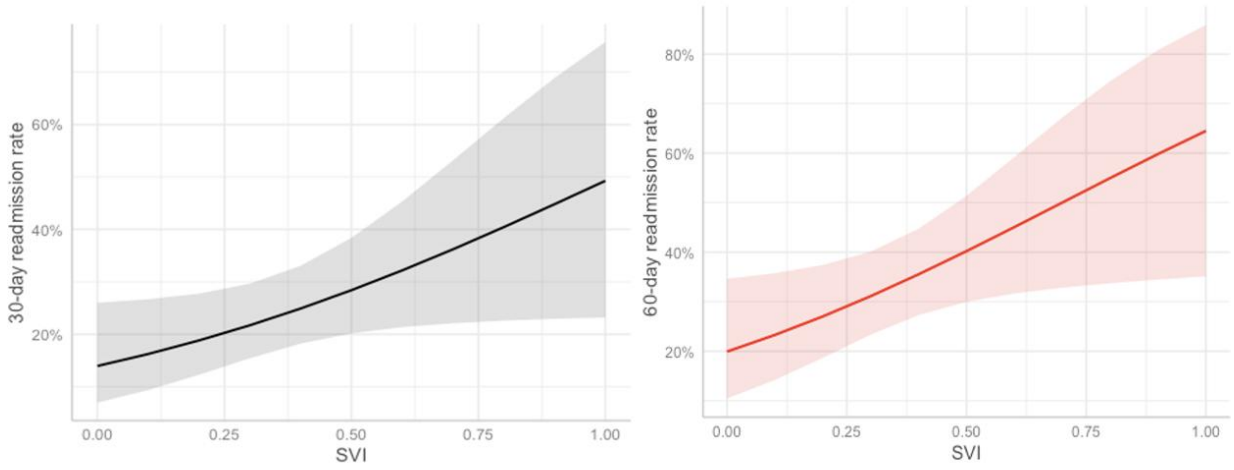


Figure 1: Positive Relationship between worsening SVI and increased probability for readmission following radical cystectomy at 30 and 60 days.

FRI-1445

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Virginia Commonwealth University Health System, Richmond, VA, USA

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FRI-1455

Optimal Number of Neoadjuvant Chemotherapy Cycles in Upper Tract Urothelial Carcinoma: A Multi-Institutional Study

T. Li[1], S. Brönimann[1,2], S. Matin[3], P. Spiess[4], R. Li[4], R. Clark[5], J. Raman[5], P. Hensley[6], J. Coleman[7], V. Margulis[8], A. Potretzke[9], J. Hoffmann-Censits[10] and N. Singla[1]

[1]James Buchanan Brady Urological Institute, Johns Hopkins University School of Medicine, Baltimore, MD, USA; [2]Department of Urology, Medical University of Vienna, Vienna, Austria; [3]University of Texas MD Anderson Cancer Center, Houston, TX, USA; [4]Moffitt Cancer Center, Tampa, FL, USA; [5]Penn State Health Milton S Hershey Medical Center, Hershey, PA, USA; [6]University of Kentucky, Lexington, KY, USA; [7]Memorial Sloan Kettering Cancer Center, New York, NY, USA; [8]UT Southwestern, Dallas, TX, USA; [9]Mayo Clinic Department of Urology, Rochester, MN, USA; [10]Sidney Kimmel Comprehensive Cancer Center, Baltimore, MD, USA

Introduction and Objective: While recent studies demonstrated the efficacy of neoadjuvant chemotherapy (NAC) in upper tract urothelial carcinoma (UTUC), the optimal number of NAC cycles remains undefined. We investigated the impact of NAC cycle on pathological response and survival outcomes in clinically non-metastatic high-risk UTUC patients.

Methods: We performed a retrospective analysis of the UTUC Collaborative Network (UCAN) database, comprising 2276 patients who underwent radical nephroureterectomy (RNU) across seven high-volume tertiary care centers in the United States (2000–2021). We identified patients who received 1–4 cycles of cisplatin-based NAC before surgery. Primary endpoints included pathologic complete response (pCR: ypT0N0). Secondary endpoints included metastasis-free survival (MFS), bladder cancer-free survival (BCFS), cancer-specific survival (CSS), and overall survival (OS). Outcomes were assessed using multivariable logistic regression and Cox proportional hazards models.

Results: Among 467 patients who received NAC, 216 were eligible for inclusion, where 49 and 128 received 3 and 4 cycles of NAC respectively, and 10 patients received 1–2 cycles. Receipt of 3–4 cycles of NAC was associated with higher pCR than those who received 1–2 cycles (16% vs. 0%, $p < 0.001$). No significant difference in pCR was observed between 3 and 4 cycles (16% vs. 16%, $p = 0.48$). On multivariable logistic regression analysis, the number of NAC cycles received was not associated with pCR rates (3 vs. 4 cycles OR 1.12, 95% CI 0.35–4.36, $p = 0.9$). In comparing oncologic outcomes on multivariable Cox regression analysis, 4 cycles of NAC were associated with improved OS compared to 3 cycles (HR 0.36, 95% CI 0.18–0.72, $p = 0.004$), but this survival benefit did not extend to MFS, BCFS, or CSS.

Conclusions: pCR rates and cancer-specific oncologic outcomes are similar between patients receiving 3 versus 4 cycles of cisplatin-based NAC prior to RNU for high-risk, clinically non-metastatic UTUC. Our findings warrant prospective validation to optimize cisplatin-based NAC regimens for high-risk UTUC, balancing efficacy and toxicity.

FRI-1505

Characterizing the Use and Implications Of genetic Testing for Prostate Cancer in a Community Setting

G. Mansour, L. Spiers and M. Williams

Eastern Virginia Medical School, Norfolk, VA, USA

Introduction and Objective: National Comprehensive Cancer Network (NCCN) guidelines currently support the use of germline and somatic testing in individuals with metastatic prostate cancer. Genetic testing has both implications for mutation directed therapy as well as for family counseling. This study aims to evaluate the impact of genetic testing results on men with prostate cancer and the utilization of poly (ADP-ribose) polymerase (PARP) inhibitors.

Methods: This is a retrospective review of men from 2017–2024 undergoing somatic testing for prostate cancer. Mutation rate, presence of actionable mutations, treatment change as a result of genetic testing were evaluated. Actionable mutations were defined as a mutation as outlined by the NCCN guidelines that would make a patient eligible for a PARP inhibitor or Pembrolizumab. Baseline patient characteristics as well as disease status at time of genetic test ordering, additional systemic therapies were evaluated.

Results: A total of 237 men were included that had undergone Foundation One Somatic testing. Of men that genetic testing was ordered for 42% were diagnosed with metastatic hormone sensitive prostate cancer at the time of diagnosis, 19% had non metastatic hormone sensitive prostate cancer, 18% had metastatic castrate resistant prostate cancer, 1% had non metastatic castrate resistant prostate cancer. Of the patients tested, 2 patients had non diagnostic results, 22 patients had no mutations identified, and 213 patients had at least one mutation identified. Of all patients tested, 17.7% had an actionable mutation, and 33% of eligible patients were initiated on a PARP inhibitor as a result of the genetic testing.

Conclusions: Genetic testing in prostate cancer will continue to play a larger role in the future as more trials continue to identify targetable mutations for precision therapy. Currently the utilization of PARP inhibitors remains low in eligible men with prostate cancer likely due to their limited indication in the castrate resistant space.

THU-0945

Prostate Cancer Risk After Solid Organ Transplant: A Retrospective Claims-Based Matched Cohort Study

I. Florissi[3], A. Grutman[1,2], M. Alshak[3], M. Higgins[3], Y. Jing[3] and C. Pavlovich[3]

[1]Johns Hopkins School of Medicine, Baltimore, MD, USA; [2]The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA; [3]The James Buchanan Brady Urological Institute, Baltimore, MD, USA

Introduction and Objective: Immunosuppression in transplant patients has raised concerns about cancer risk. However, research is limited by small sample sizes or lack of matching. This study used a globally federated claims database to assess risk of incident prostate cancer in transplant patients compared to the general population.

Methods: The TriNetX Research Network was queried for men without history of prostate cancer who underwent solid organ transplant (kidney, heart/lung, liver, or pancreas) between ages 50–59, 60–69, or 70–79. Controls did not have a history of solid organ transplant or prostate cancer. Propensity-score matching was performed for age, race/ethnicity, BMI, tobacco use, family history of prostate cancer, and PSA range.

Results: After matching, there were 52,439 patients in the 50–59 cohort, 67,084 in the 60–69 cohort, and 32,565 in the 70–79 cohort. The relative risk (RR) of prostate was increased 10 years after transplant compared to controls (RR = 1.14; 95% CI: 1.03–1.27, p = 0.01). For patients aged 60–69 or 70–79 at transplant, there was no significant difference in risk 10 years after transplant.

Conclusions: Risk of prostate cancer in men after solid organ transplantation varies by age. Men aged 50–59 at transplant experienced increased long-term risk, highlighting the importance of continued prostate cancer surveillance in younger transplant patients. There was no increase in prostate cancer for men aged 60–69 or 70–79 at transplant, suggesting age-appropriate screening and shared decision making may be applied. Additional studies are needed to clarify prostate cancer risk following transplant and risk of disease progression.

Age Cohort 50-59 (n =52439)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR (95% CI)	p-value
1 day - 1 year	0.29%	0.33%	0.89 (0.72-1.11)	0.3
1 day - 3 years	0.65%	0.61%	1.05 (0.90-1.23)	0.5
1 day - 5 years	0.90%	0.81%	1.11 (0.98-1.27)	0.1
1 day - 10 years	1.48%	1.29%	1.14 (1.03-1.27)	**0.01**

Age Cohort 60-69 (n = 67084)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR	p-value
1 day - 1 year	0.96%	1.20%	0.79 (0.72-0.88)	**<0.0001**
1 day - 3 years	1.80%	1.90%	0.95 (0.88-1.03)	0.2
1 day - 5 years	2.31%	2.36%	0.98 (0.91-1.05)	0.6
1 day - 10 years	3.01%	3.16%	0.95 (0.90-1.01)	0.1

Age Cohort 70-79 (n = 32565)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR	p-value
1 day - 1 year	2.57%	2.76%	0.93 (0.85-1.02)	0.1
1 day - 3 years	3.83%	3.99%	0.96 (0.89-1.04)	0.3
1 day - 5 years	4.42%	4.51%	0.98 (0.91-1.05)	0.6
1 day - 10 years	4.89%	5.14%	0.95 (0.89-1.02)	0.1

THU-0952

Ordering Pre-Salvage Cryoablation Positron Emission Tomography Does Not Impact Biochemical Recurrence-Free Survival

C. Caputo, Z. Asadi, A. Laguerta, M. Lesgart, F. Montanaro, N. Dhanikonda, D. Omil-Lima, R. Lee and D. Chen

Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA

Introduction and Objective: The necessity of pre-prostate ablation positron emission tomography (PET) scans in the salvage setting remains unclear. We explored characteristics and outcomes of patients undergoing salvage cryoablation in a single-center, single-surgeon setting, stratified by pre-cryoablation PET scans.

Methods: We retrospectively reviewed 97 patients from 2007–2024 undergoing salvage cryoablation after prior failed radiotherapy. PET modalities included fluciclovine F-18 or prostate-specific membrane antigen. Pre-cryoablation patient characteristics and biochemical recurrence-free survival (BRFS) were recorded, with patients stratified by pre-cryoablation PET status (PET vs. non-PET).

Results: Of 97 patients, 65 (67%) were in the PET group and 32 (33%) were in the non-PET group. No significant differences were seen in age, pre-cryoablation PSA, or Gleason grade groups between groups (Table 1). Post-cryoablation PSA was higher in the non-PET group (2.45 vs. 0.68), but this difference was not significant (p = 0.06). BRFS was not significantly different (47% vs. 29%, non-PET vs. PET), although there was a trend toward lower BRFS in the non-PET group at 5 years (Fig. 1). There was no significant difference in BRFS over time (p = 0.28), with about 75% of both groups remaining biochemical recurrence-free at 2.5 years post-cryoablation.

Conclusions: No significant differences in key clinical parameters and outcomes were observed between patients who underwent pre-salvage cryoablation PET imaging versus those who did not. Future research should further evaluate the role of PET in treatment planning and recurrence risk stratification. Additional studies are needed to clarify trends in post-cryoablation PSA and lower BRFS in patients lacking pre-ablation PET scans.

Table 1: Characteristics of Salvage Cryoablation Patients (n=97)

	Pre-ablation PET Performed	Pre-ablation PET Not Performed	P-value
N	65	32	
Median Days PET Scan Performed Prior to Cryoablation (IQR)	112 (90)		
Median Age (IQR)	77 (9)	78 (12.3)	0.28
Median Pre-Cryoblation PSA (IQR) ng/mL	5.1 (5.86)	4.4 (6.1)	0.5
Pre-Cryoablation Grade Groups (GG) Frequency (%)			
GG ≤ 2	18 (28%)	9 (28%)	1
GG 3	19 (29%)	7 (22%)	0.59
GG ≥ 4	28 (43%)	16 (50%)	0.66
Median Post-Cryo PSA (IQR) ng/mL	0.68 (3.4)	2.45 (8.8)	0.06
Biochemical Recurrence Frequency (%)	19 (29%)	15 (47%)	0.13
Median Time to Biochemical Recurrence (IQR) years	1.5 (2.3)	2 (6.6)	0.17
Median Follow Up Duration (IQR) years	2.1 (3.8)	5.9 (4.9)	<.0001

Organ	Age Group	Transplant	Control	RR	95% CI	p-value
Kidney	50-59 (n = 38242)	605	502	1.21	(1.07, 1.36)	**0.002**
	60-69 (n = 39638)	1302	1216	1.07	(0.99, 1.16)	0.08
	70-79 (n = 19084)	969	898	1.08	(0.99, 1.18)	0.09
Heart/Lung	50-59 (n = 128)	-	-	-	-	-
	60-69 (n = 11540)	430	376	1.14	(0.998, 1.31)	0.052
	70-79 (n = 6621)	382	333	1.15	(0.99, 1.32)	0.06
Pancreas	50-59 (n = 3131)	38	57	0.667	(0.444, 1.002)	0.0495
	60-69 (n = 1734)	43	63	0.68	(0.47, 1.00)	0.049
	70-79 (n = 357)	-	-	-	-	-
Liver	50-59 (n = 16391)	218	228	0.96	(0.80, 1.15)	0.6
	60-69 (n = 22219)	602	611	0.99	(0.88, 1.10)	0.8
	70-79 (n = 9416)	392	481	0.82	(0.72, 0.93)	**0.002**

THU-0945

Prostate Cancer Risk After Solid Organ Transplant: A Retrospective Claims-Based Matched Cohort Study

I. Florissi[3], A. Grutman[1,2], M. Alshak[3], M. Higgins[3], Y. Jing[3] and C. Pavlovich[3]

[1]Johns Hopkins School of Medicine, Baltimore, MD, USA; [2]The Johns Hopkins Bloomberg School of Public Health, Baltimore, MD, USA; [3]The James Buchanan Brady Urological Institute, Baltimore, MD, USA

Introduction and Objective: Immunosuppression in transplant patients has raised concerns about cancer risk. However, research is limited by small sample sizes or lack of matching. This study used a globally federated claims database to assess risk of incident prostate cancer in transplant patients compared to the general population.

Methods: The TriNetX Research Network was queried for men without history of prostate cancer who underwent solid organ transplant (kidney, heart/lung, liver, or pancreas) between ages 50–59, 60–69, or 70–79. Controls did not have a history of solid organ transplant or prostate cancer. Propensity-score matching was performed for age, race/ethnicity, BMI, tobacco use, family history of prostate cancer, and PSA range.

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Age Cohort 50-59 (n =52439)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR (95% CI)	p-value
1 day - 1 year	0.29%	0.33%	0.89 (0.72-1.11)	0.3
1 day - 3 years	0.65%	0.61%	1.05 (0.90-1.23)	0.5
1 day - 5 years	0.90%	0.81%	1.11 (0.96-1.27)	0.1
1 day - 10 years	1.48%	1.29%	1.14 (1.03-1.27)	**0.01**

Age Cohort 60-69 (n = 67084)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR	p-value
1 day - 1 year	0.95%	1.20%	0.79 (0.72-0.88)	**<0.0001**
1 day - 3 years	1.80%	1.90%	0.95 (0.88-1.03)	0.2
1 day - 5 years	2.31%	2.36%	0.98 (0.91-1.05)	0.6
1 day - 10 years	3.01%	3.16%	0.95 (0.90-1.01)	0.1

Age Cohort 70-79 (n = 32565)

Time after Index Event	Transplant Outcomes (%)	Controls Outcomes (%)	RR	p-value
1 day - 1 year	2.57%	2.76%	0.93 (0.85-1.02)	0.1
1 day - 3 years	3.83%	3.99%	0.96 (0.89-1.04)	0.3
1 day - 5 years	4.42%	4.51%	0.98 (0.91-1.05)	0.6
1 day - 10 years	4.89%	5.14%	0.95 (0.89-1.02)	0.1

Organ	Age Group	Transplant	Control	RR	95% CI	p-value
Kidney	50-59 (n = 38242)	605	502	1.21	(1.07, 1.36)	**0.002**
	60-69 (n = 39638)	1302	1216	1.07	(0.99, 1.16)	0.08
	70-79 (n = 19084)	969	898	1.08	(0.99, 1.18)	0.09
Heart/Lung	50-59 (n = 128)	-	-	-	-	-
	60-69 (n = 11540)	430	376	1.14	(0.998, 1.31)	0.052
	70-79 (n = 6621)	382	333	1.15	(0.99, 1.32)	0.06
Pancreas	50-59 (n = 3131)	38	57	0.667	(0.444, 1.002)	0.0495
	60-69 (n = 1734)	43	63	0.68	(0.47, 1.00)	0.049
	70-79 (n = 357)	-	-	-	-	-
Liver	50-59 (n = 16391)	218	228	0.96	(0.80, 1.15)	0.6
	60-69 (n = 22219)	602	611	0.99	(0.88, 1.10)	0.8
	70-79 (n = 9416)	392	481	0.82	(0.72, 0.93)	**0.002**

THU-0952

Ordering Pre-Salvage Cryoablation Positron Emission Tomography Does Not Impact Biochemical Recurrence-Free Survival

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Introduction and Objective: The necessity of pre-prostate ablation positron emission tomography (PET) scans in the salvage setting remains unclear. We explored characteristics and outcomes of patients undergoing salvage cryoablation in a single-center, single-surgeon setting, stratified by pre-cryoablation PET scans.

Methods: We retrospectively reviewed 97 patients from 2007–2024 undergoing salvage cryoablation after prior failed radiotherapy. PET modalities included fluciclovine F-18 or prostate-specific membrane antigen. Pre-cryoablation patient characteristics and biochemical recurrence-free survival (BRFS) were recorded, with patients stratified by pre-cryoablation PET status (PET vs. non-PET).

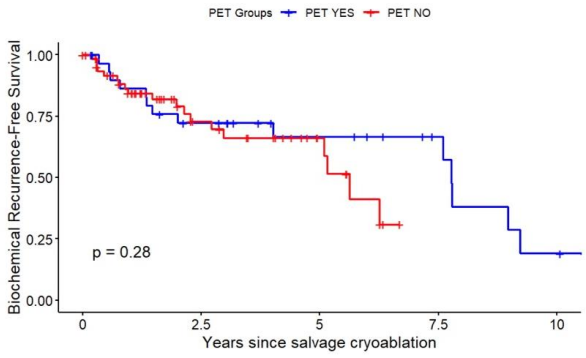
Results: Of 97 patients, 65 (67%) were in the PET group and 32 (33%) were in the non-PET group. No significant differences were seen in age, pre-cryoablation PSA, or Gleason grade groups between groups (Table 1). Post-cryoablation PSA was higher in the non-PET group (2.45 vs. 0.68), but this difference was not significant (p = 0.06). BRFS was not significantly different (47% vs. 29%, non-PET vs. PET), although there was a trend toward lower BRFS in the non-PET group at 5 years (Fig. 1). There was no significant difference in BRFS over time (p = 0.28), with about 75% of both groups remaining biochemical recurrence-free at 2.5 years post-cryoablation.

Conclusions: No significant differences in key clinical parameters and outcomes were observed between patients who underwent pre-salvage cryoablation PET imaging versus those who did not. Future research should further evaluate the role of PET in treatment planning and recurrence risk stratification. Additional studies are needed to clarify trends in post-cryoablation PSA and lower BRFS in patients lacking pre-ablation PET scans.

Table 1: Characteristics of Salvage Cryoablation Patients (n=97)

	Pre-ablation PET Performed	Pre-ablation PET Not Performed	P-value
N	65	32	
Median Days PET Scan Performed Prior to Cryoablation (IQR)	112 (90)		
Median Age (IQR)	77 (9)	78 (12.3)	0.28
Median Pre-Cryoblation PSA (IQR) ng/mL	5.1 (5.86)	4.4 (6.1)	0.5
Pre-Cryoablation Grade Groups (GG) Frequency (%)			
GG ≤ 2	18 (28%)	9 (28%)	1
GG 3	19 (29%)	7 (22%)	0.59
GG ≥ 4	28 (43%)	16 (50%)	0.66
Median Post-Cryo PSA (IQR) ng/mL	0.68 (3.4)	2.45 (8.8)	0.06
Biochemical Recurrence Frequency (%)	19 (29%)	15 (47%)	0.13
Median Time to Biochemical Recurrence (IQR) years	1.5 (2.3)	2 (6.6)	0.17
Median Follow Up Duration (IQR) years	2.1 (3.8)	5.9 (4.9)	<.0001

Figure 1: Biochemical Recurrence-Free Survival Post Salvage Cryoablation Stratified by Pre-ablative PET Scan Status



Years Since Salvage Cryoablation	0	2	4	6	8	10
Number at Risk	95	48	30	15	4	2

THU-0959

VPAC Urinary Optical Imaging Assay (VPAC Assay) for Detection and Assessment of Prostate Cancer Aggressiveness

THU-1006

Subgroup Analysis of Decipher Immune Signatures by Clinical Characteristics in Prostate Cancer

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Introduction and Objective: Prostate cancer (PCa) detection and risk stratification depends on prostate biopsy and assessment of Prostate Grade Group (PGG). PSA alone, nor other available *ex-vivo* tests, can determine PGG, other than biopsy..

We have developed a VPAC Assay which targets VPAC receptors expressed in high density on PCa malignant cells (MC) shed in urine and detects PCa with >95% sensitivity. The assay uses a receptor specific fluorophore (Kd 3.1×10^{-8} M), facilitating optical imaging of MC. We hypothesized that quantification of percent MC cells and the fluorescence intensity of MC cells can determine the severity of PCa.

Methods: Voided urine was collected from 101 patients with known PCa undergoing radical prostatectomy. Spun urine cells were incubated with the VPAC receptor specific fluorophore, and treated with DAPI (4,6-diamidodino-2-phenylindole), and analyzed microscopically to determine percent positive for each patient. The patient data, and the imaging results were analyzed per PGG, determined by post-surgical histopathology.

Results: The percent MC shed in urine increased from 13.1+/−14.4% for GG1 to 25.3+/−21.07% for GG3 ($p = 0.05$) to 50.5+/−26.7% for GG5 ($p = 0.002$). Similarly, the fluorescence intensity increased from 43.8+/−2.2 for GG1 to 48.8+/−7.0 for GG3 ($p = 0.01$) to 51.5 +/−14.4 for GG5 ($p = 0.15$). Although the numbers were limited for certain GG scores, they clearly depict a trend. As PGG increased, there was i) increased number of MC shed and ii) there was enhanced MC cell fluorophore intensity. The enhanced MC fluorophore intensity is likely due to increased VPAC density on MC shed from more aggressive PCa.

Conclusions: From this preliminary data, we postulate that the number of MC cells shed in voided urine, and the fluorophore intensity of MC, as quantified by the VPAC Assay, can predict the severity of PCa. These data suggest that this simple, noninvasive diagnostic urinary VPAC Assay may contribute to the diagnosis and management of PCa.

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Introduction and Objective: Prostate cancer risk stratification traditionally relies on PSA and Gleason grade but these factors may not reflect the immune microenvironment. High PI-RADS (4–5) indicates aggressive disease yet imaging alone cannot capture molecular heterogeneity). The Decipher 22-gene classifier assesses tumor biology, including immune-related genes, beyond traditional parameters The prostate tumor immune milieu varies and can influence outcomes. We investigated whether Decipher-derived immune signatures differ across subgroups defined by PI-RADS, Gleason, and PSA.

Methods: We analyzed Decipher genomic data and clinical features of prostate cancer patients. Patients were stratified by PI-RADS score (low vs high), Gleason grade (≤7 vs ≥8), and pre-treatment PSA (≤10 vs >10 ng/mL). Key Decipher immune signatures (e.g., T-cell inflammation and cytotoxic T-lymphocyte activity) were compared between groups. Statistical tests (ANOVA/Kruskal-Wallis) were used to test for subgroup differences.

Results: Immune signature scores were largely comparable between Gleason grade groups and PSA strata (no significant differences). However, PI-RADS stratification revealed differences. Tumors with PI-RADS 5 (highest suspicion) showed significantly lower cytotoxic T-lymphocyte signature scores than those with PI-RADS ≤4 ($p < 0.05$), indicating reduced T-cell infiltration in these lesions. The T-cell inflamed score was also lowest in PI-RADS 5 tumors (non-significant trend). No significant immune-profile differences were observed between low-grade (Gleason ≤7) and high-grade (≥8) cancers or between PSA groups.

Conclusions: This subgroup analysis suggests that Gleason and PSA do not markedly stratify tumor immune profiles, whereas MRI findings (PI-RADS) may. PI-RADS 5 lesions appear to have “cold” immune microenvironments, which could impact treatment selection. Integrating immune genomic signatures with clinical factors may improve patient stratification. Immune-cold, high-PIRADS tumors might benefit from immune-targeted or combination therapies, while immune-inflamed tumors could be candidates for immunotherapy. Incorporating immune profiling alongside standard tools supports a more personalized, multi-modal approach to prostate cancer management.

THU-1013

Prostate Cancer Active Surveillance in the MRI Era: Outcomes from a Large Prospective Cohort

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Introduction and Objective: Prostate magnetic resonance imaging (MRI) and MRI-guided biopsy are increasingly used for prostate cancer diagnosis and monitoring. This has contributed to broadened indications for active surveillance (AS), reduced surveillance biopsy frequency, and allowed more men to avoid overtreatment and treatment-related morbidities. We assessed outcomes in a large prospective AS cohort selected and followed with the aid of MRI.

Methods: Our prospective AS cohort included men who were diagnosed with Grade Group (GG) 1 disease during 2012–2023, underwent a confirmatory biopsy within 18 months of diagnosis demonstrating no early grade reclassification (GR) to Grade Group (GG) ≥2, and completed a prostate MRI before the diagnostic or confirmatory biopsy. Men received serial prostate-specific antigen checks, MRIs every 2–3 years, and surveillance biopsies every 1–3 years. We evaluated GR to ≥GG2, GR to ≥GG3 (extreme GR), and a composite adverse outcome: extreme GR during AS, adverse pathology at prostatectomy (≥GG3, ≥pT3b or ≥pN1), or biochemical recurrence (BCR) after surgery or radiation.

Results: We included 724 men. After median follow-up of 3.9 years (interquartile range 1.9–6.4) after diagnosis, 168 (23%) had GR to ≥GG2, of whom 34 (5%) had extreme GR. 183 men (25%) received treatment; 49 (7%) experienced the composite adverse outcome, including 23 of 126 (18%) with adverse pathology after prostatectomy and 3 of 182 (2%) with BCR after treatment. No patient had known metastasis or prostate cancer mortality. At 5 years, the cumulative incidence of GR to ≥GG2 was 31%, extreme GR 6%, and composite adverse outcome 10%.

Conclusions: In this study, after 5 years since diagnosis, over 60% of men remained free of GR or treatment, 10% developed adverse pathological features or recurrence after treatment, and none progressed to metastatic disease or died from prostate cancer, demonstrating that AS aided with MRI has a high degree of safety.

THU-1020

Comparing Androgen Deprivation Therapy-Free Survival in Early or Late Salvage Prostate Cryoablation

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Introduction and Objective: Patients with recurrent prostate cancer are oftentimes subject to androgen deprivation therapy (ADT) and radiation, which is associated with significant morbidity and side effects. Salvage cryoablation may result in prolonged ADT-free survival in these patients, which may improve patient quality of life. We aimed to characterize this outcome in a single-center, single-surgeon setting.

Methods: We retrospectively reviewed 97 patients who received salvage cryoablation therapy after failed radiotherapy from 2007–2024. Patients were stratified into early treatment (treatment < 75 days after diagnosis of biopsy-confirmed recurrence) and late treatment (treatment ≥ 75 days) groups. Patient characteristics and ADT-free survival were analyzed.

Results: In the cohort, 49 (51%) and 48 (49%) patients had early and later treatment, respectively. There was no statistically significant difference in age, pre- and post-ablation prostate specific antigen level, Gleason grade group, time to ADT, or biochemical recurrence frequency between the groups (Table 1). There was no significant difference between the groups in long term ADT-free survival (log-rank test $p = 0.78$), and 63% and 60% of both groups (<75 and ≥ 75 days) remained ADT-free at 5 years after salvage cryoablation (Fig. 1).

Conclusions: The timing of salvage cryoablation in patients with prostate cancer does not play a role in long-term avoidance of ADT therapy for recurrence. Over half of all patients undergoing salvage cryoablation avoided ADT for the entire duration of follow up. Patients diagnosed with recurrence after radiotherapy may safely take time to consider the risks and benefits of salvage cryoablation without impacting their biochemical recurrence frequency or ADT-free survival.

	Salvage Prostate Cryoablation less than 75 days after recurrence (n=49)	Salvage Prostate Cryoablation 75 or more days after recurrence (n=48)	P-value
Median Age (IQR)	79 (9)	77 (11)	0.77
Pre-Cryoablation PSA (IQR) (ng/mL)	6.1 (6.09)	4.5 (4.48)	0.15
Pre-Cryoablation Gleason Grade Groups (GG) Frequency (%)			
GG ≤ 2	12 (24.5%)	15 (31%)	0.61
GG 3	15 (30.6%)	11 (23%)	0.53
GG ≥ 4	22 (44.9%)	22 (46%)	1
Follow up duration (years)	3.05 (4.76)	4.05 (3.96)	0.24
Biochemical Recurrence Frequency (%)	15 (31%)	19 (40%)	0.47
Median Time to Biochemical Recurrence (IQR) (years)	2 (3.8)	1.3 (3.7)	0.87
Median Time to Androgen Deprivation therapy (IQR) (years)	1.8 (2.5)	1.2 (1.5)	0.98
Median Post-Cryoablation PSA (IQR) (ng/mL)	0.665 (4.86)	1.104 (5.83)	0.29

Table 1: Description of cohort and sample size analyzed

Time (years)	Number of Patients at Risk	
	Early therapy	Late Therapy
0	48	47
2	23	25
4	11	15
6	9	6
8	2	3
10	1	1

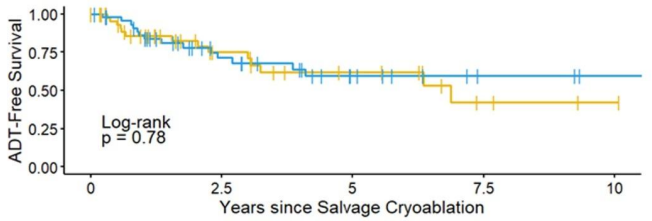

Figure 1: Kaplan Meier analysis of ADT-free survival* in early (yellow curve) vs late (blue curve) salvage cryoablation therapy
(*) Number of patients ADT-free (number at risk) after ablation shown in the table (2 patients from overall cohort not included due to prostatectomy)

THU-1027

Trends and Outcomes in Salvage Therapy for Recurrent Prostate Cancer: A Comparative Analysis of Radical Prostatectomy, Cryotherapy, and High-Intensity Focused Ultrasound

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Introduction and Objective: Salvage therapy is crucial for patients with recurrent prostate cancer after radiotherapy failure. While radical prostatectomy (RP), cryotherapy (cryo), and high-intensity focused ultrasound (HIFU) are available options, comparative data on their utilization and complications remain limited. Understanding differences in patient selection, complication rates, and readmissions is essential for optimizing treatment decisions. This study analyzes salvage therapy trends from 2021–2023 and compares perioperative outcomes among RP, cryo, and HIFU patients

Methods: This retrospective cohort study used National Surgical Quality Improvement Program (NSQIP) data to evaluate trends and perioperative outcomes in patients with prior pelvic radiation undergoing salvage RP, cryo, or HIFU, from 2021–2023. Baseline demographics included age, race, smoking status, functional status, and comorbidities. Perioperative outcomes included pulmonary embolism (PE), urinary tract infection (UTI), myocardial infarction (MI), cardiac arrest, transfusion, sepsis, deep vein thrombosis (DVT), and 30-day readmission and mortality. Statistical analysis included Chi-square tests for categorical variables and one-way ANOVA or Kruskal-Wallis tests for continuous variables ($p < 0.05$).

Results: Among 40,143 patients, 39,681 underwent RP, 351 cryo, and 111 HIFU. RP remained dominant but declined slightly (98.9% in 2021 to 98.6% in 2023), while cryo (0.85% to 0.95%) and HIFU (0.24% to 0.47%) increased. Cryo patients were older (70.2 vs. 64.2 years for RP, $p < 0.001$) with higher CHF rates (3.1% vs. 1.1%, $p = 0.002$), while HIFU had the highest HTN rates (52.3%, $p < 0.001$). RP had higher transfusion rates (2.0%, $p < 0.001$), but other complications, readmissions, and 30-day mortality were similar across groups ($p > 0.05$).

Conclusions: Salvage RP remains the most common therapy, though cryo and HIFU use are rising. Patient selection varied by comorbidities, but outcomes were comparable. Limitations include the inability to distinguish whole-gland vs. focal therapy in NSQIP. Further research is needed to refine patient selection and optimize perioperative management.

THU-1034

MRI as Risk Stratification for High-Risk Prostate Cancer in Black Men: Insights from the Penn Cohort

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Introduction and Objective: This study examines race as a risk factor for high-risk prostate cancer (PCa), assessing associations between racial demographics, PI-RADS scores, transition zone lesion prevalence, and high-risk genetic mutations. By identifying disparities in imaging and genomic risk factors, we aim to highlight the need for tailored diagnostic and therapeutic strategies.

Methods: We analyzed data from 522 men (mean age: 68.7 years) who underwent MRI and Decipher genomic testing for PCa (May 2016–January 2023). MRI-visible lesions were classified using PI-RADS v2, and Decipher scores stratified genomic risk. Linear regression and correlation analyses examined relationships between MRI visibility, PI-RADS scores, and Decipher risk. Additional analyses assessed MRI findings against clinical features, including Gleason scores and lesion location (peripheral vs. transition zone).

Results: Black patients had a higher prevalence of elevated PI-RADS scores (≥4) and transition zone lesions, suggesting greater imaging-based risk. They also exhibited increased frequencies of TP53 (HR = 2.5, $p < 0.01$) and RB1 mutations (HR = 1.8, $p < 0.05$), both significantly linked to disease progression. Compared to White patients, Black patients had a 50% higher risk of progression (HR = 1.5, $p < 0.05$).

Conclusions: Race is a significant factor in high-risk PCa, with Black patients more frequently presenting with high PI-RADS scores, transition zone lesions, and high-risk mutations. In our urban cohort (44% Black patients), these disparities underscore the need for race-informed diagnostic and treatment strategies. Integrating genetic, imaging, and racial factors into PCa assessments may enhance early detection, optimize treatment, and reduce disparities in care.

THU-1515

Single Institution Experience with Optilume Balloon Dilation for Bladder Neck Contracture and Vesicourethral Anastomotic

THU-1522

Use of Postoperative Imaging Among Surgeons Who Perform Urethroplasty

Stenosis

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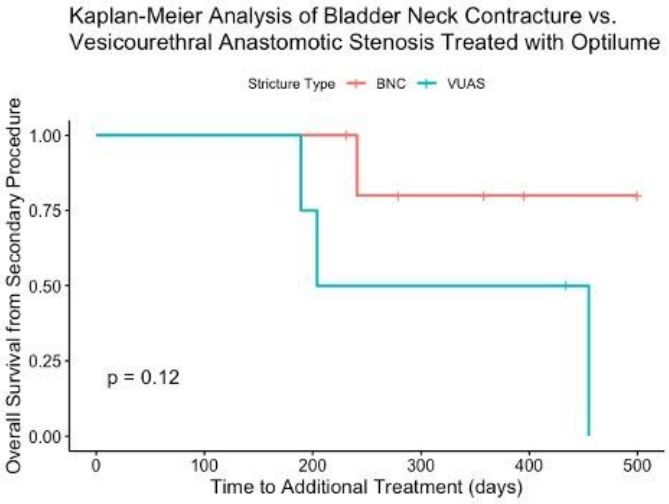
Introduction and Objective: Bladder neck contracture (BNC) and Vesicourethral Anastomotic Stenosis (VUAS) are known complications of benign and oncologic lower urinary tract treatments. These can be difficult to treat and have high recurrence rates. We present a case series at a single institution of BNC and VUAS treatment with paclitaxel drug-coated balloon (DCB, Optilume®) dilation.

Methods: Patient demographics, comorbidities, history of cancer, radiation, and previous lower urinary tract surgeries were collected. A 30 Fr DCB was used for every case. Our primary outcome was time to and need for a secondary treatment. Fisher's exact test and Kaplan-Meier (KM) curve were used to compare outcomes between BNC and VUAS patients.

Results: Our cohort comprised of 60% BNC (n = 6) and 40% (n = 4) VUAS patients. Median age at time of surgery was 73 years (IQR 71–75 years). Most patients had a history of prostate cancer (n = 9, 90%) and radiation treatment (n = 7, 70%). Median number of prior dilations/direct vision internal urethrotomy was 1.5 (IQR 1.0–2.8). There were no major complications. Median follow up time was 308 days (IQR 247–367 days). Freedom from a secondary intervention for the entire cohort was 60% (n = 6) and 70% for radiated patients. Median time to secondary procedure was 223 days (IQR 200–295 days). KM analysis depicted a better overall survival from secondary procedures in the BNC group compared to the VUAS group (83% vs. 25%, p = 0.12).

Conclusions: Paclitaxel DCB seems to be a promising technique, compared to traditional endoscopic dilation, with minimal complications, to treat BNC or VUAS. We suspect BNC had a slightly better success rate due to ischemia at the anastomotic site in those with VUAS.



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Introduction and Objective: While the AUA guidelines recommend cystoscopy, retrograde urethrography (RUG), voiding cystourethrography (VCUG), or ultrasound urethrography to diagnose urethral strictures, there are no recommendations for postoperative evaluation after urethroplasty. Recent studies suggest postoperative urethral imaging (POUI) before catheter removal may not be necessary after urethroplasty in patients with an uncomplicated postoperative course. This study aims to determine trends in the use of POUI among surgeons who perform urethroplasty.

Methods: We surveyed practicing Urologists who perform urethroplasty between August and September 2024 via social media and direct email to the members of the Society of Genitourinary Reconstructive Surgeons (GURS). The survey assessed the surgeon's practice setting, years in practice, case volume, and overall imaging preferences when managing urethral strictures. The primary outcome was the surgeon's preference in the use of POUI. Descriptive statistics were used to analyze responses.

Results: We received a total of 67 responses from Urologists who perform urethroplasty. Almost every respondent (n = 63, 94.0%) uses either RUG, VCUG or a combination of these imaging modalities to diagnose urethral strictures. Most surgeons who perform urethroplasty (n = 45, 67.2%) routinely obtain POUI, while 19.4% (n = 13) use POUI selectively and 13.4% (n = 9) do not obtain any POUI before urethral catheter removal. When POUI is performed, the preferred modality among respondents is VCUG (n = 35, 60.3%), followed by RUG (n = 22, 37.9%). In two-thirds of cases, imaging studies were performed by the surgeon (n = 44, 66.7%). Almost all POUI (92.4%, n = 61) was obtained according to the surgeon's preference at their corresponding facilities.

Conclusions: Most surveyed Urologists who perform urethroplasty routinely obtain POUI before catheter removal, while a third of surgeons omit or limit the use of POUI. Since surgeons perform most of these studies, selective use of POUI may save time, material resources and radiation exposure to both patient and surgeon.

THU-1529

Delayed Management of Penetrating External Genital Trauma: A Review of Practice Patterns in High Gun Violence Regions

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Introduction and Objective: Current AUA guidelines recommend prompt evaluation and surgical exploration for penetrating injuries to the urethra and scrotum. Depending on access to care, concomitant injuries and patient presentation, immediate exploration may not always be possible or warranted. We examined outcomes of penetrating trauma including instances where clinical principles or systemic constraints delayed operative management.

Methods: A retrospective review was performed to identify patients admitted for genitourinary trauma at two level one trauma centers from January 2015 to May 2024. A subset of patients with penetrating external genital trauma was identified, and patient demographics, structures involved, mechanism of injury, management, and outcomes were evaluated. Delayed surgical exploration was defined as intervention after two days.

Results: Overall, 91 patients met inclusion criteria from a cohort of 227 patients with external genitalia trauma. Eighty-nine (97.8%) were from GSWs and two (2.2%) were from stab wounds. Seventy-two patients with penetrating trauma (79.1%) required operative management, five (5.5%) required bedside procedures, and 14 (15.4%) patients required intervention during hospitalization. Twenty-two patients (24.1%) underwent delayed surgical exploration (Table 1). Two patients developed infections; one requiring incision and drainage 14 days after initial intervention, six patients were discharged without complication, and one had normal urethrogram at follow-up.

Conclusions: In our study, ~80% of injuries from penetrating external genital trauma were surgically explored. Majority (55%) of patients underwent surgical exploration within 48 h of presentation, however, a subset of patients underwent delayed exploration with minimal complications. Approximately 20% of patients had superficial injuries with reassuring imaging studies and did not undergo operative intervention. Our findings indicate that conservative management and delayed repair are safe options but should be used selectively with a low threshold for immediate exploration.

	Immediate Operation (0-1 days)	Delayed Operation (2+ days)	No Operation	**Total**
n (%)	50 (54.9%)	22 (24.1%)	19 (20.9%)	**91 (100%)**
Age* (years)	29 (18-59)	28 (16-58)	25 (19-59)	**28 (16-59)**
Male (%)	50 (100%)	22 (100%)	19 (100%)	**91 (100%)**
Location				
Scrotum (%)	23 (46%)	11 (50%)	14 (73.7%)	**48 (52.7%)**
Scrotum + Penis (%)	20 (40%)	8 (36.3%)	3 (15.8%)	**31 (34.1%)**
Penis (%)	7 (14%)	3 (13.6%)	2 (10.5%)	**12 (13.2%)**
Testicular Involvement (%)	26 (52%)	14 (63.6%)	2 (10.5%)	**42 (46.2%)**
Urethral Involvement (%)	15 (30%)	9 (40.9%)	0 (0%)	**24 (26.4%)**
Urinary Diversion (%)				
- Urethral Catheterization (%)	37 (74%)	12 (54.5%)	7 (36.8%)	**56 (61.5%)**
- Urethral + Suprapubic Catheterization (%)	3 (6%)	0 (0%)	0 (0%)	**3 (3.3%)**
- Suprapubic Catheterization (%)	0 (0%)	2 (9.1%)	0 (0%)	**2 (2.2%)**
- Length of Catheterization (days)*	4 (0-50)	17 (1-39)	4 (0-8)	**5 (0-50)**
Operative Management (%)				**72 (79.1%)**
- Orchiectomy (%)	15 (30%)	5 (22.7%)	N/A	18 (25%)
- Urethroplasty (%)	8 (16%)	5 (22.7%)	N/A	13 (18.1%)
- Orchiectomy + Urethroplasty (%)	3 (6%)	3 (13.6%)	N/A	6 (8.3%)
- Other (%)	24 (48%)	9 (40.9%)	N/A	35 (48.6%)
Bedside Procedure (%)				
Washout/Laceration Repair	N/A	N/A	5 (26.3%)	**5 (5.5%)**
*Represents median value				

Table 1: Demographics, clinical presentation, and management of patients with penetrating injury to the external genitalia

THU-1536

A Single-Institution Comparative Analysis of Urethral Strictures and Fistulae in Masculinizing Gender-Affirming Surgeries

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Introduction and Objective: Urethral complications, such as strictures and fistulae, are commonplace after masculinizing gender-affirming (GA) genital surgeries, including phalloplasty and metoidioplasty. This study compares urethroplasty outcomes in patients with urethral complications following phalloplasty or metoidioplasty.

Methods: We performed a retrospective chart review of 64 patients who underwent either phalloplasty or metoidioplasty and urethral lengthening (UL) at a single institution since 2016.

Results: A total of 30 phalloplasties with UL were performed, with 63.3% (n = 19) developing urethral complications requiring urethroplasty. Of these, 14 had concomitant phalloplasty and UL, with 57.1% (n = 8) developing strictures and 42.9% (n = 6) developing both stricture and fistula. Among 5 patients who underwent phalloplasty and UL in a staged approach, 40% (n = 2) developed isolated stricture, 20% (n = 1) developed isolated fistula, and 40% (n = 2) developed concomitant stricture and fistula. Out of 34 patients who received metoidioplasty with UL, 32.4% (n = 11) developed complications requiring urethroplasty. Of these, 54.6% (n = 6) underwent urethroplasty for fistulae, 18.2% (n = 2) for stricture, and 9.1% (n = 1) for concomitant stricture and fistula. Two remaining patients presented for urethroplasty for other reasons (hypospadias and dehiscence). Of the phalloplasty patients, the number of surgeries required to repair the urethral complications ranged from 1–5 (M = 2.3) with a median follow-up time of 7 months. Metoidioplasty patients required 1–2 surgeries (M = 1.6) with a median follow-up time of 7 months.

Conclusions: Strictures are the most common urethral complication following phalloplasty, with patients often requiring more than one surgery for resolution. In contrast, metoidioplasty patients have a higher incidence of fistulae but require fewer surgeries for definitive repair. Complication types and rates vary depending on type of masculinizing GA surgery. Management approach and success varies along with this, and is important for patient counseling.

THU-1543

Impact of GLP-1 Agonists on Male Fertility Parameters in Patients with Metabolic Disorders: A Systematic Review

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Introduction and Objective: Male infertility, a contributor to nearly 50% of global infertility cases, is significantly influenced by metabolic disorders such as obesity and type 2 diabetes mellitus (T2DM) thus impairing reproductive health by affecting sperm quality and levels. Glucagon-like peptide-1 (GLP-1) agonists, known for their role in weight reduction and insulin sensitivity, may offer fertility benefits for men with metabolic issues. This review evaluates the effects of GLP-1 agonists on male fertility parameters in patients with obesity and T2DM.

Methods: A systematic literature search was conducted in PubMed, Embase, and Cochrane Library using terms such as "GLP-1 agonists," "male fertility," "sperm quality," and "type 2 diabetes." Studies were included if they addressed semen quality, hormonal levels, or fertility outcomes in men with metabolic disorders on GLP-1 agonist therapy. Of the initial 45 studies, five met the inclusion criteria, focusing on outcomes related to sperm motility, concentration, and metabolic regulation.

Results: Studies suggest GLP-1 agonists, such as liraglutide and semaglutide, enhance male reproductivity through metabolic improvements. Popoviciu et al. (2023) correlated weight loss and improved insulin sensitivity to enhanced sperm motility and concentration. Muller et al. (2023) highlighted their role in regulating metabolic pathways supporting fertility, though animal studies raised fetal development concerns. Lotti and Maggi (2022) noted that improved metabolic control could mitigate diabetes-related sperm damage. Costa et al. (2023) emphasized mitochondrial quality control as crucial for sperm function, while Hussain et al. (2023) linked reduced oxidative stress to improved sperm quality, suggesting benefits for men with T2DM.

Conclusions: GLP-1 agonists show promise in improving fertility parameters in obesity and T2DM. The benefits, such as enhanced sperm concentration and motility, underscore the potential for GLP-1 agonists as adjunctive treatments in male infertility linked to metabolic disorders. However, further studies, especially human clinical trials, are necessary to validate these findings and better understand the mechanisms involved.

THU-1550

Anionic Surfactant Solutions Are Incompatible with Both Hydrophilic and Antibiotic Impregnated Penile Prosthesis Surfaces

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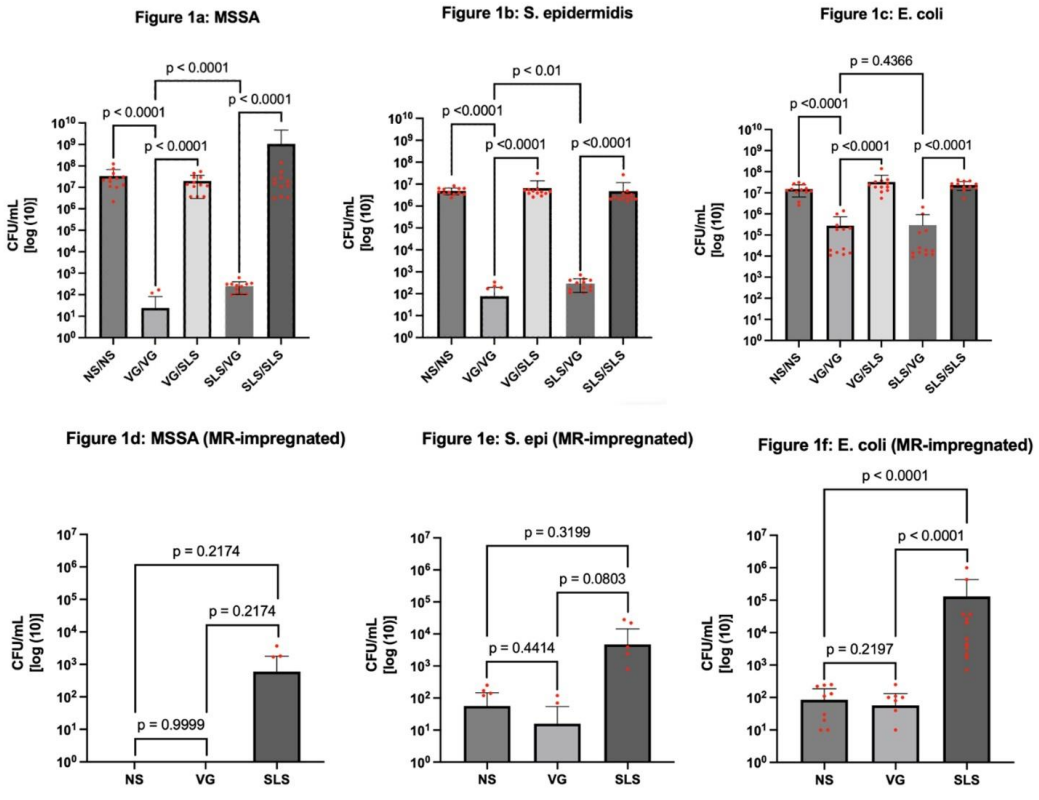
Introduction and Objective: Anionic surfactants, such as sodium lauryl sulfate (SLS), are currently being used in penile prosthesis (PP) surgery. We hypothesize that use of SLS as an antiseptic dip confers antimicrobial properties, and irrigation with SLS is compatible with both hydrophilic and antibiotic-impregnated PP surfaces.

Methods: Sterile 8 mm PP discs with hydrophilic coating (Coloplast, Minneapolis, MN) and 8 mm PP discs impregnated with minocycline and rifampin (MR) (Boston Scientific, Marlborough, MA) were submerged for 3 min in 3 mL of normal saline (NS), 3 mL of 2 mg/mL vancomycin and 160 µg/mL gentamicin (VG), or 3 mL of solution composed of sodium citrate, citric acid, and SLS (XPERIENCE, NEXT SCIENCE, Jacksonville, FL). PP discs were incubated with 105 colony forming units per milliliter (CFU)/mL of methicillin-sensitive Staphylococcus aureus sourced from a clinical PP infection, *Staphylococcus epidermidis* 35984, or *Escherichia coli* 33694 for 48 h. Biofilm was removed by shaking in 0.3% Tween-20. Suspended bacteria were diluted, plated, and counted. Mann-Whitney U tests were performed to compare outcomes, $p < 0.05$ considered significant.

Results: Average bacterial counts with 95% CI are plotted. Across all species, there were significant decreases in bacterial counts in hydrophilic coated discs dipped in and/or irrigated with VG relative to NS controls ($p < 0.001$). However, hydrophilic coated discs dipped in VG then irrigated with SLS completely lost any antimicrobial properties. Similarly, discs dipped in SLS did not result in any reduction in bacterial counts. MR-impregnated discs were adversely affected by SLS, with significant loss of antibacterial activity relative to NS controls and irrigation with VG.

Conclusions: Both hydrophilic and MR-impregnated PP surfaces are incompatible with SLS, both as a dip for the hydrophilic surface and as an irrigation solution.



THU-1557

Trends in Urinary Diversion Following Cystectomy

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Introduction and Objective: After radical cystectomy, continent urinary diversion prioritizes quality of life, while incontinent methods focus on safety with fewer late complications. This study examines trends in urinary diversion over time based on patient factors.

Methods: We conducted a retrospective cohort study using TriNetX, identifying patients via ICD-10 and CPT codes. Inclusion required total cystectomy between 1997 and 2024. Cohorts were defined by bladder cancer diagnosis and chemotherapy treatment. The primary outcome analyzed trends in urinary diversion over time, comparing ileal conduit to continent diversion across subgroups. Outcomes were assessed using risk ratio (RR) with a 95% confidence interval (CI).

Results: Trends for urinary diversion following cystectomy noted that continent diversion peaked in use in 2000 and has gradually declined thereafter. (Fig. 1). The bladder cancer cohort included 13,189 patients, while the non-cancer cohort had 2618 patients. Bladder cancer patients were significantly more likely to undergo continent diversion (RR: 1.386, 95% CI: 1.241–1.548, p: < 0.0001). (Fig. 2A,B). 4832 patients received either neoadjuvant chemotherapy (NAC) prior to cystectomy or adjuvant chemotherapy (AC) after cystectomy, while 7546 did not. NAC/AC patients were less likely to receive an ileal conduit (RR: 0.86, 95% CI: 0.937–0.884, p: < 0.0001) compared to those who did not receive chemotherapy. (Fig. 2C,D)

Conclusions: Continent urinary diversion continues to decline over time. Patients undergoing cystectomy for bladder cancer were more likely to receive a continent diversion compared to patients without bladder malignancy. Receipt of systemic chemotherapy was associated with lower likelihood of ileal conduit.

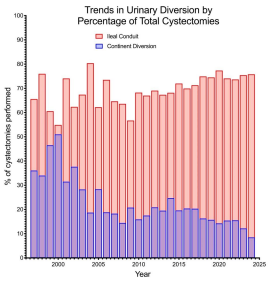

Figure 1. Comparing trends in urinary diversion as a percentage of total cystectomies over time.

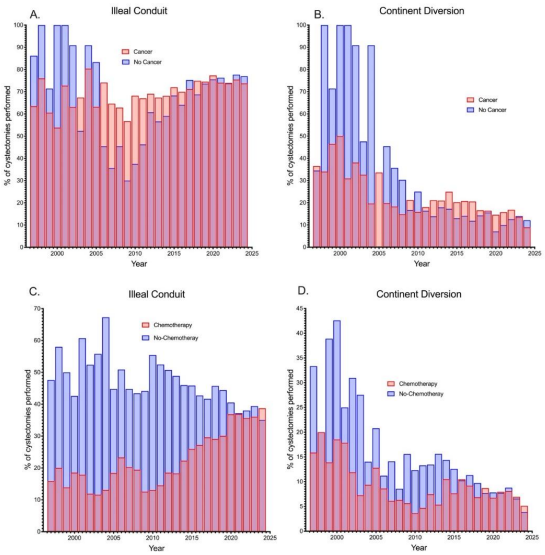

Figure 2. Comparing trends in use of A. Ileal Conduit and B. Continent Diversion in patients with and without bladder cancer diagnoses. Comparing trends in use of C. Ileal Conduit and D. Continent Diversion in patients with bladder cancer who did or did not receive chemotherapy.

THU-1604

Quality of Life in Young Adults with Neurogenic Bladder: A Bi-Institutional Analysis

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Introduction and Objective: Young adults with neurogenic bladder (NGB) face significant medical and psychosocial challenges during the transition from pediatric to adult urology care. Understanding their quality of life (QOL) is critical for improving transitional care strategies. This study evaluates the QOL of young adults with NGB across two institutions using the WHO-QOL BREF.

Methods: A multi-institutional, cross-sectional study was conducted to assess QOL in young adults with NGB. The WHO-QOL BREF was used to evaluate four domains: physical health, psychological well-being, social relationships, and environment. Scores were transformed and reported on the 0–100 scale.

Results: A total of 23 patients were included, with 17 (74%) females and 6 (26%) males. The median age was 22.1 years (IQR: 18.1–26.3). The lowest QOL scores were observed in the physical health domain, with a median score of 63 (44–81) on the 0–100 scale, reflecting the burden of chronic medical management in NGB patients. Psychological well-being scores were slightly higher, with a median 69 (63–81). Similarly, social relationship had a median score of 69 (56–81). The highest scores were observed in the environmental domain, with a median of 88 (75–94), suggesting that despite physical health limitations, patients benefit from healthcare access and social support.

Conclusions: Young adults with NGB experience significant challenges in physical health, highlighting the impact of their condition on daily functioning. However, strong environmental support may buffer some of these challenges. These findings emphasize the need for enhanced multidisciplinary transitional care programs focusing on physical rehabilitation and psychosocial well-being. Future studies with larger cohorts are warranted to explore factors influencing QOL in this population.

FRI-1045

Patient Perspectives on Surgical Management of Pelvic Organ

FRI-1052

The Association of Lower Urinary Tract Symptoms with Multi-

Prolapse: A Qualitative Analysis of Reddit Posts

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Introduction and Objective: Pelvic organ prolapse (POP) is a common, benign condition that significantly impacts patients' quality of life. Patients weigh symptom severity against treatment risk when deciding whether to pursue surgical treatment for POP. Efforts have been made to objectively compare the amount of symptom relief experienced by patients with conservative options versus surgical options. This study investigates patient perspectives surrounding perioperative decision-making for POP on Reddit.

Methods: In the subreddit, r/PelvicOrganProlapse, posts from the last 3 months including the term "surgery" were analyzed using grounded theory with two independent coders. A codebook was created using both deductive and inductive codes. Major themes that emerged were recorded as were the frequency of individual codes.

Results: In total 83 posts containing 663 comments were analyzed. Three individual posts and three comments were excluded because they were by male users. Ten major themes emerged as demonstrated in Fig. 1 with representative quotes and corresponding codes. Two themes were by far the most common: psychosocial aspects of POP and concerns about postoperative recovery (Fig. 2). This social media platform appears to validate the shared experience of women dealing with POP and also provides a "safe space" to anonymously query others regarding their recovery.

Conclusions: The most commonly identified themes on Reddit regarding perioperative decision-making are the psychological impact of POP and postoperative recovery. This study identifies an opportunity for improved preoperative counseling by surgeons regarding expectations for postoperative recovery particularly regarding pain, complications, and the resumption of sexual and physical activity postoperatively.

Themes	Representative Quotes	Codes
Sexual Health	"Have you had the problem where an organ collapses into the vaginal canal making it difficult to have sex? It's been 4 months since I had our baby and I've been having a dreadful time trying to have sex with my husband. It leaves me extremely anxious and hopeless."	• Sexual dysfunction • Sex advice • Menstruation
Comorbidities	"Hi I had this occur in my early 20s no kids As well due to connective tissue disorder and I DID get surgery to fix it last year after 10 awful years of trying to cope with it...This has seriously changed my life…"	• Connective tissue disorder comorbidity • POP in younger age • Heritability • Chronic pain
Physical Activity	"I am not in pain, but it's uncomfortable to run or do anything that requires impact. I get vaginal irritation a lot and feel constant bulging. My OB/ Gyn thinks I should consider surgery—and of course I'm scared."	• Exercise with POP
Operative Management	"On the upside, I didn't realize just how uncomfortable my prolapse made me until it wasn't there. I still have a lot of healing to do, but the constant feeling of heaviness, and constant awareness of my organs has gone away. I am so grateful that the surgery was an option for me, despite the long recovery!"	• Improved quality of life after surgery • Operative approach • Sling questions
Parenthood	"Is there anyone that has recovered at home with a toddler starting week two? What were your experiences picking them up? Holding them?"	• Postpartum • Motherhood • Pregnant with POP
Urinary and Bowel Symptoms	"A lot of women still have incontinence after surgery, so don't be surprised if it's still there. For some women it's a new issue and for others it's worse after surgery."	• Urinary retention • Incontinence • Bowel dysfunction
Conservative Management	"My physical therapist feels that I could make significant progress to the point where I might not need surgery at all…just listen to your gut."	• Pelvic floor PT • Pessary questions • Pessary suggestion • Self-exam
Preoperative Concerns	"My surgery to fix my prolapsed rectocele and part of my perineum affected by Lichen Sclerosus is Feb 4. What are some things that I will need? Or some do's and don'ts after surgery? Things you wish you had?...I am scared as this will be my first big surgery."	• Considering surgery • Surgery preparation • Pre-appointment anxiety • Seeking surgeon • Encouraging evaluation • Doubting surgery • Advice against surgery
Postoperative Concerns	"I am still feeling like shit; not able to poo despite all the stool softeners under the sun, in constant pain, not able to sit, not able to do anything other than going to the bathroom. I am starting to feel discouraged, when did you all start to get better?	• Postoperative complications • Postoperative recovery • Postoperative pain • Postoperative sexual dysfunction • Repeat surgery
Psychosocial Aspect	"I feel like my life is over before I could even really begin. This affects relationships, career, my future and health. It's taking over everything in my life."	• Shared experience • Emotional support • Embarrassment • Self-confidence • Mental health

Figure 1: Themes, representative quotes, and corresponding codes are outlined above.

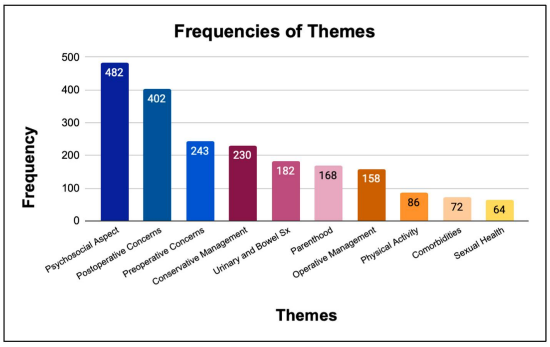

Figure 2: Frequency of Themes.

Comorbidity in Women

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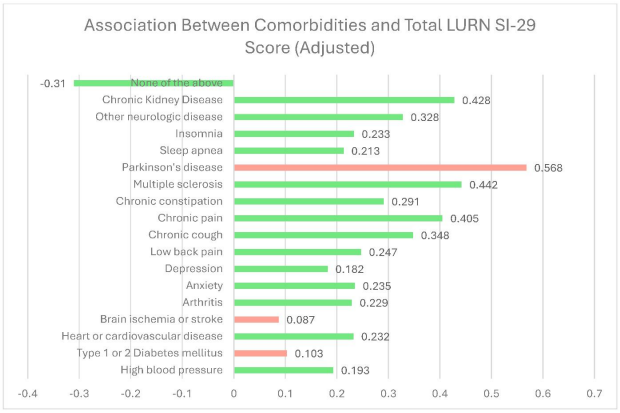
Introduction and Objective: Women with multiple chronic conditions are more likely to report lower urinary tract symptoms (LUTS); however, the urinary symptoms contributing to LUTS and its relationship to various medical comorbidities is unknown. Our aim is to determine the association between comorbidities and LUTS severity.

Methods: A cross-sectional online survey was administered to community-based women ages 18 and older via ResearchMatch, a national online volunteer research registry, from October 2019 to March 2020. LUTS were measured using the validated LURN SI-29 questionnaire. Participants reported the presence of 17 medical conditions, including hypertension, diabetes, and cardiovascular disease. Generalized linear models with gamma distribution were used for analyses.

Results: Of 1755 eligible participants, 1746 were included after excluding 9 participants with missing total LURN scores. Comorbidity burden distribution was: 0 comorbidities (n = 364), 1 comorbidity (n = 312), 2 comorbidities (n = 381), 3 comorbidities (n = 258), 4+ comorbidities (n = 431). All comorbidities were positively associated with total LURN SI-29 score (after controlling for age, race, and vaginal parity), indicating worse LUTS (β = 0.087 to 0.568). All were significant (p < 0.05) except Parkinson's, stroke, and diabetes. Having no comorbidities correlated negatively with LURN score (β = −0.31) (Fig. 1). Higher comorbidity burden was significantly associated with increased LURN scores (p < 0.001), with a 49.1% increase in score for those with 4+ comorbidities (Fig. 2).

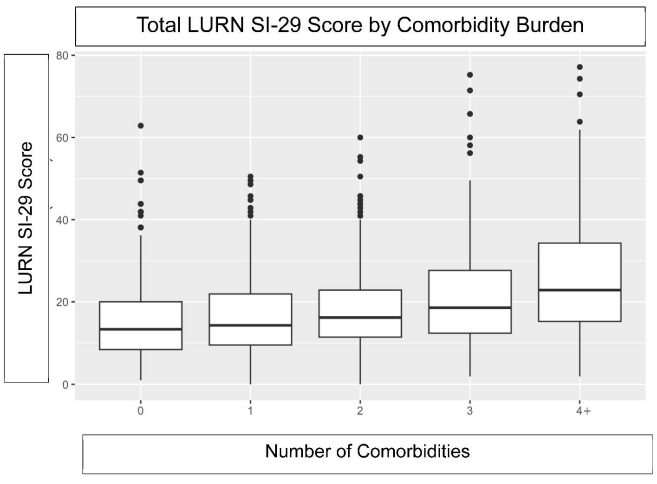
Conclusions: While the direction of association cannot be determined in this cross-sectional study, addressing medical comorbidities may help prevent or improve LUTS. Further research is needed to determine which medical conditions most impact LUTS and underlying mechanisms.

Figure 1. Gamma Regression Model of the Association Between Individual Comorbidities and Total LURN SI-29 Score



*Adjusted for age, race, vaginal parity
*Green – significant, p<0.05. Orange – non-significant

Figure 2. Association Between Comorbidity Burden and Total LURN SI-29 Score



FRI-1059

Intraoperative OnabotulinumtoxinA on Postoperative Recovery and Medication Use in Pediatric Bladder Reconstruction

M. Johnson, C. Crigger, J. Yang, C. Robey, D. Heap, V. Maxon, J. Gearhart and H. Di

FRI-1106

Microscopic Urinalysis After a Positive Dipstick for Microhematuria

T. Lan[1], B. Baer[2] and J. Raman[2]

Carlo

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Introduction and Objective: We sought to evaluate the postoperative benefits of OnabotulinumtoxinA (Botox) injections in pediatric patients undergoing bladder reconstruction.

Methods: Pediatric patients who underwent bladder reconstruction between 2018–2024 were identified retrospectively from an institutional database. Bladder reconstruction was defined to include any combination of the following procedures—bladder neck reconstruction, bladder neck transection, Mitrofanoff or Monti catheterizable channel creation, and bladder augmentation. Patients were stratified based on concurrent ureteral reimplants necessitating ureteral stent placement. Data on postoperative course, medications, and complications were collected.

Results: Among 88 bladder reconstruction patients, 43 (48.86%) received Botox and 45 (51.11%) did not. In bladder reconstruction patients without ureteral reimplants necessitating ureteral stents, Botox significantly reduced anticholinergic use (0.11 mg/kg/day, IQR 0.07–0.19 vs. 0.16 mg/kg/day, IQR 0.11–0.21, $p = 0.05$). These patients also experienced fewer days to return to feeding (3.00 days, IQR 1.00–4.25 vs. 4.50 days, IQR 3.00–5.75, $p = 0.05$) and return to bowel movement (2.00 days, IQR 2.00–3.50 vs. 4.50 days, IQR 3.00–6.00, $p = 0.01$). In contrast, bladder reconstruction patients with ureteral stents showed no significant differences in anticholinergic use (0.14 mg/kg/day, IQR 0.06–0.31 vs. 0.19, IQR 0.12–0.25, $p = 0.71$). Interestingly, there was a faster return to feeding (4.00 days, IQR 3.00–4.50 vs. 6.00, IQR 4.00–7.75, $p = 0.02$). Complication rates were comparable between Botox and non-Botox groups (all $p > 0.05$).

Conclusions: Intraoperative Botox significantly reduced anticholinergic use among pediatric patients who underwent bladder reconstruction without ureteral reimplantation requiring ureteral stents. This demonstrates its potential as an effective adjunct for postoperative recovery in patients undergoing select reconstruction.

Table 1. Postoperative course and medication requirements for bladder reconstruction

	No Ureteral Stent			Ureteral Stent		
	No Botox	Botox	*p*-value	No Botox	Botox	*p*-value
Postoperative Course						
Pain score						
Scores greater than 0, d, median (IQR)	5.00 [2.00, 10.50]	4.00 [1.75, 6.00]	0.18	6.00 [2.25, 10.00]	6.00 [4.50, 9.50]	0.66
Scores greater than 4, d, median (IQR)	4.00 [0.00, 7.00]	1.00 [0.00, 3.00]	0.10	2.00 [0.25, 6.50]	3.00 [0.50, 4.50]	0.98
Length of stay, d, median (IQR)	9.00 [8.00, 14.00]	8.00 [6.75, 12.25]	0.33	12.00 [9.00, 13.75]	10.00 [8.50, 13.50]	0.66
Return to feeding, d, median (IQR)	4.50 [3.00, 5.75]	3.00 [1.00, 4.25]	**0.05**	6.00 [4.00, 7.75]	4.00 [3.00, 4.50]	**0.02**
Return to bowel movement, d, median (IQR)	4.50 [3.00, 6.00]	2.00 [2.00, 3.50]	**0.01**	3.00 [2.00, 4.00]	2.00 [1.00, 3.50]	0.29
Patients receiving TPN, n (%)	1.00 (5.88)	5.00 (14.71)	0.36	7.00 (25.00)	1.00 (11.11)	0.38
TPN duration, d, median (IQR)	0.00 [0.00, 0.00]	0.00 [0.00, 0.00]	0.62	0.00 [0.00, 0.75]	0.00 [0.00, 0.00]	0.50
ICU management needed, n (%)	3.00 (17.65)	7.00 (20.59)	0.80	7.00 (25.00)	0.00 (0.00)	0.16
ICU duration, d, median (IQR)	0.00 [0.00, 0.00]	0.00 [0.00, 0.00]	0.94	0.00 [0.00, 0.75]	0.00 [0.00, 0.00]	0.16
Postoperative Medication Requirements						
Anticholinergic use, mg/kg per d, median (IQR)	0.16 [0.11, 0.21]	0.11 [0.07, 0.19]	**0.05**	0.19 [0.12, 0.25]	0.14 [0.06, 0.31]	0.71
Patients discharged with anticholinergic, n (%)	14.00 (82.35)	27.00 (81.82)	0.96	28.00 (100.00)	9.00 (100.00)	>0.99
Diazepam use, mg/kg per d, median (IQR)	0.27 [0.18, 0.45]	0.27 [0.20, 0.45]	0.96	0.38 [0.27, 0.53]	0.42 [0.36, 0.48]	0.79
Oxycodone use, mg/kg per d, median (IQR)	0.22 [0.04, 0.42]	0.10 [0.00, 0.27]	0.12	0.23 [0.12, 0.33]	0.11 [0.00, 0.22]	0.09
Patients receiving methadone, n (%)	1.00 (5.88)	1.00 (2.94)	0.61	1.00 (3.57)	1.00 (11.11)	0.38
Morphine use, mg/kg per d, median (IQR)	0.12 [0.00, 0.24]	0.05 [0.00, 0.28]	0.84	0.00 [0.00, 0.13]	0.04 [0.00, 0.13]	>0.99
Hydromorphone, mg/kg per d, median (IQR)	0.04 [0.00, 0.11]	0.02 [0.00, 0.08]	0.60	0.00 [0.00, 0.07]	0.03 [0.00, 0.10]	0.44
Patients receiving epidural, n (%)	13.00 (76.47)	18.00 (52.94)	0.10	26.00 (92.86)	8.00 (88.89)	0.70
Epidural duration, d, median (IQR)	6.00 [1.00, 7.00]	2.50 [0.00, 6.00]	0.10	6.50 [5.00, 8.00]	6.00 [3.50, 7.00]	0.17

TPN: total parenteral nutrition; **ICU:** intensive care unit

[1]Penn State College of Medicine, Penn State University, Hershey, PA, USA; [2]Penn State Health Milton S Hershey Medical Center, Hershey, PA, USA

Introduction and Objective: Microhematuria (MH) is a key screening tool for urologists to evaluate both benign and malignant urologic conditions. Dipstick urinalysis provides a rapid MH screening method; however, the AUA/SUFU 2025 MH guidelines recommend that a positive dipstick result be confirmed with formal microscopic urinalysis (MUA), defined as ≥3 RBC/HPF. This study examines the rate of confirmatory MUA testing following a positive dipstick and the associated screening costs.

Methods: A retrospective cohort study was conducted using the TriNetX database, identifying patients through ICD-10 diagnosis codes, LOINC terms, and CPT treatment codes. Patients with a positive dipstick were categorized based on whether they underwent confirmatory microscopic urinalysis. Patients with gross hematuria were excluded. The primary outcomes included the likelihood of further evaluation— (CT urogram, cystoscopy, renal ultrasound, or MRI urogram) within six months, as well as the associated costs, estimated using the 2024 Medicare and Medicaid Physician Fee Schedule.

Results: 399,562 patients met inclusion criteria, of whom 96% had confirmatory MUA and 4% had no follow-up MUA. For patients with follow-up MUA, 55% of patients had confirmed MH on MUA. Approximately 15% of patients without true MH underwent subsequent evaluation at an estimated combined cost of $1,950,000 (Figure).

Conclusions: Over 95% of patients with positive dipstick underwent subsequent MUA with approximately 50% having true MH. 15% of patients underwent subsequent testing based on dipstick testing alone at a cost of almost 2 million dollars. Positive dipstick should be followed by MUA to confirm the diagnosis of MH and avoid unnecessary evaluations with health care costs.

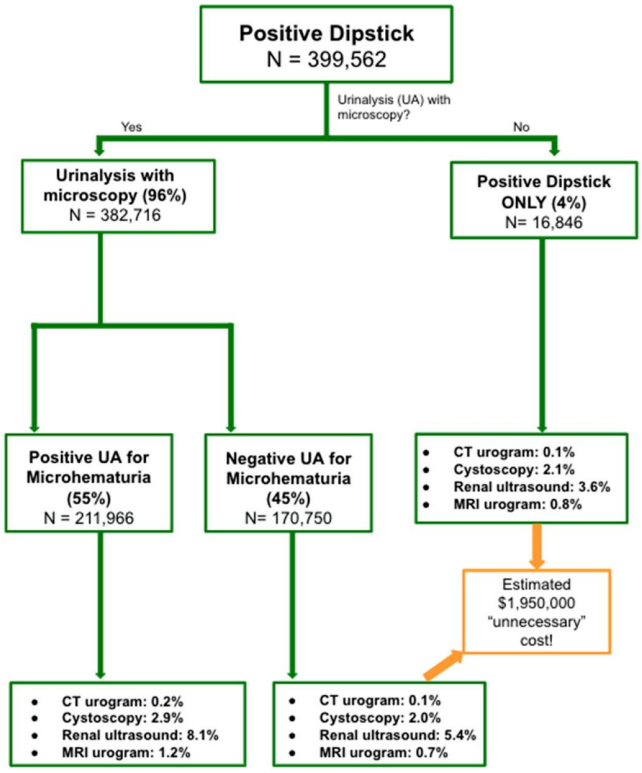

Figure: Evaluation of patients with a positive dipstick, urinalysis

FRI-1113

Update on the Long-Term Management of Genitourinary Complications of Mpox

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Introduction and Objective: Mpox, a viral zoonotic infection, captured global attention due to increased human cases. Traditionally associated with pox-like lesions and flu-like symptoms, recent reports indicate diverse manifestations, including urological involvement. This report explores the long-term management of urologic complications of Mpox.

Methods: The literature was reviewed for reports of genitourinary manifestations of Mpox and its management and compared to our long-term experience.

Results: Three series of short-term sequalae of genitourinary Mpox were identified. We describe a 33-year-old male with Type 1 diabetes, HIV and Mpox who presented to our institution in 2022 with penile pain and swelling. Initially managed conservatively for cellulitis, he had multiple admissions over the year for penile wounds and was intermittently catheter dependent. In 2023, he had persistent erosion of much of his shaft skin with fusion to his infrapubic skin, glans effacement, and a stenotic meatus [Fig. 1]. Retrograde urethrogram revealed a 5 Fr meatus with scarring at the fossa navicularis necessitating dilation [Fig. 2]. He experienced painful erections, and his penile angle made it difficult to void standing. Definitive surgical intervention was delayed to clear Mpox and obtain glycemic control. In 2024, he underwent reconstruction with a first-stage Johanson urethroplasty and buried penis repair with rotational fasciocutaneous flap to cover the dorsal, ventral, and left shaft [Fig. 2]. He was discharged same day with a catheter for 2 weeks.

Figure 1: penile and scrotal wounds from December 2022 through May of 2023

Figure 2: retrograde urethrogram and pre- and post-operative images

FRI-1120

Weight Loss and Nutrition Optimization After Pediatric Bladder Augmentation

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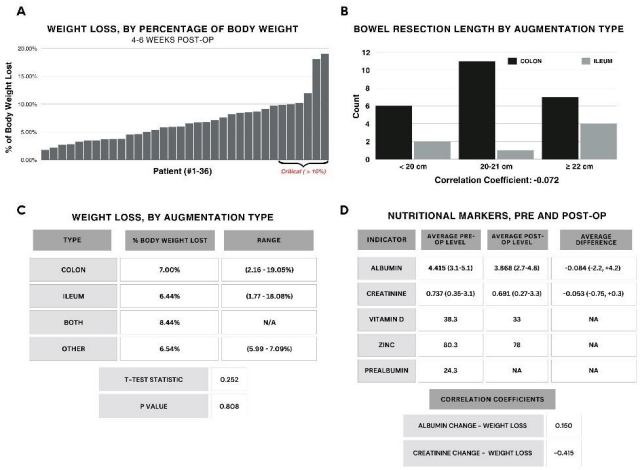
Introduction and Objective: Bladder augmentation is an essential step toward continence for many pediatric patients with congenital genitourinary abnormalities. Although necessary, it is not without complications. Our institution has observed significant postoperative weight loss in bladder augmentation patients, many of whom are already pre-operatively underweight. The absence of pediatric-specific ERAS protocols leads to unstandardized nutritional management, underscoring the need to better characterize weight loss and optimize nutrition to reduce postoperative complications and improve quality of life.

Methods: A retrospective chart review included 36 pediatric patients (<18 years) who underwent bladder augmentation at Johns Hopkins between 2019 and 2024. Data on weight/BMI change, type of augmentation, bowel resection length, time to bowel function return, complications, and nutritional labs (albumin, creatinine, prealbumin, zinc, vitamin D) were reviewed. Weight loss was compared between ileum and colon groups, and correlations with bowel resection length, age, and nutritional markers were assessed.

Results: Of the 36 patients, 94% (n = 34) lost weight within 4–6 weeks post-op, with an average loss of 7% body weight (range: 1.77%–19.5%); 14% experienced severe weight loss (>10%). Median pre-op BMI was 17.3, decreasing to 15.6 post-op. No significant difference in weight loss was observed between ileum and colon groups, nor a correlation with resection length. Mean return of bowel function was 6.35 days. Post-operative complications occurred in 30.6% (n = 11) of patients. Creatinine changes moderately correlated with weight loss. Nutritional labs were inconsistently recorded, and no patients received pre-op nutritional counseling.

Conclusions: Weight loss following bladder augmentation in pediatric patients is prevalent and severe, highlighting a critical need for pediatric-specific ERAS protocols, including preoperative nutritional supplementation. Further research is required to evaluate long-term outcomes and refine nutritional management strategies in these vulnerable patients.



FRI-1127

Bladder Matters: Redefining the Grading System for Pediatric Hemorrhagic Cystitis

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Introduction and Objective: Pediatric hemorrhagic cystitis (HC) is a debilitating condition with severity ranging from microscopic hematuria to life-threatening hemorrhage. Current grading systems, based on outdated adult-focused studies, lack predictive utility for pediatric patients and fail to incorporate emerging risk factors for severe disease and surgical intervention.

Methods: We conducted a retrospective review of pediatric patients (≤21 years) with gross hematuria from 2014 to 2024. Demographic, clinical, laboratory, and imaging data were analyzed. The predictive utility of existing grading scales (Droller and Arthur) was assessed, and risk factors for operative intervention were identified using logistic regression.

Results: Among 93 patients, the presence of an organized clot on ultrasound was the strongest predictor of surgical intervention (OR 121.5, $p < 0.0001$). Clot size thresholds correlated with increased operative probability: >41 mL (50%), >64 mL (75%), and >104 mL (95%). Other predictors included male sex ($p = 0.023$), busulfan exposure ($p = 0.011$), BMT history ($p = 0.031$), GVHD ($p = 0.027$), and BK virus positivity ($p = 0.01$). The Arthur scale had poor predictive value (PPV 36.8%), while the Droller scale was reactionary rather than predictive

Conclusions: We propose a revised HC grading system incorporating ultrasound-confirmed organized clot presence to improve early risk stratification and guide timely urologic intervention. This refined classification system enhances decision-making and standardizes care for pediatric HC, warranting further validation in prospective cohorts.

FRI-1134

Assessing Radiation Safety for Pregnant Urology Residents: A Review of Guidelines and Occupational Exposure

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Introduction and Objective: Urology, traditionally male dominated, is seeing a rise in female trainees. Fluoroscopy, commonly used in urologic procedures, like percutaneous nephrolithotomy and stent placement, pose radiation risks to the pregnant urologist and fetus. Other fluoroscopy-heavy fields have assessed these risks, but there is limited research in urology. This review aims to assess the literature on occupational radiation exposure during pregnancy in urology and evaluate current safety guidelines.

Methods: We consulted the American Urological Association (AUA) core curriculum and national guidelines on occupational radiation during pregnancy. A comprehensive review was conducted in PubMed and Scopus using the query “pregnancy” AND “occupational radiation” AND “urology”. Clinical research from 1980s to 2025 on occupational radiation exposure in pregnant urologists, including safety policies, surveys, clinical studies case reports and recommended guidelines were included. Studies from non-urological fields and individuals assigned male at birth were excluded.

Results: The AUA lacks specific guidelines specifically for pregnant urologists. US and international policies differ, with fetal radiation limits ranging from 1–5 mSv. Seven papers were reviewed. European countries have inconsistent policies on lead protection, case involvement, and radiation limits. Studies show shielding, low-dose and pulse fluoroscopy, and maintaining farther distances reduce radiation exposure. Most pregnant urologists conduct their own safety research, and many women did not use low dose fluoroscopy during their pregnancy with some not using additional precautions. Generally, fewer precautions were taken in subsequent pregnancies.

Conclusions: Radiation safety policies for pregnant urologists lack uniformity. While protective measures exist, their use is not universally implemented. Most pregnant urologists research and implement safety precautions on their own, as they are often left without specific guidance or clear protocols. This highlights the need for clear guidelines to support the growing population of female urologists who may be impacted by these occupational hazards.

FRI-1415

GLP-1 Agonists Associated with Reduced Metastatic Spread and Mortality in Diabetic Patients with Renal Cell Carcinoma.

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Introduction and Objective: The obesity paradox is the counterintuitive observation that obese patients with renal cell carcinoma (RCC) seem to have better survival rates than patients with a normal body mass index despite obesity being a risk factor for RCC. GLP-1 agonists (GLP1a) are approved treatments for diabetes and are effective in treating obesity and metabolic syndrome. We wanted to determine whether GLP1a use in patients with Type 2 diabetes (D2M) reduces the risk of metastatic progression and mortality in patients with RCC compared to those on insulin or metformin.

Methods: This retrospective cohort database study with propensity-score matching was conducted using the TriNetX database. Cohorts included adults with D2M, who were on GLP1a and no insulin (cohort A), insulin and no GLP1a (cohort B), GLP1a and no metformin (cohort C), or metformin and no GLP1a (cohort D), and had RCC. We compared cohorts A with B, and C with D after matching for age, race, obesity, CKD, prior history of malignancy, and economic status. Odds ratios with 95% confidence intervals were calculated.

Results: There were 39,212 patients with an average age of 61.3 years old. 538 (1.4%) in Cohort A, 20,391 (52.0%) in Cohort B, 1044 (2.7%) in Cohort C, and 13,961 (35.6%) in Cohort D.

After matching for the above variables, the ten-year odds of distant metastases in cohorts A vs B was 2.07% vs 6.681% ($p < 0.0001$). The odds of mortality in cohorts A vs B was 5.411% vs 27.655% ($p = 0.0005$). The odds of distant metastases in cohorts C vs D was 4.141% vs 7.113% ($p = 0.0043$). The odds of mortality in cohorts C vs D was 16.214% vs 25.146% ($p < 0.0001$).

Conclusions: In this large PSM cohort study of patients with D2M who developed RCC, GLP1a use was associated with a reduced risk of metastatic progression and overall mortality compared to both insulin and metformin.

FRI-1422

Preliminary results from LEGEND: a Phase 2 study of detalimogene voraplasmid, a novel, investigational, non-viral genetic medicine for high-risk non-muscle invasive bladder cancer (NMIBC)

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Introduction and Objective: Detalimogene voraplasmid (EG-70) is a novel, investigational, non-viral genetic medicine for high-risk NMIBC, including BCG-unresponsive disease. The Phase 1 portion of LEGEND (NCT04752722) demonstrated a promising safety profile and an overall complete response (CR) of 73% at any time. Phase 2 is ongoing; preliminary efficacy of the pivotal Cohort 1 (BCG-unresponsive NMIBC with CIS) and safety for all cohorts are reported here.

Methods: Key eligibility criteria: ≥18 years; ECOG PS 0−2; high-risk NMIBC, ± resected coexisting papillary (Ta/T1) tumors, ineligible for/elected not to undergo cystectomy. Cohorts: BCG-unresponsive with CIS (1; pivotal cohort); BCG-naïve with CIS (2A); BCG-exposed with CIS (2B); BCG-unresponsive with high-grade papillary disease without CIS (3). Patients received four-doses, 50 mL intravesically at Weeks 1, 2, 5&6 of a 12-week cycle × 4 cycles. Primary endpoint: CR rate at Week 48; safety. Secondary endpoints: PFS; CR rate at Week 12, 24, 36 & 96, % of patients with a durable CR at 12 Months.

Results: As of September 13, 2024, 21 patients were evaluable for efficacy in Cohort 1. In the 42 safety-evaluable patients (all cohorts), treatment-related adverse events were observed in 20 (47.6%; all G1/2), most commonly (≥10%): dysuria (21.4%); bladder spasm (19.0%); pollakiuria (11.9%); fatigue (11.9%). Overall CR rate 71%; CR rate 67% at 3 Months and 47% at 6 Months.

Conclusions: Preliminary data from the pivotal Phase 2 portion of LEGEND suggest a promising safety/tolerability profile. Overall, 71% of patients achieved a CR, with 67% achieving a CR at 3 Months and 47% achieving a CR at 6 Months. All four cohorts continue to enroll, with a target accrual of approximately 300 patients.

FRI-1429

Interim Analysis of Urostomy Patients from the Ostomy Telehealth for Cancer Survivors Study Suggests an Improvement in Quality of Life Metrics That Are Maintained at 6 Months

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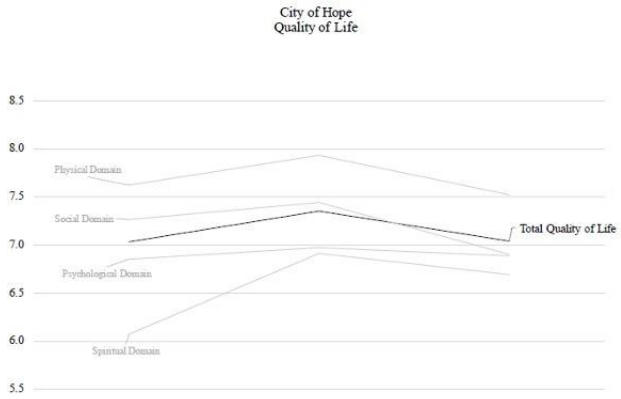
Introduction and Objective: Quality of life (QOL) is a significant concern for patients undergoing ostomy surgery as part of their cancer care. The impact of interventions to enhance QOL metrics in this population has been understudied, particularly among patients with urostomy procedures. This study aimed to analyze the quality of life among urostomy patients enrolled in the Ostomy Self-Management Telehealth (OSMT) program.

Methods: The OSMT program is a three-year, multi-site, randomized controlled trial for cancer survivors with ostomies and their caregivers. Participants were surveyed at three time points: post-surgical baseline, at the conclusion of the OSMT program (which consists of a five-session patient education program), and six months after the program. Measurement instruments included the City of Hope QOL (COH QOL) survey, the Hospital Anxiety and Depression Scale (HADS), and the Patient Activation Measure and Self-Efficacy survey (PAM).

Results: Seventy-one urostomy patients comprised the study group. The age range was 45 to 90 years (mean 72.1), and the majority were male (47, 66.2%). Most participants were White (91.4%), while five (7.1%) were Black, and one identified as another race. Thirty-three participants (46.5%) lived with a caregiver, 22 (31%) lived with others, and 15 (21.1%) lived alone. The COH QOL survey showed an overall increase in all domains at the conclusion of the program, followed by a return to baseline at six months. HADS and PAM scores demonstrated improvements from baseline that persisted at six months.

Conclusions: Cancer patients with urostomies experienced general improvements in QOL domains following participation in the self-management educational program. Although the improvements diminished over six months, they remained above post-surgical baseline levels.



FRI-1436

Impact of High Tumor Grade on Prognosis in pT1 Renal Cell Carcinoma Undergoing Surgical Resection

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Introduction and Objective: T1 stage renal cell carcinoma (RCC) is associated with favorable outcomes, especially with curative-intent surgery. However, the impact of high-grade disease in this setting is not well understood, particularly whether outcomes are more driven by grade or stage. This study characterizes oncologic outcomes for patients with pT1 grade 4 RCC after surgery.

Methods: A retrospective analysis of localized RCC nephrectomy databases from JHU and Mayo was performed. The Surveillance, Epidemiology, and End Results (SEER) database was used for a validation cohort. Patients were categorized into 5 groups based on pT stage and ISUP grade: pT1G1/2, pT1G3, pT1G4, pT2G1-4, pT3G1/2. The Kaplan-Meier and log-rank test were used to compare recurrence-free survival (RFS) and cancer-specific survival (CSS). Fine-Gray regression analysis was used to compare cumulative incidence of cancer-specific death.

Results: Of 1837 JHU and 2893 Mayo cohort patients, 20 and 33 patients had pT1G4 RCC, respectively. In both cohorts, there was a significant difference in RFS among groups ($p < 0.001$), with pT1G4 demonstrating the worst 5-year RFS: 72.9% (95% CI 53.1–100%) in the JHU cohort and 54.5% (39.9–74.5%) in the Mayo cohort (Fig. 1A,B). Across 77,763 SEER patients, 1458 had pT1G4 RCC and were found to have significantly worse 5-year CSS (86.1%; 95% CI 83.8–88%) compared to other groups ($p < 0.001$). pT1G4 had the largest hazard of cancer-specific death (subhazard ratio (SHR) 3.2 (2.7–3.7), $p < 0.001$; ref:pT1G1/2) among all groups, including pT3G1/G2 (Fig. 1C). Similar results were obtained with analysis limited to pT1aG4 tumors (Fig. 1D).

Conclusions: Oncologic outcomes in pT1G4 RCC appear to be driven more by their high-grade than low stage. Biopsy-proven G4 RCC in patients with small renal masses suggests more aggressive biology with implications for selecting definitive treatment over active surveillance.

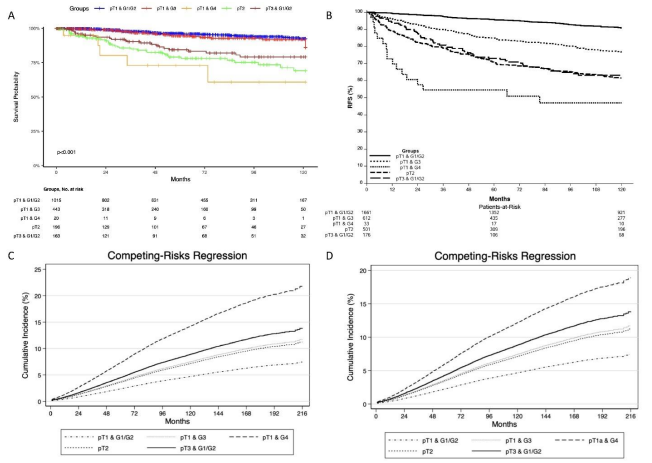
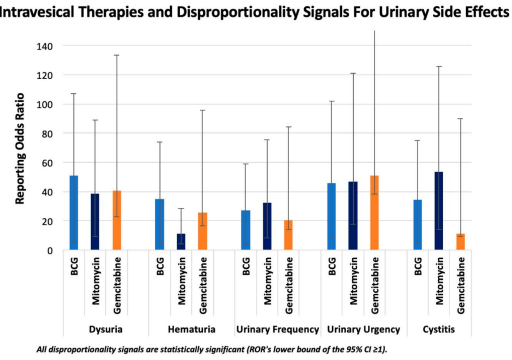


Figure 1.



FRI-1443

Adverse Reactions of Intravesical Therapies for Bladder Cancer: An Analysis of the World Health Organization Pharmacovigilance Database

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Introduction and Objective: Intravesical therapies for bladder cancer have minimal systemic side effects but are associated with various adverse drug reactions (ADRs). This study aimed to characterize these ADRs using an international pharmacovigilance database.

Methods: The World Health Organization's global database of individual case safety reports (VigiBase) was queried for de-duplicated records of ADRs associated with intravesical Bacillus Calmette-Guerin (BCG), mitomycin, and gemcitabine in patients between 1978 and 2024. Disproportionality analysis was performed to measure each therapy's reporting odds ratios (ROR) for the most commonly reported ADRs and assess differences in urinary side effects.

Results: Overall, 5455 reports with 15020 ADRs to BCG, 1010 reports with 2118 ADRs to mitomycin, and 103 reports with 237 ADRs to gemcitabine, were identified. The descriptive characteristics of these unique reports are presented in Table 1. Common ADRs include disseminated BCG infection (11.4%; ROR = 9681, 95% CI: 8697–10774), fever (6.5%; ROR = 3.6, 95% CI: 3.4–3.9), and dysuria (2.8%; ROR = 50.8, 95% CI: 45.8–56.4) for BCG; rash (30.7%; ROR = 5.0, 95% CI: 4.3–5.8), dysuria (3.0%; ROR = 38.6, 95% CI: 29.5–50.6), and urinary frequency (3.0%; ROR = 32.3, 95% CI: 24.0–43.4) for mitomycin; and ineffective therapy (12.2%; ROR = 10.6, 95% CI: 6.9–16.3), dysuria (3.0%; ROR = 40.7, 95% CI: 17.8–92.8), and nausea (2.1%; ROR = 0.8, 95% CI: 0.3–1.9) for gemcitabine. Significantly disproportionate associations of all therapies with urinary side effects are compared in Fig. 1.

Conclusions: Intravesical BCG exhibits strong disproportionality signals for systemic side effects like disseminated infection and fever, unlike mitomycin and gemcitabine. All therapies have significantly disproportionate drug-ADR relationships with urinary side effects, which may affect patient adherence.

Table 1: Descriptive Characteristics of Adverse Drug Reaction Reports for the Different Intravesical Therapies in VigiBase.

Characteristic	N (%)		
	BCG	Mitomycin	Gemcitabine
Number of reports	5,455 (100)	1,010 (100)	103 (100)
Sex			
Male	4342 (79.6)	720 (71.3)	51 (49.5)
Female	723 (13.3)	246 (24.3)	14 (13.6)
Unknown	390 (7.1)	44 (4.4)	38 (36.9)
Age (years)			
18 – 44	87 (1.6)	21 (2.1)	1 (1.0)
45 – 64	1020 (18.7)	242 (24.0)	14 (13.6)
65 – 74	1540 (28.2)	263 (26.0)	21 (20.4)
≥75	1401 (25.7)	298 (29.5)	22 (21.3)
Unknown	1407 (25.8)	186 (18.4)	45 (43.7)
UN Continent			
America	2101 (38.5)	131 (13.0)	80 (77.7)
Europe	2702 (49.5)	855 (84.6)	18 (17.5)
Asia	563 (10.3)	19 (1.9)	-
Africa	10 (0.2)	-	-
Oceania	79 (1.5)	5 (0.5)	5 (4.8)
Reporting years			
1978 – 1994	77 (1.4)	51 (5.0)	-
1995 – 1999	324 (5.9)	52 (5.1)	-
2000 – 2004	194 (3.6)	47 (4.7)	2 (1.9)
2005 – 2009	423 (7.8)	117 (11.6)	3 (2.9)
2010 – 2014	990 (18.1)	206 (20.4)	6 (5.8)
2015 – 2019	2008 (36.8)	332 (32.9)	45 (43.7)
2020 – 2024	1439 (26.4)	294 (29.1)	47 (45.6)
Patient death			
Yes	201 (3.7)	23 (2.3)	8 (7.8)
No / unknown	5254 (96.3)	987 (97.7)	95 (92.2)

FRI-1450

Mechanism of action and translation to the clinic of detalimogene voraplasmid—a novel, investigational, non-viral

FRI-1457

The Extent of Financial Toxicity in Testicular Cancer: A Systematic Review and Meta-Analysis

genetic medicine for non-muscle-invasive bladder cancer (NMIBC)

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Introduction and Objective: Detalimogene voraplasmid (EG-70) is a novel, investigational, non-integrating, non-viral genetic medicine designed to elicit local stimulation of an anti-tumor, intravesical immune response while mitigating risk of systemic toxicities. LEGEND is an ongoing Phase 1/2 study (NCT04752722) investigating safety and efficacy of detalimogene in high-risk NMIBC.

Methods: Preclinical evaluation was conducted *in vitro* and *in vivo* in an orthotopic syngeneic model of bladder cancer. Immunocompetent C57BL/6 mice received two weekly intravesical instillations of a murine EG-70 surrogate (mEG-70). Efficacy was assessed by flow cytometry, immunoassays, immunohistochemistry, bioluminescence *in vivo* imaging, and overall survival. The Phase 1 clinical LEGEND study evaluated detalimogene in high-risk BCG-unresponsive NMIBC with carcinoma *in situ* (CIS).

Results: Immune profiling revealed remodeling of the tumor microenvironment from an immunosuppressive to a pro-inflammatory milieu. Accordingly, administration of mEG-70 was associated with a marked and dose-dependent reduction in tumor burden. Over 90% of mEG-70-treated mice had durable anti-tumor responses as demonstrated by long-term disease-free survival with no disease relapse during the 100-day monitoring period. The anti-tumor immune response in surviving tumor-free mice resulted in durable protection against subsequent tumor re-challenge, and systemic immune memory. In Phase 1 of LEGEND, detalimogene was generally well tolerated, with a complete response rate of 73% at any time in patients with BCG-unresponsive NMIBC with CIS.

Conclusions: In a preclinical model, a mouse surrogate of detalimogene elicited a durable, anti-tumor immune response and a marked, dose-dependent reduction in tumor burden. The proposed mechanism of action of detalimogene has been translated clinically into the Phase 1 portion of the LEGEND study.

M. Leff[1], S. Xiao[2], W. Krakowka[3], D. Hartman[1], N. Mclauchlan[4], J. Pluta[1], S. Chambule[1], Y. Shah[5], A. Rangnekar[1], R. Daniel[1], M. Parmar[6], B. Schurhamer[6], D. Lee[6], T. Guzzo[6], P. Pierorazio[6] and K. Alkhatib[6]

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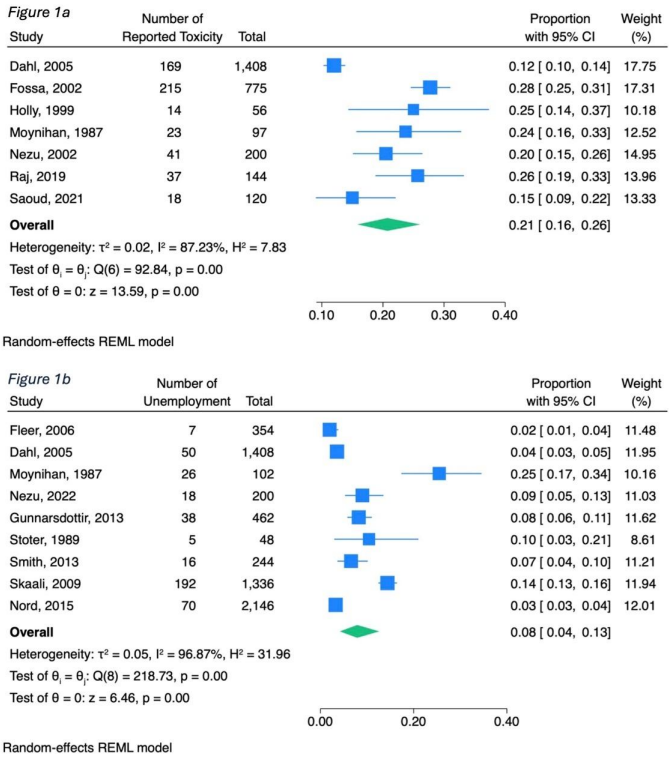
Introduction and Objective: Given the high survivability of testicular cancer (TC), patient quality of life must be prioritized in disease management. Much like chemotherapy toxicity, the effects of financial toxicity (FT) may reverberate for decades. We conducted a systematic review and meta-analysis of existing TC research on FT to evaluate the FT prevalence and identify literature gaps.

Methods: After registering our protocol with PROSPERO (CRD42023410422), databases including MEDLINE, Scopus, Cochrane Library, Embase, ProQuest, and CINAHL were searched in April 2023. Search and inclusion criteria focused on explicit measures of financial toxicity (FT), such as direct treatment costs, finance-related psychological burdens, cost-induced treatment modifications, employment disruptions, and educational disruptions. A meta-analysis estimated the prevalence of reported FT and unemployment resulting from TC.

Results: Of 977 unique studies, 59 met inclusion criteria. Of these, ten focused on financial burden, four on patient costs, 28 on employment impacts, six on fertility costs, 13 on insurance status, and one on mitigating strategies. Publicly insured or uninsured patients were found to have a higher likelihood of guideline-discordant or delayed care (5 studies) and experiencing increased mortality (4 studies). TC survivors exhibited evidence of altered work ability (4 studies) and self-reported subjective financial stress (5 studies). Meta-analysis found a mean proportion of self-reported FT from 5 studies to be 0.21 (95% CI: 0.16–0.26), and a pooled mean proportion of unemployment resulting from TC treatment from 9 studies to be 0.08 (95% CI: 0.04–0.13) [Fig. 1].

Conclusions: Our work showed that the financial burdens of care can affect both treatment decisions and the survivorship experience. This review highlights the need for future studies using FT models to evaluate TC survivorship and develop interventions to mitigate FT.

Figure 1. Forest Plots of (a) Reported Financial Toxicity and (b) Unemployment Resulting from



FRI-1504

Evolution of Stage II Seminoma Management: from Radiotherapy to Retroperitoneal Lymph Node Dissection Across Two Decades

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Introduction and Objective: Management of clinical stage II seminoma has evolved with recent trials demonstrating the efficacy of retroperitoneal lymph node dissection (RPLND). This study analyzes national treatment trends for stage II seminoma using a large administrative dataset.

Methods: Patients with clinical stage II seminoma (TANYN1-3M0S0) were identified in the national cancer database testis cancer dataset (2004–2021). Descriptive statistics summarized patient characteristics, and treatment trends were analyzed by year. Fisher's Exact Test with post hoc Monte Carlo simulation assessed changes in treatment distribution (chemotherapy, radiation, RPLND).

Results: Among 1300 men meeting inclusion criteria, 1025 (79%) received chemotherapy, 181 (14%) radiation, and 94 (7%) RPLND. Chemotherapy use significantly increased, while radiation declined ($p < 0.05$) (Fig. 1). RPLND use decreased in the early 2000s but rebounded, surpassing radiation by 2018. Table 1 details patient demographics and clinical characteristics by treatment. Chemotherapy patients had higher rates of lymphovascular invasion (LVI), while those receiving radiation had lower-stage nodal disease.

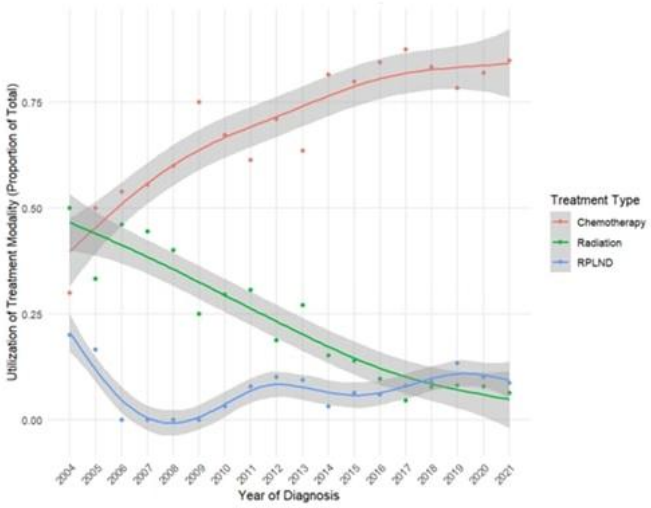
Conclusions: Over the past two decades, treatment patterns for marker-negative clinical stage II seminoma have shifted considerably. Chemotherapy utilization has increased, particularly among patients with high-risk features such as LVI and advanced nodal stage. While the use of radiation therapy continues to decline, the use of RPLND has shown a modest increase in the last decade. Further research is needed to assess the impact of new evidence on treatment patterns and to determine the most appropriate treatment strategies for different patient subgroups.

Table 1: Patient Demographics by Treatment Modality for Clinical Stage II Seminoma

Characteristic	Chemotherapy	Radiation	RPLND
n	1025	181	94
Age (mean (SD))	39.79 (10.59)	39.76 (11.95)	45.27 (13.99)
Race (%)			
White/Caucasian	791 (77.2%)	161 (89.0%)	72 (76.6%)
Black/African American	43 (4.2%)	5 (2.8%)	5 (5.3%)
Latino/Hispanic	153 (14.9%)	10 (5.5%)	12 (12.8%)
American Indian/Alaskan Native	3 (0.3%)	2 (1.1%)	0 (0.0%)
East Asian	16 (1.6%)	1 (0.6%)	1 (1.1%)
Hawaiian/Pacific Islander	4 (0.4%)	0 (0.0%)	0 (0.0%)
Indian/South Asian	5 (0.5%)	1 (0.6%)	0 (0.0%)
Other/Unknown	10 (1.0%)	1 (0.6%)	4 (4.3%)
Charlson-Deyo Comorbidity Score (%)			
Charlson 0	917 (89.5%)	168 (92.8%)	85 (90.4%)
Charlson 1	90 (8.8%)	10 (5.5%)	7 (7.4%)
Charlson 2	10 (1.0%)	1 (0.6%)	1 (1.1%)
Charlson 3	8 (0.8%)	2 (1.1%)	1 (1.1%)
LVI Present (%) *	356 (42.1%)	49 (31.6%)	17 (29.3%)
Pre-Orchiectomy HCG (%)			
Normal, <2 mIU/ml	481 (100.0%)	131 (100.0%)	40 (100.0%)
Pre-Orchiectomy AFP (%)			
Normal, <20 ng/ml	481 (100.0%)	131 (100.0%)	40 (100.0%)
Clinical T Stage (%) *			
cT1	98 (49.0%)	57 (71.2%)	8 (66.7%)
cT2	54 (27.0%)	20 (25.0%)	1 (8.3%)
cT3	18 (9.0%)	3 (3.8%)	2 (16.7%)
cT4	30 (15.0%)	0 (0.0%)	1 (8.3%)
Clinical N Stage (%) *			
cN1	207 (21.7%)	116 (68.6%)	25 (34.2%)
cN2	406 (42.5%)	51 (30.2%)	31 (42.5%)
cN3	343 (35.9%)	2 (1.2%)	17 (23.3%)

* $p<0.05$

Figure 1: Trends in Treatment Modality by year of diagnosis



SAT-1115	SAT-1122
A Wave of Relief: Our Experience with Aquablation After Failed Urolift M. Lee, J. Pryor, C. Matta and S. Sterious *Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA*	**Endoscopic Management of Prostatic Urethral Bridges after Aquablation** J. Clark, J. Pryor and S. Sterious *Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA*
SAT-1129	SAT-1136
Single Port Robotic Transvesical Bladder Diverticulectomy J. Brisbon[1], J. Pfail[1] and S. Elsamra[2] *[1]Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA; [2]Rutgers Cancer Institute of New Jersey, New Brunswick, NJ, USA*	**Side-to-Side, Non-transecting Ureteral Reimplantation in a Duplex Collecting System** K. Petrillo[1], J. Marantidis[2], K. Venkatesan[1,2] and N. Shaw[1,2] *[1]Georgetown University, Washington, DC, USA; [2]MedStar Georgetown University Hospital, Washington, DC, USA*
SAT-1143	SAT-1150
Single-Port Robotics for Complicated Ureteroenteric Anastamosis Revision: A Case Report R. Islam[1], K. Brackman[2] and S. Elsamra[1] *[1]Rutgers Robert Wood Johnson Medical School, New Brunswick, NJ, USA; [2]University of Wisconsin School of Medicine, Madison, WI, USA*	**Overcoming Challenging Bladder Tumor Locations: Thullium Fiber Laser Ablation via Flexible Cystoscopy** K. Chen and T. Krupski *University of Virginia, Charlottesville, VA, USA*
SAT-1157	SAT-1204
Endoscopic Management of Tubulovillous Adenoma in an Orthotopic Neobladder Two Decades After Radical Cystectomy for Bladder Cancer. L. Wilkins, C. Rivera Lopez, I. Florissi, S. Patel and M. Kates *Johns Hopkins University, Baltimore, MD, USA*	**Indocyanine-Green Guided Selective Clamping in Robotic Assisted Retroperitoneal Partial Nephrectomy** F. Sun, K. Chen, D. Hutchinson and C. Ibilibor *University of Virginia, Charlottesville, VA, USA*

SAT-1330

Retrospective review comparing thulium: yttrium–aluminum–garnet laser vs. holmium: yttrium–aluminum–garnet laser endoscopic enucleation of the prostate: a single-institution, single-surgeon experience

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Introduction and Objective: The holmium: yttrium–aluminum–garnet (YAG) laser (Moses 2.0) is popular for endoscopic enucleation of the prostate (HoLEP) due to its safety and efficacy in treating benign prostatic hyperplasia (BPH). Currently, no data compares outcomes of the new pulsed solid-state Thulium:YAG laser (ThuLEP using Thulio) to Moses 2.0.

Methods: We retrospectively reviewed data from patients who underwent ThuLEP or HoLEP at a single institution by a single surgeon from 2022–2024. ThuLEPs were performed using Thulio (Dornier MedTech) at 2.0 J and 25 Hz. HoLEPs were performed using MOSES 2.0 (Boston Scientific) at 2.0 J and 30–50 Hz. Complication analysis focused on Clavien Dindo grade ≥2 complications within 30 days. Surgical success was defined as pre-operative symptom resolution at 1 month.

Results: 205 patients underwent ThuLEP and 47 patients underwent HoLEP. Both groups had largely similar preoperative characteristics, though median American Society of Anesthesiologists (ASA) Classification and follow up duration differed significantly ($p < 0.05$) (Table 1). In the ThuLEP and HoLEP groups respectively, 59 (50%) and 22 (47%) patients were taking blood thinners pre-operatively.

Surgical success rate was not significantly different between the groups. Frequency of presentation to the emergency room did not differ between ThuLEP and HoLEP (14% vs 15%, $p = 0.94$). No statistical difference was seen in the proportion of patients experiencing Clavien ≥ 2 complications between the groups (12% vs 17% in ThuLEP vs HoLEP; $p = 0.45$). Postoperative transfusion rate was 2.9 vs 2.1 for patients undergoing ThuLEP vs HoLEP.

Conclusions: Thulio offers a safe alternative to Moses 2.0 for laser enucleation of the prostate in managing symptomatic BPH. In our experience, complication rates and surgical success in patients who underwent ThuLEP or HoLEP were not significantly different.

	ThuLEP				HoLEP				
Preoperative Patient Characteristics	*N*	%	Mean (SD)	Median (Range)	*N*	%	Mean (SD)	Median (Range)	p value
Age (years)	118		72.3 (8.7)	73.0 (53-94)	47		71.0 (8.5)	70.0 (52-92)	0.38
Body Mass Index (kg/m^2)	118		28.5 (5.0)	27.5 (17-44)	45		28.7 (6.3)	27.3 (17.3-46.7)	0.75
Prostate Volume (ml)	92		106.2 (61.5)	88.5 (18-360)	46		96.2 (52.4)	89 (26-260)	0.46
Prostate-specific antigen (ng/ml)	102		5.4 (5.7)	3.5 (.01-29)	41		30.6 (162.9)	4.1 (0.1-1060)	0.67
American Urological Association Symptom Score	60		18.7 (8.4)	20.0 (1-34)	31		20.5 (7.4)	23 (6-33)	0.28
Hemoglobin (g/dL)	117		13.4 (1.7)	13.5 (6.9-16.9)	45		13.7 (1.6)	13.8 (9.4-16.1)	0.32
Creatinine (mg/dL)	117		1.1 (0.4)	1.0 (0.6-2.5)	45		1.1 (0.2)	1.0 (0.63-1.6)	0.87
Maximum flow rate (Qmax) (ml/s)	21		7.3 (6.2)	7.0 (0-23.8)	9		4.9 (2.7)	5.0 (1.2-10)	0.4
American Society of Anesthesiologists Classification	118		2.7 (0.6)	3 (2-4)	40		3.0 (0.3)	3.0 (3-4)	**<0.05**
Urinary retention (indwelling catheter or intermittent catheterization dependent)	36	31			15	32			1
Patients taking antiplatelet and/or anticoagulant therapy	59	50			22	47			0.84
Follow up duration (days)	118		194 (108)	177 (1-510)	47		375 (218)	447 (0-720)	**<0.05**
Peri-and Post-Operative Variables									
Specimen weight (g)	118		64.0 (60.8)	46.8 (1-351)	45		61.2 (43.8)	67.0 (1.5-157)	0.69
Operative time (minutes)	118		112.6 (43.7)	108 (38-270)	38		136.4 (54.5)	132 (72-360)	**<0.05**
Enucleation time (minutes)	112		44.8 (25.2)	40 (5-167)	0				
Estimated blood loss (ml)	118		8.8 (15.2)	5 (0-100)	47		8.5 (21.7)	0.0 (0-100)	**<0.05**
Intraoperative complications	4	3			0				
Bladder injury	2								
Equipment failure	2								
Presence of obstructing median lobe	113	96			43	91			0.27
Duration of catheterization (days)	118		1.3 (0.92)	1.0 (0-6)	47		1.7 (1.6)	1 (0-7)	**<0.05**
Same day discharge	24	21			4	9			0.1
American Urological Association Symptom Score	39		7.2 (5.3)	6.0 (1-28)	37		7.1 (4.6)	6.0 (2-19)	0.55
Maximum flow rate (Qmax) (ml/s)	8		9.7 (4.7)	10.1 (3.1-18.7)	6		12.8 (8.8)	10.4 (3.8-26.9)	0.4
Surgical Success	114	97			45	96			1
30 Day Post-Operative Complications									
Patients included in complication analysis	205				47				
Presentation to the emergency room	27	14			7	15			0.94
Number of patients with Clavien ≥ 2 Complications	24	12			8	17			0.45
Highest Grade Clavien Dindo Complication (CDC) per patient									
II	17	8			7	15			
IIIb	4	2			1	2			
IV	1	0.5			0				
V	2	1			0				
Total Number of Complications	30				10				
UTI (CDC II)	16	8			7	15			
Transfusion (CDC II)	6	3			1	2			
Hyperkalemia requiring correction (CDC II)	0	0			1	2			
Reintervention for hematuria, operating room clot evacuation (CDC IIIb)	4	2			1	2			
Transient Ischemic Attack (CDC IV)	1	0.5			0	0			
NSTEMI (CDC IV)	1	0.5			0	0			
Death during post-operative course (enucleation performed with palliative intent) (CDC V)	2	1			0	0			

SAT-1337

Initial Experience with Same Day Discharge Using the New Pulsed Thulium: Yttrium-Aluminum-Garnet Laser for Endoscopic Enucleation of the Prostate

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Introduction and Objective: Data regarding same-day discharge (SDD) after Thulium laser enucleation of the prostate (ThuLEP) remains limited. We describe our initial experience of SDD using the new pulsed Thulium: yttrium–aluminum–garnet (Thulio YAG) laser.

Methods: Data from patients undergoing ThuLEP at our institution between July 2023 and January 2024 were reviewed. Pre-op patient characteristics, as well as peri-and post-operative outcomes and complications were statistically compared between patients undergoing SDD and those discharged on or after POD1. Complications were classified according to the Clavien-Dindo (CDC) system. Surgical success was defined as improvement of preoperative symptoms at 1 month follow up.

Results: Twenty-four patients underwent SDD, compared to 94 patients discharged POD1 or later. Pre-operative characteristics were largely similar between the groups with the exception of mean age (Table 1). Of SDD patients, 8 (33%) were discharged without a foley catheter. Surgical success between SDD patients and patients discharged POD1 or later was similar (96% vs 97%, $p = 0.76$). Postoperatively, there was no significant difference in patients returning to the emergency room (ER), having a catheter replaced for urinary retention, or experiencing Clavien ≥ 2 complications (Table 1). Same day discharge patients did not experience any bleeding related complications.

Conclusions: Same-day discharge following ThuLEP using Thulio is safe and associated with comparable clinical outcomes to patients discharged on or after POD1. Same-day discharge for younger patients with favorable operative anatomy may be a safe and effective option, potentially reducing hospital resource utilization without compromising patient safety and long-term outcomes.

	Discharged on or after Postoperative Day 1				Same Day Discharge				
Preoperative Patient Characteristics	*N*	%	Mean (SD)	Median (Range)	*N*	%	Mean (SD)	Median (Range)	p value
Age (years)	94		73 (8.6)	74 (55-94)	24		68.2 (8.3)	68.5 (53-82)	**p<0.05**
Body Mass Index (kg/m^2)	94		28.5 (5)	27.5 (17-44.1)	24		28.8 (4.8)	27.7 (22-40)	0.87
Prostate Volume (ml)	72		111 (65)	98.5 (18-350)	20		87.7 (44.6)	78 (29.5-200)	0.14
Prostate specific antigen (ng/mL)	83		5.6 (6.0)	3.5 (0.01-29.08)	19		4.4 (3.9)	2.8 (0.1-11.6)	0.57
American Urological Association Symptom Score	47		19.4 (8.5)	21 (1-34)	13		16.1 (8.1)	16 (4-32)	0.2
Hemoglobin (g/dL)	93		13.4 (1.6)	13.5 (9.3-16.9)	24		13.6 (2.2)	13.9 (6.9-16.6)	0.22
Creatinine (mg/dL)	93		1.1 (0.36)	1.04 (0.64-2.5)	24		1.1 (0.34)	1.03 (0.66-2.2)	0.79
Maximum flow rate (Qmax) (ml/s)	16		6.8 (5.9)	7.2 (0-23.8)	4		8.8 (7.9)	7 (1-22)	1
American Society of Anesthesiologists Classification	94		2.7 (0.6)	3 (2-4)	24		2.6 (0.5)	3 (2-3)	0.35
Urinary retention (indwelling catheter or intermittent catheterization dependent)	30	32			6	25			0.4
Patients taking antiplatelet and/or anticoagulant therapy	50	53			9	38			0.16
Follow up duration (days)	94		187 (97)	175 (7-401)	24		218 (145)	228 (1-510)	0.41
Peri-and Post-Operative Variables									
Specimen weight (g)	94		67.7 (62.9)	49.5 (1.5-351)	24		49.4 (50.5)	38.3 (1-195.5)	0.14
Operative time (min)	94		116 (41)	112.5 (45-243)	24		98.6 (52)	87.5 (38-270)	**p<0.05**
Enucleation time (minutes)	90		47 (26)	42 (9-167)	22		36 (20)	33.5 (5-82)	0.06
Estimated blood loss (ml)	94		8.8 (13.8)	5 (0-100)	24		9 (20.2)	5 (0-100)	0.38
Presence of obstructing median lobe	90	96			23	96			1
Duration of catheterization (days)	94		1.5 (2)	1 (1-6)	24		0.7 (0.5)	1 (0-1)	**p<0.05**
Discharged without catheter	94	100			8	33			**p<0.05**
American Urological Association Symptom Score	31		7.1 (5.6)	6 (1-28)	8		7.8 (4.1)	8.5 (1-13)	0.26
Maximum flow rate (Qmax) (ml/s)	6		10.8 (5)	10.9 (3.1-18.7)	2		6.4 (2.3)	6.4 (4.8-8)	0.24
Surgical Success	91	97			23	96			0.76
30 Day Post-Operative Complications									
Patients returning to emergency room	13	14			3	13			1
Patients with catheter replaced due to acute urinary retention	6	6			2	8			0.66
Number of patients with Clavien ≥ 2 Complications	19	20			1	4			0.11
Highest Grade Clavien Dindo Complication (CDC) per patient									
II	14	15			1	4			
IIIb	2	2			0				
IV	1	1			0				
V	2	2			0				
Total number of complications	25				1				
Urinary tract infection (CDC II)	15	16			1	4			
Transfusion (CDC II)	4	4			0				
Reintervention for hematuria, operating room clot evacuation (CDC IIIb)	2	2			0				
Transient Ischemic Attack (CDC IV)	1	1			0				
NSTEMI (CDC IV)	1	1			0				
Death during post-operative course (enucleation performed with palliative intent) (CDC V)	2	2			0				

SAT-1344

Do postoperative antibiotics after laser enucleation of the prostate reduce the number of urinary tract infections?

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Introduction and Objective: Practice patterns in prescribing antibiotics perioperatively for patients undergoing endoscopic enucleation of the prostate widely vary. We investigate the impact of postoperative antibiotics on reducing the rate of postoperative urinary tract infections (UTIs) for patients undergoing laser enucleation of the prostate (LEP).

Methods: We performed a retrospective review of all patients with negative pre-operative urine cultures who underwent LEP between 2023 and 2024. We compared patient characteristics and operative outcomes amongst those who did and those who did not receive postoperative antibiotics immediately after their procedure. Rates of postoperative UTIs occurring within 30 days of LEP were included in our analysis.

Results: Of 99 patients with negative pre-operative urine cultures who underwent LEP, 31 (31%) did not receive post-operative antibiotics and 68 (69%) did. Table 1 demonstrates no significant differences between the groups across most patient characteristic variables, including age, prostate volume, and AUASS, with the exception of ASA score (Wilcoxon rank sum-test, $p < 0.05$). Six patients (19%) who did not receive postoperative antibiotics experienced UTIs, compared to eight patients (12%) who received postoperative antibiotics, however, no statistical difference was established between groups (Fisher's exact test, $p = 0.35$).

Conclusions: Regardless of post-operative antibiotic prophylaxis, patients who underwent LEP with negative pre-operative urine cultures experienced UTIs at similar rates. Future studies and clinical trials are necessary to investigate the role of prophylactic antibiotics in reducing the incidence of post-operative UTIs in patients with negative pre-operative urine cultures.

	No post-operative antibiotics given				Post-operative antibiotics given				
Preoperative Patient Characteristics	N	%	Mean (SD)	Median (Range)	N	%	Mean (SD)	Median (Range)	p-value
Total Patients	31				68				
Utilized Holmium Laser	28	90			2	3			
Utilized Thulium Laser	3	10			66	97			
Age (years)	31		71.5 (9.6)	70 (52-92)	68		70.9 (7.4)	71 (53-88)	0.70
BMI (kg/m^2)	30		29.3 (6.3)	27.8 (20.7-46.7)	68		29.3 (4.8)	28.6 (22.7-44.1)	0.61
Prostate Volume (ml)	30		96.7 (60.5)	89.5 (26.5-260)	55		104.7 (62)	87 (18-350)	0.50
PSA (ng/ml)	28		42.4 (199)	4.2 (.16-1060)	62		6.04 (8.1)	3.5 (.01-48.5)	0.70
AUA Symptom Score	25		20.2 (7.1)	23 (4-30)	40		20 (7.6)	21 (6-34)	0.91
Hb (g/dL)	30		13.9 (1.4)	14.15 (10.2-15.9)	68		13.7 (1.5)	13.7 (9.4-16.9)	0.44
Cr (mg/dL)	30		1.1 (0.23)	1 (.63-1.67)	68		1.1 (0.33)	1 (.64-2.5)	0.83
Q max (ml/s)	5		4.4 (2)	4.8 (2-7.2)	10		10.1 (7.2)	8.2 (2.9-23.8)	0.06
Urinary retention (had indwelling catheter or CIC)	4	13			6	9			0.72
ASA Risk Classification	27		2.9 (0.19)	3 (2-3)	68		2.7 (0.54)	3 (2-4)	**<0.05**
Peri- and post-operative variables									
Patients with concominant procedures during enucleation	6	19			9	13			0.54
OR time (minutes)	26		138.8 (63)	133 (55-360)	68		113.8 (46)	101.5 (38-270)	**<0.05**
Duration of post-op antibiotics (days)	0		0	0	68		3.1 (0.64)	3 (1-7)	
Specimen Weight (g)	30		65.02 (47.82)	72.4 (1.5-155)	68		65.1 (60.66)	50.5 (1-351)	0.75
Patients experiencing urinary tract infections < 30 days post op	6	19			8	12			0.35
**all patients had negative pre-operative urine cultures									

SAT-1358

The Impact Of 5-alpha Reductase Inhibitors on Weight Gain In the Setting of Benign Prostatic Hyperplasia Treatment: A TriNetX Analysis

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Introduction and Objective: 5-alpha reductase inhibitors (5-ARI) are commonly utilized to treat Benign Prostatic Hyperplasia (BPH). 5-ARI use comes with unwanted effects due disruption of dihydrotestosterone synthesis. A potential adverse effect involves adipocyte metabolism resulting in weight gain. This study aims to analyze the impact of 5-ARI's on body mass index (BMI) for BPH patients in a real-world setting.

Methods: TriNetX, a global healthcare network was used to identify BPH patients at normal, overweight and obesity class I (OBI) BMI ranges. Identified patients where then placed in three treatment groups: 5-ARI's, alpha blockers and combination of both. BMI class changes were assessed as an outcome using Kaplan Meyer analysis.

Results: Of 3,006,831 BPH patients, 97,295 received 5-ARIs, 1,119,378 received alpha blockers and 360,096 received combination therapy. In the 5-ARI group, 50.18% of normal weight patients became overweight, 30.11% of overweight patients progressed to OBI and 30.03% of OBI patients progressed to obesity class II (OBII) (Table 1). For the combination therapy group, 58.01% of normal weight patients progressed to overweight, 36.13% progressed from being overweight to OBI and 41.28% progressed from OBI to OBII (Table 1). For the alpha blockers group 50.61% of normal weight patients progressed to overweight, 42.04% of overweight patients progressed to OBI and 41.67% of OBI patients progressed to OBII (Table 1).

SAT-1351

IMPACT RCT Reveals Most Patients Randomized to Medication Treatment Experienced Inadequate Symptom Improvement and Chose to Crossover to PUL Treatment

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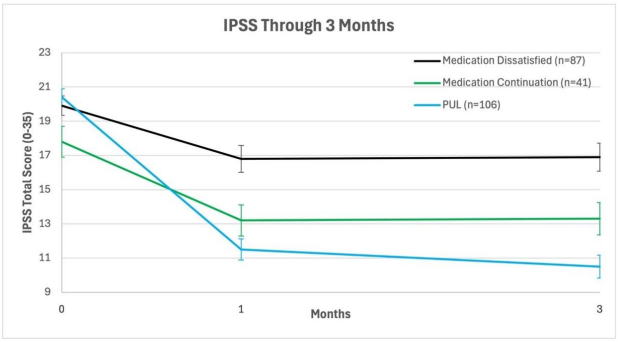
Introduction and Objective: High non-adherence to BPH medication suggests patients may be dissatisfied with pharmacologic treatment for BPH-associated LUTS. IMPACT is the largest head-to-head study comparing medical therapy to a MIST.

Methods: IMPACT is a prospective, multicenter RCT of BPH patients randomized to treatment with UroLift PUL or medication (tamsulosin 0.4 mg daily). The trial compares safety, efficacy, and patient experience. Following 3-month assessment, patients randomized to medication were offered the opportunity to crossover to PUL. This analysis reports 3-month outcomes for "medication-dissatisfied" patients prior to crossover.

Results: Of 136 patients randomized to medication treatment, 95 (70%) chose to crossover to PUL treatment. At baseline, medication-dissatisfied patients had higher IPSS than those who continued on medication; baseline demographics were otherwise similar between groups. Factors which predicted crossing over to PUL included higher IPSS and PVR. Medication-dissatisfied patients experienced significantly less IPSS improvement while on medication than medication-continuation patients, and fewer medication-dissatisfied patients met the MCID of ≥3 pt improvement in IPSS compared to medication-continuation or PUL patients. Medication-dissatisfied patients had significantly worse QoL scores than medication-continuation or PUL-randomized patients. Medication-dissatisfied patients were less satisfied with medical therapy than medication-continuation patients, and less satisfied than PUL-randomized patients. Baseline treatment goals were similar between groups. At 3mo, significantly fewer medication-dissatisfied patients had met their expected goal achievement of "preventing symptom worsening" and overall goal achievement vs. medication-continuation patients. Most AEs were mild-to-moderate and transient for all groups.

Conclusions: 70% of patients randomized to BPH medication chose to crossover to PUL when given the option at 3 months. Medication-dissatisfied patients demonstrated had higher baseline IPSS and reported inferior symptom improvement at 1 and 3 months on medication than those who chose to remain on medication.

Fig. 1: Medication Dissatisfied, Medication Continuation, and PUL IPSS Through 3 Months



Conclusions: Our findings suggest that BPH patients treated with 5-ARI's only displayed lower percent weight gain compared to other treatments. Efforts should be dedicated to examining mechanisms driving BMI increases and develop strategies that will mitigate metabolic effects with treatment.

Table 1: Kaplan Meier analysis assessing BMI class changes in BPH patients treated with 5-ARI's, Alpha Blockers and Combination Therapy.

Drug Therapy	Patients in Cohort	Median Survival Time	Survival Probability at end of time Window	Probability that met outcome	Assessed Outcome
Normal Weight Patients (18.5 kg/m² to 24.9 kg/m²)					
5-ARIs	15,325	5,965	49.821 %	50.179 %	BMI Overweight (25 – 29.9 kg/m²)
Alpha Blockers	131,366	6,886	49.389 %	50.611 %	
Combination Therapy	50,347	4,734	41.993 %	58.007 %	
Overweight Patients (25 kg/m² to 29.9 kg/m²)					
5-ARIs	20,956	-	69.887 %	30.113 %	BMI Obesity Class I (25 kg/m² to 29.9 kg/m²)
Alpha Blockers	214,359	-	57.958 %	42.042 %	
Combination Therapy	64,597	-	63.872 %	36.128 %	
Obesity Class I Patients (30 kg/m² to 34.9 kg/m²)					
5-ARIs	9,906	-	70.614 %	29.386 %	BMI Obesity Class II (35 kg/m² to 39.9 kg/m²)
Alpha Blockers	126,153	-	57.6	42.4 %	
Combination Therapy	33,896	-	59.801 %	40.199 %	

SAT-1405

Factors Driving Hospital Transfer Following Ambulatory PCNL: An Analysis of Over 2000 Cases

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Introduction and Objective: Percutaneous nephrolithotomy (PCNL) has traditionally been considered an inpatient surgery due to risk of bleeding and systemic infection. The evolution of technology and surgical approaches have facilitated the adaptation of ambulatory PCNL (aPCNL). In this study, we aim to analyze which factors predispose aPCNL patients to hospital transfer.

Methods: We analyzed patients who underwent aPCNL, including standard PCNL (24–30 Fr) and mPCNL (14–23 Fr), at two free-standing ambulatory surgery centers (ASCs) between 2015 and 2024. Patient exclusion criteria for the ASC included BMI > 50, severe cardiopulmonary conditions, and prior anesthetic complication. Patients were observed in the post-anesthesia care unit (PACU) until discharge criteria was met and were sent home without a Foley catheter. Patient demographics, pre-operative, and post-operative data were collected and descriptive statistics were used for data analysis.

Results: 2196 cases were available for analysis (Table 1). Transferred patients tended to be older (65.5 vs 57.6), however had comparable ASA scores and BMIs. Transferred patients were more likely to have positive pre-operative urine cultures (31.4% vs 19.2%) and higher stone burden (42.9 mm vs 30.8 mm). Renal access times were similar (3.9 min in the transferred group vs 2.8 min). Transferred patients had greater average number of dilated access sites (1.24 vs 1.09), longer OR time (127.74 min vs 90.75 min), longer fluoroscopy time (70.53 s vs 51.59 s), and higher estimated blood loss (105.6 cc vs 32.3 cc).

Conclusions: aPCNL has a low transfer rate of approximately 1.6%. Transferred patients tended to be older and have more complex cases, as evidenced by higher rates of positive pre-operative urine culture, increased stone burden, greater number of dilated access tracts, and longer operating room times. This data can help provide guidance for those interested in transitioning to aPCNL.

	Discharged Patients (n=2161)	Transferred Patients (n=35)	p-value
Age	57.6	65.5	p<0.01
Gender (F)	51.6%	62.9%	p=0.09
BMI	30.3	30.6	p=0.76
ASA	2.3	2.6	p=0.06
Diabetes Mellitus	28.0%	25.7%	p=0.38
Hypertension	58.8%	67.6%	p=0.15
Anticoagulation	20.0%	4.7%	p<0.01
Positive Urine Culture	19.2%	31.4%	p=0.04
Hounsfield Units	853.1	816.5	p=0.57
Total Stone Burden (cm)	30.8	42.9	p<0.01
Skin to Collecting System Distance (cm)	12.1	9.7	p=0.39
# Dilated Access Tracts	1.09	1.24	p<0.01
Time to Access (min)	2.8	3.9	p=0.13
Operating Room Time (min)	90.8	127.7	p<0.01
Fluoroscopy Time (s)	51.8	70.6	p<0.01
Estimated Blood Loss (mL)	32.3	105.6	p<0.01

SAT-1412

First Clinical Experience with Steerable Ureteroscopic Renal Evacuation Using the Next-Generation CVAC Aspiration Ureteroscope

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Introduction and Objective: To evaluate the safety and effectiveness of the next-generation CVAC aspiration ureteroscope that integrates direct vision, laser lithotripsy, microjet irrigation, dynamic aspiration and stone collection.

Methods: A prospective, single-arm study was conducted. Steerable ureteroscopic renal evacuation (SURE) using the CVAC aspiration ureteroscope was performed on adult candidates for ureteroscopic laser lithotripsy. Stone clearance (percent stone volume removed), residual stone volume (RSV), residual fragments (RF) and stone-free status at post-operative days (POD) 1 and 30 were assessed using non-contrast CT (NCCT) with 2 mm slices and semi-automated segmentation software. Regression analysis was performed to understand whether outcomes degrade with increasing baseline stone volume. Adverse events were recorded.

Results: 30 subjects (32 renal units) were treated by 10 surgeons and followed through POD30 to report safety; 26 subjects (28 renal units) had NCCT were available at POD 30. Mean baseline stone volume and density was 703.6 mm3 and 1203 HU respectively. Mean stone clearance increased from 93.8% at POD 1 to 96.2% at POD 30 while RSV decreased from 36.0 mm3 at POD 1 to 14.1 mm3 at POD 30. SFR (zero RF) increased from 25.0% at POD 1 to 46.4% at POD 30. Stone clearance remained high and RSV remained low at POD 30 even with increasing baseline stone volume. There were no device-related injuries; adverse events were mild and resolved without issues. No subject required retreatment or hospital readmission for RF.

Conclusions: The CVAC System is safe and efficiently delivers high stone clearance and low RSV even with larger and harder stones and leaves minimal burden on the patient to pass stones post-procedure.

Poster 01

Feasibility and Short-Term Outcomes Among Men Undergoing Aquablation After UroLift: A Multicenter Study

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Introduction and Objective: Aquablation is a minimally invasive, safe, and efficacious surgical treatment for BPH. Its versatility, with fewer limitations related to prostate size or median lobe presence, is a key advantage. Aquablation may often be second line for patients who initially opt for less invasive procedures, such as UroLift. However, the feasibility, efficacy, and safety of "salvage" Aquablation in patients who previously underwent UroLift remain unknown. This retrospective multicenter study compared outcomes of primary versus salvage Aquablation post-UroLift.

Methods: Retrospective chart review was performed on patients who underwent Aquablation between February 2019 and September 2024 by two surgeons at different centers. Baseline demographics, peri-operative details, and short-term clinical outcomes were analyzed and stratified by primary by versus salvage Aquablation using two-tailed *t*-tests, Chi-square tests, and multivariate linear regression.

Results: 269 patients underwent Aquablation. 234 (87%) had primary Aquablation and 19 (7%) had salvage Aquablation after UroLift. The only significant differences in baseline characteristics between primary and salvage Aquablation patients were lower PSA in the primary group and smaller prostate size in the salvage group (Table 1).

There were similar improvements in PVR, IPSS, and IPSS QOL scores at 2–3 months and similar rates of transfusion, complications, and re-operation between groups (Table 2).

Conclusions: There were no significant differences in efficacy and safety outcomes in primary versus salvage Aquablation after UroLift. Given the abundance of minimally invasive BPH treatments, future studies are needed to establish long-term safety and efficacy of Aquablation as a secondary procedure.

Table 1. Pre-Operative Characteristics Between Primary vs. Salvage Aquablation

Variable	Primary Aquablation	Salvage Aquablation After UroLift
N	234	19
Age (years)	66.5 (7.1)	67.8 (5.3)
BMI	28.4 (5.0)	27.4 (3.5)
PSA (ng/mL)**	6.2 (26.1)	14.9 (46.9)
PVR (mL)	215.2 (312.0)	147.4 (199.0)
Prostate Size (mL)**	84.0 (37.4)	65.8 (18.7)
Pre-Operative IPSS	22.2 (6.5)	22.8 (6.9)
Pre-Operative IPSS QOL	4.6 (1.1)	5.1 (0.9)

** Represents significant difference between groups.
Data is presented as mean (standard deviation)

Table 2. Peri-Operative and Post-Operative Outcomes by Primary vs. Salvage Aquablation

Variable	Primary Aquablation	Salvage Aquablation After UroLift	P-Value
Length of Stay (days), mean (SD)	1.3 (1.0)	1.2 (0.4)	0.533
Change in Hgb (g/dL), mean (SD)	-1.7 (1.1)	-1.5 (1.1)	0.570
Transfusion, N (%)	3 (1.3)	1 (5.3)	0.340
Return to OR, N (%)	4 (1.7)	1 (5.3)	0.649
Clavien-Dindo ≥ 2, N (%)	7 (3.0)	1 (5.3)	0.463
Change in PVR (mL), mean (SD)	-117.1 (248.0)	-91.7 (148.0)	0.691
Change in IPSS, mean (SD)	-12.6 (9.5)	-10.2 (8.8)	0.384
Change in IPSS QOL, mean (SD)	-1.9 (2.3)	-2.2 (2.4)	0.668

Poster 02

Real-world experience using the new pulsed solid-state thulium: yttrium–aluminum–garnet laser for endoscopic enucleation of the prostate in patients on antiplatelet and/or anticoagulation medications

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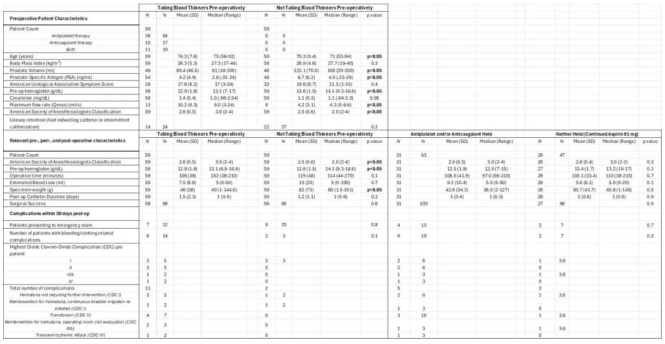
Introduction and Objective: Endoscopic enucleation of the prostate using a holmium: yttrium–aluminum–garnet (YAG) laser is safe for patients requiring antiplatelet (AP) or anticoagulation (AC) medications, but data on thulium:YAG enucleation (ThuLEP using Thulio) is lacking.

Methods: Retrospectively reviewing our institutional ThuLEP database, we compared demographics and peri/postoperative outcomes between patients on AP/AC medications and those not. A subgroup analysis compared patients who continued Aspirin 81 mg perioperatively to patients who discontinued AP/AC medications. Surgical success was defined as symptom resolution at 1 month follow-up.

Results: Of 118 patients who underwent ThuLEP, 59 (50%) were taking AP/AC medications. Of these, 31 patients (53%) held AP/AC medications and 28 patients (47%) continued Aspirin 81 mg perioperatively (47%).

Patients on AP/AC medications had significantly different median prostate volumes (81 vs 108 mL), hemoglobin (13.1 vs 14.1 g/dL), age (75 v 71), and American Society of Anesthesiologists risk classification (3 vs 2) compared to patients not taking blood thinners (all $p < 0.05$) (Table 1).
No significant differences in median estimated blood loss, postoperative catheter duration, presentations to the emergency room, transfusion rates (7% vs 0%), or proportion of patients with bleeding-related complications were seen between patients on AP/AC medications and those not.
Subgroup analysis showed no significant difference in emergency room visits, catheter duration, or bleeding related complications between those who continued Aspirin 81 mg and those who held AP/AC medications.

Conclusions: ThuLEP is safe for older, medically complex patients taking AP/AC medications. Bleeding-related complications and blood loss were similar when compared to patients not taking AP/AC medications, however, blood transfusion rates were higher in these patients. Furthermore, continuing Aspirin 81 mg is safe for patients undergoing endoscopic enucleation of the prostate with Thulio.



Poster 04

Buprenorphine vs. Opioids: Incidence of Persistent Postoperative Opioid Use Following Benign Prostatic Hyperplasia Surgeries in Older Men

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Introduction and Objective: Approximately 70–80% of surgeries result in opioid prescriptions, a potential source of persistent postoperative opioid use (PPOU). This study aims to compare the incidence of different perioperative pathways (buprenorphine versus opioids prescribed day of surgery [DOS]) on the risk of developing PPOU in opioid-naïve versus opioid-exposed older men undergoing elective benign prostatic hyperplasia (BPH) surgeries.

Methods: This retrospective cohort study used deidentified electronic medical records within the TriNetX database. Cohorts included men ages 60 and older who underwent BPH surgeries between 2011–2024. Patients were excluded for any instance of surgery requiring anesthesia 30 to 180 days after date of indexed surgery. In opioid-naïve cohorts, patients were excluded if prescribed opioids one month to one day prior to date of procedure or for any diagnosis of opioid-related disorders. After being divided into opioid-naïve versus opioid-exposed cohorts, groups were further divided by number who received buprenorphine versus number who received opioids DOS. Identifying the four groups allowed for propensity score matching (PSM) to control for potential confounders based on established risk factors and demographics.

Results: The primary outcome of PPOU was defined as at least one instance of opioid use from 90 to 180 days following the indexed BPH surgery. After PSM, in opioid-naïve cohorts we find the risk of developing PPOU was 12.953% while buprenorphine DOS demonstrated a risk of 5.181%. This correlates to an additional 7.772 patients per 100 BPH surgeries who are at risk of developing PPOU from opioids as compared to buprenorphine DOS. Risks of PPOU in opioid-exposed cohorts were statistically insignificant ($p = 0.3$).

Conclusions: This study represents an initial step in a broader research initiative aimed at understanding factors predisposing older patients to PPOU. Buprenorphine during the perioperative period significantly reduces subsequent risks of PPOU in older opioid-naïve men undergoing BPH surgeries.

Poster 05

Improving HOLEP Efficiency: Evolving from 3 Lobe to 2 Lobe to En Bloc in a Community Hospital

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Introduction and Objective: HOLEP is widely considered a standard of care for BPH and the only endoscopic size-independent surgical technique. The learning curve and length of operation are commonly cited barriers to wider adoption. Our HOLEP technique has evolved from a traditional 3-lobe incision to 2-lobe, and since June 2024, en bloc resection. We evaluated this change to identify operative efficiency and effect on length of stay.

Methods: In our prospectively maintained database, demographic and clinicopathologic information was obtained from patients receiving treatment from March 2017 to January 2025 at LVHN. Log transformed ANCOVA models were fit to analyze operative time and resection efficiency. A multivariable logistic regression was fitted to evaluate discharge time. All statistical analyses were conducted using SAS Version 9.4.

Results: En Bloc HOLEP had the shortest time in all time (Table 2), while 3-Lobe had the longest time. En Bloc and 2-Lobe were significantly faster than 3-Lobe in total time ($p < 0.0001$, $p < 0.0001$) and resection time ($p < 0.0001$, $p = 0.0004$). En bloc was significantly shorter in morcellation time ($p < 0.0001$), but 2-lobe was not significantly different. Volume of resection significantly influenced all time outcomes, with the largest effect on morcellation time ($p < 0.0001$). Imaging size and ASA did not have a significant effect on any operative time. No significant differences were found between techniques for discharge times.

Conclusions: En Bloc technique significantly improves operative time without affecting discharges. These findings suggest that En Bloc HOLEP may be preferable in cases where operative efficiency is prioritized.

Table 1: Demographic and clinicopathologic characteristics between cohorts.

Avg (std)	3 Lobe	2 Lobe	En Bloc
Age (Yrs)	70.19	69.4	71.1
Reason for procedure			
Retention	33	22	35
Refractory luts	26	37	26
Other	3	4	2
PSA (ng/ml)	5.75(4.8)	6.02(6.4)	6.64(5.5)
Prostate V on imaging (g)	112.62(56.5)	122.00(46)	110.53(49.4)
Qm (ml/s)	5.55(2.3)	7.83(4.3)	7.89(4.8)
PVR (ml)	362.51(489)	222.26(253)	348.02(313)
IPSS total	17.70(8.8)	17.44(8.6)	14.86(9.3)
IPSS bother	3.86(1.66)	4.16(1.59)	4.07(1.63)
Path V (g)	56.56(34.1)	60.18(32.2)	57.60(37.3)
Same day discharge			
Total	77.40%	73.00%	78.70%
Excluding Social/Medical Admissions	84.20%	73.00%	82.80%
ASA			
1-2 (39.15%)	21	26	27
3-4 (60.85%)	42	37	36
Race			
White	52	57	54
Black	7	3	8
Asian	2	2	0
Hispanic	0	2	2

Table 2. Multivariable analysis of operative time improvements based on technique.

Technique	Total Op Time (min)	% Faster to 3 Lobe (Total Time)	Resection Time (min)	% Faster to 3 Lobe (Resection Time)	Morcellation Time (min)	% Faster to 3 Lobe (Morcellation Time)
3 Lobe	84.7 min	-	55.8 min	-	11.3 min	-
2 Lobe	65.8 min(p<0.0001	22.3%	44.5 min(p=0.0004	20.3%	9.4 min(p=0.31)	16.8%
En Bloc	54.5 min(p<0.0001)	35.6%	34.0 min(p<0.0001)	39.1%	6.8 min (p<0.0001)	39.8%

Poster 06

Comparative Outcomes of Primary versus Salvage Holmium Laser Enucleation of the Prostate (HoLEP) for Benign Prostatic Hyperplasia

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Introduction and Objective: Holmium laser enucleation of the prostate (HoLEP) is used to treat symptomatic BPH and limited research has examined the efficacy and safety of HoLEP in patients who have previously undergone BPH surgeries. This study aims to evaluate and compare the outcomes of salvage HoLEP (sHoLEP) versus a primary treatment (pHoLEP) for BPH.

Methods: We conducted a retrospective analysis of 579 patients who underwent HoLEP at a single academic center. Demographic data, comorbid conditions, and preoperative and postoperative outcomes were compared between the sHoLEP group (n = 35) and the pHoLEP group (n = 544). Statistical analyses included Chi-square tests for categorical variables and Mann-Whitney U tests for continuous variables to assess differences between the two groups.

Results: Patients in the sHoLEP group were significantly older than those in the pHoLEP group (mean age: 73.8 vs. 69.4 years; p = 0.007) and were predominantly White, showing a significant association between ethnicity and surgery type (p < 0.001). Preoperatively, sHoLEP patients demonstrated a lower mean maximum flow rate (Qmax) compared to pHoLEP patients (p < 0.001). Postoperatively, sHoLEP was significantly associated with a higher rate of temporary urinary incontinence (p < 0.001). The sHoLEP group also had a higher rate of comorbidities including COPD (p = 0.026) and CKD (p = 0.011). In multivariate analysis we found that older age (p = 0.036) and white ethnicity (p < 0.001) were the only risk factors for temporary incontinence. Previous surgery (p = 0.063) was noted, however due to low sample size it did not reach statistical significance.

Conclusions: Patients undergoing sHoLEP have distinct demographic and clinical profiles, including a higher likelihood of postoperative incontinence and comorbidities. These findings underscore the importance of thorough patient selection and counseling in salvage cases. While sHoLEP remains an effective retreatment option, further studies are necessary to consistently capture outcomes.

Poster 07

Long-Term Incidence of Mental Health Conditions Following Cystoscopy in Adult Women: A 10-Year Cohort Analysis

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Introduction and Objective: Cystoscopy is a common diagnostic and therapeutic procedure in adult urology, but its psychological impact remains unclear. With evidence linking invasive procedures to mental health effects, this study evaluates the long-term incidence of new-onset anxiety, depression, and stress-related disorders in adult women following cystoscopy.

Methods: A retrospective cohort study was conducted using the TriNetX database, including women ≥18 years who underwent diagnostic cystoscopy in 2014. A control group, matched by age, race, and baseline health, excluded individuals with prior mental health diagnoses, chronic pain, disabilities, cancer, and prior cystoscopies. Mental health outcomes were identified using ICD-10 codes (F01-F99, F32, F33, F41, F43). Risk differences, risk ratios, and statistical significance were assessed at 1-, 5-, and 10-year follow-ups.

Results: At the 1-year follow-up, the cystoscopy group had a 1.88 times higher likelihood of a mental health diagnosis (95% CI: 1.617–2.181, p < 0.0001). This increased risk persisted at the 5-year (RR = 1.388) and 10-year (RR = 1.254) follow-ups, though relative risk gradually declined. At 5 years, 16.1% of cystoscopy patients had a mental health diagnosis, compared to 11.6% of control patients. The cystoscopy group was 2.2 times more likely to develop depression (p < 0.001) and 1.9 times more likely to be diagnosed with anxiety (p < 0.001) at the 1-year follow-up, and elevated risks remained significant at both 5-year and 10-year follow-ups. No significant difference was found for stress and adjustment disorders.

Conclusions: Cystoscopy in adult women is associated with an increased risk of depression and anxiety. Enhanced psychological support post-procedure may mitigate long-term mental health impacts. Further research should explore underlying mechanisms, risks of multiple cystoscopies, and potential interventions to support mental well-being.

All Mental Health Conditions (F00-F99)

Risk analysis excluding patients with outcome prior to the time window

1-year Follow Up		95% CI	z	p
Risk Difference	0.045	(0.032, 0.058)	6.829	0.000
Risk Ratio	1.388	(1.263, 1.526)	N/A	N/A
Odds Ratio	1.463	(1.311, 1.632)	N/A	N/A
5-year Follow Up				
		95% CI	z	p
Risk Difference	0.037	(0.029, 0.046)	8.429	0.000
Risk Ratio	1.878	(1.617, 2.181)	N/A	N/A
Odds Ratio	1.954	(1.668, 2.289)	N/A	N/A
10-year Follow Up				
		95% CI	z	p
Risk Difference	0.044	(0.030, 0.059)	5.856	0.000
Risk Ratio	1.254	(1.162, 1.353)	N/A	N/A
Odds Ratio	1.325	(1.206, 1.457)	N/A	N/A

Anxiety (F41)

Risk analysis excluding patients with outcome prior to the time window

1-year Follow Up		95% CI	z	p
Risk Difference	0.016	(0.010, 0.022)	5.593	0.000
Risk Ratio	1.943	(1.532, 2.463)	N/A	N/A
Odds Ratio	1.975	(1.549, 2.518)	N/A	N/A
5-year Follow Up				
		95% CI	z	p
Risk Difference	0.024	(0.015, 0.033)	5.232	0.000
Risk Ratio	1.476	(1.274, 1.709)	N/A	N/A
Odds Ratio	1.514	(1.295, 1.770)	N/A	N/A
10-year Follow Up				
		95% CI	z	p
Risk Difference	0.020	(0.008, 0.031)	3.466	0.001
Risk Ratio	1.221	(1.090, 1.367)	N/A	N/A
Odds Ratio	1.248	(1.101, 1.414)	N/A	N/A

Depression (F32, F33)

Risk analysis excluding patients with outcome prior to the time window

1-year Follow Up		95% CI	z	p
Risk Difference	0.018	(0.012, 0.023)	6.316	0.000
Risk Ratio	2.197	(1.709, 2.823)	N/A	N/A
Odds Ratio	2.236	(1.731, 2.889)	N/A	N/A
5-year Follow Up				
		95% CI	z	p
Risk Difference	0.020	(0.012, 0.029)	4.767	0.000
Risk Ratio	1.464	(1.250, 1.714)	N/A	N/A
Odds Ratio	1.496	(1.266, 1.767)	N/A	N/A
10-year Follow Up				
		95% CI	z	p
Risk Difference	0.019	(0.008, 0.029)	3.614	0.000
Risk Ratio	1.264	(1.113, 1.436)	N/A	N/A
Odds Ratio	1.290	(1.123, 1.481)	N/A	N/A

Stress and Adjustment Disorders (F43)

Risk analysis excluding patients with outcome prior to the time window

1-year Follow Up		95% CI	z	p
Risk Difference	0.002	(-0.000, 0.004)	1.855	0.064
Risk Ratio	1.800	(0.959, 3.381)	N/A	N/A
Odds Ratio	1.804	(0.959, 3.395)	N/A	N/A
5-year Follow Up				
		95% CI	z	p
Risk Difference	0.004	(-0.000, 0.009)	1.873	0.061
Risk Ratio	1.321	(0.986, 1.768)	N/A	N/A
Odds Ratio	1.327	(0.986, 1.784)	N/A	N/A
10-year Follow Up				
		95% CI	z	p
Risk Difference	0.007	(0.001, 0.013)	2.162	0.031
Risk Ratio	1.271	(1.022, 1.582)	N/A	N/A
Odds Ratio	1.280	(1.023, 1.603)	N/A	N/A

Poster 08

Poster 09

Lost in Translation: Are Online Patient Resources on Genitourinary Syndrome of Menopause Too Hard to Read?

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Introduction and Objective: Genitourinary syndrome of menopause (GSM) affects nearly half of postmenopausal women, yet awareness and treatment rates remain low. Patient education materials (PEMs) play a critical role in informing patients, but they must be written at an accessible level. The American Medical Association and National Institutes of Health recommend a 6th–8th grade reading level for health materials to ensure comprehension. This study evaluates the readability of online PEMs on GSM using the Flesch-Kincaid Grade Level (FKGL) and Flesch Reading Ease (FRE) score.

Methods: 15 publicly available PEMS from major medical institutions were analyzed. Readability was assessed using the FKGL (U.S. school grade level) and FRE (0–100 scale). Statistical analyses were conducted using R statistical software (version 4.4.2) and included one-sample *t*-tests and Wilcoxon signed-rank tests to assess readability differences and relationships.

Results: The average FKGL was 11.31 ± 2.82, exceeding the recommended 8th-grade level ($t = 4.54$, $p < 0.001$; Wilcoxon $p < 0.01$). The average FRE score was 34.43 ± 16.83, indicating that most materials were classified as "difficult" to read. FRE scores ranged from 14.7 (very difficult) to 80.6 (fairly easy). Only one source, the American Academy of Family Physicians (FKGL 3.9, FRE 80.6), met the recommended readability standards. In contrast, highly reputable sources such as Mayo Clinic (FKGL 11.4, FRE 28.7) and Johns Hopkins (FKGL 10.7, FRE 41.5) significantly exceeded the suggested reading level.

Conclusions: Most online PEMs on GSM exceed readability recommendations, limiting patient accessibility. Given the significant statistical evidence of poor readability, efforts should focus on simplifying language to ensure comprehension. This study is limited by selection bias, as search results may not capture all relevant PEMs, and readability scores do not account for visual aids or patient familiarity with medical terminology. Future research should assess the impact of readability on treatment adherence and patient outcomes.

Comparative Risk of Developing Interstitial Cystitis with Childhood Gastrointestinal, Urological, Autoimmune, or Psychiatric Disorders

H. Zhong[1], M. Alipour-Vaezi[1], R. McNamara[2], M. Rukstalis[2], E. Gentry[1], K. Tsui[3], D. Penzien[4] and D. Rukstalis[2]

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Introduction and Objective: Interstitial Cystitis (IC) is a chronic condition associated with significant urological discomfort and is challenging in terms of diagnosis and management. Although its etiology is unclear, early-life conditions, including Gastrointestinal (GI) conditions, Urological Anomalies (UA), and Psychiatric Disorders (PD), and Autoimmune Diseases (AD), may contribute to the risk of developing IC in adulthood. This study investigates these potential associations, focusing on identifying early-life risk factors for IC.

Methods: A retrospective cohort study was conducted using data from the TriNetX US Collaborative Network, comprising over 118 million patient records. Study and control groups were defined across four categories of childhood disorders and IC incidence was tracked over 14 years. Propensity score matching and statistical analyses, including Kaplan-Meier survival analysis, were used to compare outcomes across matched cohorts.

Results: Results indicate a significant association between childhood GI, and UA, with increased IC risk in adulthood. Specifically, individuals with childhood Irritable Bowel Syndrome (IBS) had a risk ratio of 2.9, and those with urinary tract infections (UTIs) had a risk ratio of 3.2 for developing IC later in life. Our study also revealed notable gender disparities, with females representing a larger proportion of patients, especially in UA and autoimmune disorders. Additionally, patients with these conditions had a higher prevalence of comorbidities, suggesting a complex interplay of health issues that may contribute to IC development.

Conclusions: The findings underscore the potential for specific early-life conditions, particularly GI, and UA, to serve as predictors for IC, supporting targeted interventions for at-risk individuals. These insights offer pathways for early detection and preventative care strategies, especially for patients presenting with chronic GI or urological symptoms during childhood.

Poster 10

Bladder Wall Micromotion Before and After Detrusor Overactivity Events: Non-Invasive Assessment using Ultrasound Urodynamics

T. Wong[1], M. William[2], M. Ghatas[2], L. Burkett[1], J. Speich[2] and A. Klausner[1]

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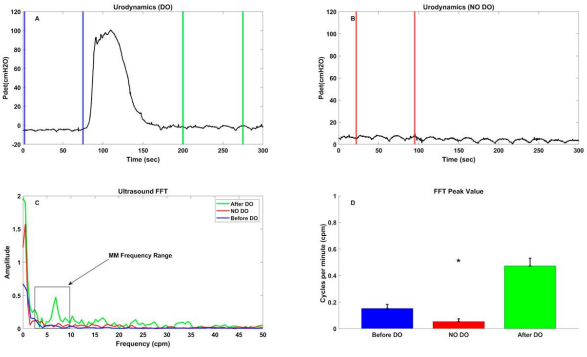
Introduction and Objective: Overactive bladder (OAB) is a common condition characterized by urinary urgency, often associated with detrusor overactivity (DO). The gold standard for assessing DO is invasive urodynamic (UD) testing which involves bladder catheterization and carries risks such as discomfort and urinary tract infections. Emerging evidence suggests that bladder wall micromotion (BWM)—small rhythmic contractions—plays a role in OAB and may be detectable non-invasively using ultrasound displacement (UD) imaging. This study investigates the relationship between DO events and UD patterns to determine whether micromotion characteristics change before and after a DO event.

Methods: Anatomical M-mode ultrasound cine-loops of the bladder were obtained from OAB patients during indicated UD testing. OAB severity was assessed using the ICIq-OAB and OAB-V3 surveys. Ultrasound imaging was acquired at ~50% cystometric capacity based on a pre-study void diary. A custom texture correlation algorithm tracked temporal changes in bladder wall thickness across consecutive ultrasound frames. Fast Fourier Transform (FFT) analysis was used to extract micromotion frequency components from time segments relative to DO events.

Results: Among 26 patients, 8 (30.8%) had DO confirmed by blinded expert review. FFT peaks for micromotion were higher after DO (0.47 ± 0.1, $n = 4$) compared to before DO (0.15 ± 0.06, $n = 4$) and no DO detected (0.05 ± 0.08, $n = 16$) ($p < 0.05$).

Conclusions: This study introduces a novel, non-invasive method for assessing bladder wall micromotion in OAB patients. Changes in micromotion frequency suggest that DO may enhance micromotion synchronization. UD imaging could serve as a non-invasive adjunct to traditional UD testing, but larger studies are needed to validate these findings and explore clinical applications for real-time OAB diagnostics.



Legend:

A. pDet during an example detrusor overactivity (DO) event with time segment before DO event (blue) and after DO event (green). **B.** pDet during UD without DO event with example time segment (red). **C.** FFT analysis of micromotion frequency components from time segments relative to DO events. **D.** Peak values of FFT from time segments relative to DO events.

Poster 11

A Novel Method for Non-Invasive Detection of Detrusor Overactivity in OAB Patients Using Bladder NIRS

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[1]Virginia Commonwealth University Health System, Richmond, VA, USA; [2]Virginia Commonwealth University, Richmond, VA, USA; [3]Virginia Commonwealth University School of Medicine, Richmond, VA, USA

Introduction and Objective: Urodynamics (UD) is the gold standard for the detection of detrusor overactivity (DO) which is involved in the pathophysiology of Overactive Bladder (OAB). However, the test is invasive and prone to artifacts. Near-infrared spectroscopy (NIRS) is a non-invasive, cost-effective tool that measures tissue hemodynamics. This study evaluates bladder NIRS as a non-invasive method for detecting DO in OAB patients.

Methods: OAB patients underwent simultaneous bladder NIRS and UD testing. Peak and area-under-the-curve values were determined during DO events in UD (pDet) and bladder NIRS (O_2HB). DO events were compared to 1) simultaneous NIRS segments, 2) internal control segments (without DO), and 3) external control segments from additional participants (without DO). Normalized AUC for NIRS data and UD data over the entire fill were compared after motion correction and a linear fit subtraction.

Results: Twenty-seven female OAB patients were enrolled, including four with DO (13 DO events). pDet peaks were higher during DO (73.9 ± 49.6) compared to internal (2.2 ± 1.2), and external controls (1.8 ± 1.5) ($p < 0.05$). Likewise, O_2HB peaks were higher during identical periods ($p < 0.05$). pDet AUC was 28.1 ± 22.6 (DO), 1.1 ± 0.6 (internal control), and 0.8 ± 0.7 (external control) which was also seen with O_2HB ($p < 0.05$). Normalized NIRS AUC was higher in patients with DO (0.72 ± 0.54) than in external controls (0.06 ± 0.03, $p < 0.05$) (Fig. 1).

Conclusions: DO events were associated with significantly higher pDet and NIRS O_2HB values. Normalized AUC for NIRS signals was higher in DO patients than those without. These findings support bladder NIRS as a novel, non-invasive tool for DO detection in OAB patients.

Poster 12

Optimizing Antibiotic Resistance Detection: Integrating PCR and Standard Urine Culture for Enhanced Uropathogen Management

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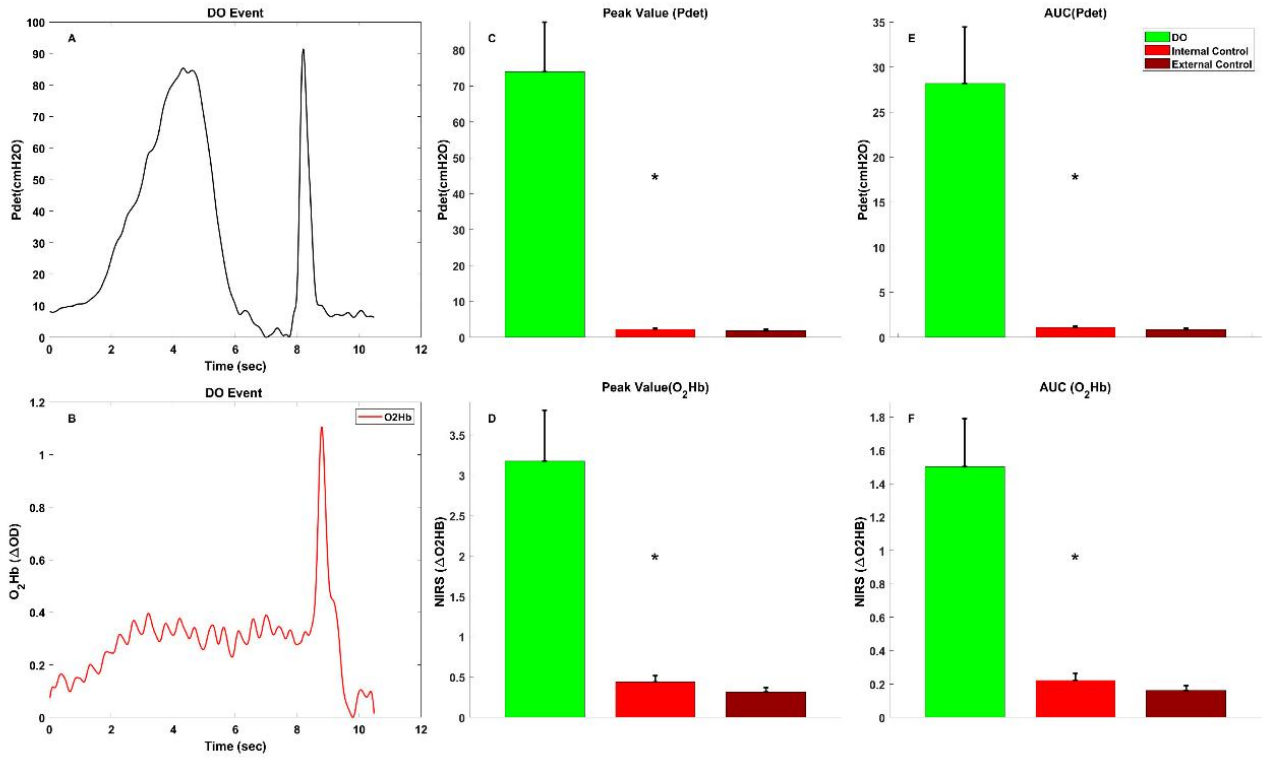
Introduction and Objective: This study evaluated and compared the diagnostic abilities of Polymerase Chain Reaction (PCR) testing and Standard Urine Culture (SUC) in identifying uropathogens in urinary tract infections (UTIs), with implications for clinical outcomes, antibiotic resistance detection, and antimicrobial stewardship.

Methods: A retrospective analysis of 145 patients from Urology of Virginia was conducted. Patients included had persistent or recurrent UTIs (≥3 episodes in 12 months) or required pre-surgical evaluation. Data were extracted from Urology of Virginia's EPIC electronic medical records and analyzed for bacterial identification, resistance profiles, and diagnostic accuracy. Multiplex PCR assays targeted virulent uropathogens and resistance genes, while SUC followed Clinical and Laboratory Standards Institute (CLSI) guidelines.

Results: PCR detected clinically significant pathogens in 40.7% of cases, while SUC detected pathogens in 41.4%, frequently identifying non-virulent organisms. PCR identified five virulent pathogens missed by SUC, while SUC detected seven non-virulent organisms absent from PCR. PCR failed to identify resistance genes in 29 cases where SUC indicated resistance, leading to inappropriate antibiotic recommendations in 27% of cases. PCR's faster turnaround enabled earlier targeted therapy, and integrating PCR with SUC data improved diagnostic accuracy and antimicrobial stewardship.

Conclusions: PCR enhances diagnostic efficiency by targeting virulent uropathogens associated with severe infections, such as Escherichia coli and Klebsiella pneumoniae. However, its inability to detect non-genetic resistance mechanisms illustrates the importance of SUC in providing comprehensive resistance profiles. Combining PCR with SUC optimizes uropathogen identification and resistance detection, ensuring effective patient management and promoting responsible antibiotic use.



Legend:

A. pDet segment during an example detrusor overactivity (DO) event. **B**. NIRS data (O_2HB: red) for the corresponding DO event. **C-D**. Urodynamic Pdet peak (**C**) and AUC data (Mean ± SEM: **D**) for DO events (green: N=13), internal control segments without DO (N=13: red) and external control segments without DO (maroon:N=8). **E-F**. NIRS O_2HB peak (**E**) and AUC data (Mean ± SEM: **F**) for corresponding DO events (green: N=13), internal control segments without DO (N=13: red) and external control segments without DO (maroon: N=8).

Poster 13

A Novel Intravesical Therapy for Genitourinary Manifestations of IgG4-Related Disease

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Introduction and Objective: Immunoglobulin G4-related disease (IgG4-RD) is a chronic immune-mediated fibroinflammatory condition affecting multiple organs. This report describes the presentation and novel management of a urologic manifestation of IgG4-RD.

Methods: Using Google Scholar and PubMed, the literature was reviewed for reports of urologic manifestations and management of IgG4-RD and compared to our experience.

Results: No reports of intravesical therapy for genitourinary IgG4-RD were identified in the literature. We describe a case of a 60-year-old male with history of type 2 diabetes, nephrolithiasis, and ureteral and urethral strictures who presented in 2022 with urinary frequency, urgency, urge incontinence, and recurrent left hydronephrosis after recent ureteral stent removal. Urine testing revealed sterile pyuria without presence of atypical uropathogens. Cystoscopy revealed a recurrent urethral stricture requiring dilation and diffusely friable and erythematous bladder mucosa which was biopsied. A small ulcerated lesion was also fulgarated. A 1 cm left distal ureteral stricture was appreciated on retrograde pyelogram and a stent was placed. Pathology revealed chronic lymphoplasmacytic inflammation prompting referral to rheumatology. Rheumatologic testing revealed elevated serum IgG4 levels and additional immunohistochemical staining of the biopsy sample showed IgG4-expressing plasma cells. This confirmed the diagnosis of IgG4-RD. He underwent Rituximab induction therapy and six weekly bladder instillations with a triamcinolone-bupivacaine mixture with significant symptomatic improvement. Serum IgG4 levels also normalized. Repeat cystoscopy with biopsy revealed benign bladder mucosa and retrograde pyelogram after stent removal revealed resolution of his left ureteral stricture. He transitioned to biannual maintenance Rituximab infusions. He had recurrence of his symptoms and left hydronephrosis concerning for disease relapse nine months after his last bladder instillation.

Conclusions: His initial symptomatic improvement after intravesical therapy highlights the potential for a novel treatment for urologic manifestations of IgG4-RD. The relapsing nature of his disease emphasizes long-term complexities of managing these patients and the importance of a multidisciplinary approach to optimizing treatment.

Poster 14

Do MRI visible lesions predict genetic scores?

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Introduction and Objective: This study investigates the relationship between MRI-visible prostate lesions and genomic risk, leveraging MRI phenotypes and Decipher genomic classifier data. The analysis aims to determine whether MRI-visible lesions correlate with higher genomic risk, as defined by Decipher scores, and to compare these findings with clinical and histopathological markers from a prostate cancer cohort.

Methods: The dataset includes records from 522 male patients, with an average age of 68.7 years, who underwent MRI and Decipher genomic testing for prostate cancer between May 2016 and January 2023. MRI-visible lesions were classified using PI-RADS v2 scores, and genomic risk was categorized into low, intermediate, and high-risk groups based on Decipher scores. Linear regression and correlation coefficients were applied to assess the relationship between MRI visibility, PI-RADS scores, and Decipher risk groups. Additional analyses compared MRI findings against clinical features, such as Gleason scores and lesion location (peripheral zone vs. transition zone).

Results: The study revealed that MRI-visible lesions were significantly correlated with higher Decipher scores, indicating a greater likelihood of being categorized as intermediate- or high-risk for early metastasis. Most MRI-invisible lesions were associated with low-risk Decipher scores, suggesting a lower biological potential for metastasis. A moderate correlation ($r = 0.54$, $p < 0.001$) was found between PI-RADS v2 scores and Decipher risk groups, especially in peripheral zone lesions. PI-RADS v2 demonstrated higher accuracy in distinguishing between low and intermediate/high-risk lesions compared to Gleason scores (AUC = 0.78, $p = 0.018$).

Conclusions: MRI phenotypes, particularly those classified by PI-RADS v2, show a positive correlation with Decipher genomic risk categories. The study underscores the clinical benefit of integrating MRI imaging with genomic profiling to improve prostate cancer risk stratification and treatment planning

Poster 15

History of Vasectomy is Not Associated with Prostate Cancer Progression in Men on Active Surveillance

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Introduction and Objective: Despite decades of debate, there is little resolution about whether vasectomy influences prostate cancer risk, let alone disease progression in men on active surveillance. We compared progression risk in men on active surveillance with or without history of vasectomy.

Methods: We performed a retrospective review of data from the Johns Hopkins Active Surveillance Program. We evaluated baseline demographic data, PSA, PSA density, and estimates of biopsy tumor volume in men with low-grade prostate cancer with or without vasectomy history. Men with vasectomy were further categorized by duration of vasectomy to prostate cancer diagnosis. We defined grade reclassification as any upgrading to Gleason grade ≥ 2 on a surveillance biopsy. Elective treatment, volume progression, and death not due to prostate cancer were considered competing risks. The Fine & Gray model was used to calculate sub-distribution hazard ratios accounting for competing risk.

Results: We included 1565 men with Grade Group 1 at diagnosis. A total of 373 men reported prior vasectomy and 1192 reported no vasectomy history. Upgrading to $\geq$ Grade Group 2 occurred in 112 (30.0%) men with prior vasectomy, compared to 386 (32.4%) in men without vasectomy. After adjustment for baseline characteristics, neither a history of vasectomy nor the duration of vasectomy to diagnosis was associated with significant risk of progression to higher grade disease.

Conclusions: This is the first investigation of prostate cancer progression risk and history of vasectomy in men on active surveillance. Identification of risk factors for adverse clinical outcomes is necessary so patients may make informed management decisions.

Univariate Analysis

Variable	SHR	95% CI	p-value
Vasectomy History	0.97	(0.79, 1.19)	0.8
Age at Diagnosis	1.05	(1.03, 1.06)	**< 0.0001**
Race			0.05
White	REF		
African American	1.42	(1.06, 1.89)	
Other	0.89	(0.56, 1.42)	
Smoking			0.8
Never	REF		
Former	0.95	(0.79, 1.13)	
Current	0.89	(0.56, 1.41)	
BMI	0.9997	(0.998, 1.001)	0.7
Family History of Cancer	1.11	(0.91, 1.36)	0.3
Year of Diagnosis	1.07	(1.05, 1.08)	**<0.0001**
PSA at Diagnosis	1.02	(0.99, 1.04)	0.2
PSA Density at Diagnosis	1.03	(1.03, 1.04)	**< 0.0001**
Number Positive Cores at Diagnosis	1.29	(1.17, 1.41)	**<0.0001**
Max % Positive Cores at Diagnosis	1.02	(1.01, 1.02)	**<0.0001**

Multivariable Analysis

Variable	SHR	95% CI	p-value
Vasectomy History	1.00	(0.81, 1.24)	1
Age at Diagnosis	1.05	(1.03, 1.06)	**<0.0001**
Race			0.06
White	REF		
African American	1.31	(0.96, 1.77)	
Other	0.70	(0.42, 1.15)	
Smoking			0.7
Never	REF		
Former	0.93	(0.77, 1.12)	
Current	1.09	(0.68, 1.72)	
BMI	1.00	(0.998, 1.00)	0.8
Family History of Cancer	1.07	(0.87, 1.31)	0.5
Year of Diagnosis	1.06	(1.04, 1.07)	**<0.0001**
PSA at Diagnosis	1.00	(0.97, 1.03)	0.9
PSA Density at Diagnosis	1.030	(1.02, 1.03)	**<0.0001**
Number Positive Cores at Diagnosis	1.16	(1.08, 1.24)	**<0.0001**
Max % Positive Cores at Diagnosis	1.01	(1.00, 1.01)	**<0.0001**

Univariate Analysis

Variable	SHR	95% CI	p-value
Vasectomy to Diagnosis			0.8
< 15 years	REF		
15 - 30 years	1.15	(0.66, 2.02)	
> 30 years	1.23	(0.68, 2.22)	
Age at Diagnosis	1.02	(0.99, 1.05)	0.2
Race			0.8
White	REF		
African American	1.43	(0.26, 7.80)	
Other	0.66	(0.15, 2.96)	
Smoking			0.2
Never	REF		
Former	0.99	(0.69, 1.44)	
Current	0.26	(0.06, 1.10)	
BMI	0.99	(0.95, 1.03)	0.5
Family History of Cancer	1.18	(0.76, 1.83)	0.5
Year of Diagnosis	1.07	(1.03, 1.10)	**<0.0001**
PSA at Diagnosis	1.08	(1.03, 1.13)	**0.001**
PSA Density at Diagnosis	1.05	(1.03, 1.08)	**< 0.0001**
Number Positive Cores at Diagnosis	1.39	(1.18, 1.64)	**<0.0001**
Max % Positive Cores at Diagnosis	1.02	(1.01, 1.02)	**<0.0001**

Multivariable Analysis

Variable	SHR	95% CI	p-value
Vasectomy to Diagnosis			1
< 15 years	REF		
15 - 30 years	1.07	(0.61, 1.87)	
> 30 years	1.04	(0.53, 2.04)	
Age at Diagnosis	1.03	(0.99, 1.06)	0.1
Race			0.5
White	REF		
African American	1.35	(0.20, 8.95)	
Other	0.37	(0.06, 2.13)	
Smoking			0.2
Never	REF		
Former	1.07	(0.72, 1.57)	
Current	0.29	(0.07, 1.28)	
BMI	0.998	(0.96, 1.04)	0.9
Family History of Cancer	1.01	(0.63, 1.62)	1
Year of Diagnosis	1.05	(1.01, 1.09)	**0.01**
PSA at Diagnosis	1.02	(0.96, 1.07)	0.6
PSA Density at Diagnosis	1.05	(1.01, 1.08)	**0.005**
Number Positive Cores at Diagnosis	1.21	(0.96, 1.51)	0.1
Max % Positive Cores at Diagnosis	1.01	(0.99, 1.02)	0.4

Poster 16

The Impact of ExoDx Prostate Intelliscore on the Decision to Undergo Prostate Biopsy: A Decision Tree Analysis

J. Weiss, S. Lee, L. Lipowsky, V. Xu, D. Gonzalez, R. Antar, A. Murdock and M. Whalen

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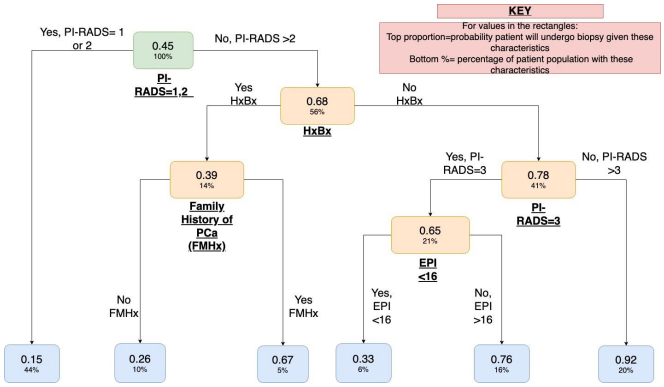
Introduction and Objective: The ExoDx Prostate Intelliscore (EPI) test is a urine biomarker assay emerging as a tool to screen for clinically significant prostate cancer (PCa). We aim to understand how EPI may influence clinical decision-making among the numerous demographic, clinical and radiographic variables that factor into the pursuit of biopsy.

Methods: Patients who received an EPI between 2019–2024 at a single academic center were retrospectively reviewed. Patient and clinical variables were collected including age, race, insurance, EPI, PSA, PI-RADS v2.1 score, prostate volume, digital rectal exam findings, history of prior negative prostate biopsy (HxBx), and family history of prostate cancer. Categorical and continuous variables were compared using chi-squared test and Student's *t*-test, respectively. An a priori value of $p < 0.05$ determined statistical significance. Statistically significant variables were placed into a decision tree for further analysis. Univariable logistic regression assessed factors associated with receipt of prostate biopsy.

Results: Of 387 patients identified, 324 were included for analysis. 145 (44.7%) patients underwent a biopsy, and 179 (55.3%) did not. In univariable analysis, EPI ≥15.6 (OR = 3.792) and a PI-RADS score >3 (OR = 35.308) was associated with an increased likelihood of biopsy, and a HxBx was associated with a decreased likelihood of biopsy (OR = 0.339). In decision tree analysis, patients with PI-RADS = 3, no HxBx, and EPI > 16 had a 76% likelihood of undergoing a biopsy, compared to a 33% likelihood in patients with EPI < 16, and similar PI-RADS and HxBx.

Conclusions: EPI, mpMRI PI-RADS score, and HxBx held the most value in determining a patient's pursuit of prostate biopsy. An elevated EPI (≥15.6) may provide the most utility in informing the decision to pursue prostate biopsy for patients with indeterminate PI-RADS compared to other factors.



Poster 17

Prostate Cancer and Sleep: A National Comparison of Sleep Duration Between Cancer Patients and Survivors and Non-Cancer Controls

S. Patel[1], A. Rangnekar[1], M. Leff[1], S. Chambule[1], Y. Shah[2], R. Daniel[1], M. Parmar[3], K. Michel[3], K. Alkhatib[3], D. Lee[3], B. Schurhamer[3], T. Guzzo[3] and P. Pierorazio[3]

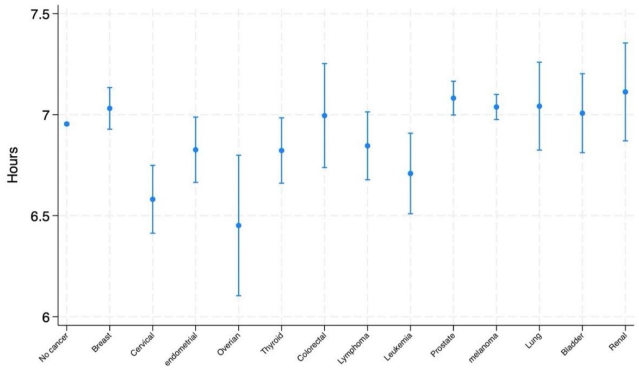
[1]Perelman School of Medicine, University of Pennsylvania, Philadelphia, PA, USA; [2]Sydney Kimmel Medical College, Thomas Jefferson University, Philadelphia, PA, USA; [3]Hospital of the University of Pennsylvania, Philadelphia, PA, USA

Introduction and Objective: Sleep is crucial for physical restoration, immune function, and psychological well-being. Cancer and its treatments, particularly prostate cancer (PCa), can disrupt sleep patterns. However, it is unclear whether sleep duration in PCa patients and those with a cancer history differs significantly from individuals without cancer. This study aimed to investigate differences in sleep duration among PCa patients, other cancer patients, and those with no cancer history using national representative data.

Methods: We analyzed self-reported sleep duration from the Behavioral Risk Factor Surveillance System (BRFSS) for participants with a history of cancer. Complex weighted survey linear regression was used to estimate the national mean sleep duration by cancer type, adjusting for covariates such as age, race, depression, income, marital status, education, and exercise. Adjusted difference analysis identified significant sleep duration differences between cancer types and individuals without a cancer history.

Results: The study included 3,077,806 participants from 2016 to 2022. Compared to individuals without a cancer history, significant adjusted sleep differences (ASD) were found for PCa (ASD = 0.13, $p = 0.003$), cervical cancer (ASD = −0.37, $p < 0.001$), ovarian cancer (ASD = −0.50, $p = 0.005$), leukemia (ASD = −0.25, $p = 0.016$), and melanoma (ASD = 0.08, $p = 0.008$). The mean adjusted sleep duration by cancer type is shown in Fig. 1.

Conclusions: Our findings indicate that PCa patients experience a higher adjusted sleep risk difference compared to non-cancer individuals. In contrast, patients with cervical and ovarian cancer, leukemia, and melanoma show significantly lower adjusted risk differences. These results suggest that PCa patients may face unique sleep challenges, warranting further investigation into sleep quality and its impact on quality of life.



Poster 18

Prevalence and Predictors of Brain Metastases in Metastatic Prostate Cancer

M. Wang, V. Xu, R. Antar, M. Whalen and Y. Rao

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Introduction and Objective: Brain metastases (BM) in metastatic prostate cancer (mPCa), although rare, have a poor prognosis. Predictors of BMs in mPCa remain unknown. This study aims to investigate the prevalence of BMs in mPCa and identify significant clinical and pathological predictors associated with their occurrence.

Methods: The National Cancer Database (NCDB) was queried for patients diagnosed with prostate cancer (PCa) from 2004–2021. Patients with cM1 PCa and complete data on patient and tumor characteristics were included. Kaplan-Meier analysis and log-rank tests compared overall survival (OS) between patients with and without BMs. Univariable and multivariable logistic regression assessed factors associated with BMs.

Results: Among 101,900 cM1 PCa patients,1144 had BMs. After excluding missing data,6654 patients remained, with 46 having BMs. Chi-square analysis revealed patients with BMs were more likely to have cT4 tumors (36.8% vs 24.6%, $p < 0.001$), cN+ status (51.9% vs 42.8%, $p < 0.001$), neuroendocrine histology (6.8% vs 1.6%, $p < 0.001$), and higher Gleason grade group (GGG) ($p = 0.017$). Patients with BMs more frequently had liver (17.2% vs 4.1%, $p < 0.001$) and lung mets (27.0% vs 8.0%, $p < 0.001$), while bone mets were less common (80.3% vs 89.8%, $p < 0.001$). Patients with BMs had a shorter median OS (15.08 months vs. 32.59 months, $p < 0.001$), despite being younger. Multivariable analysis identified neuroendocrine histology (aOR 3.916, $p = 0.037$), GGG ≥3 (aOR 3.699, $p = 0.016$), and liver metastases (aOR 3.855, $p = 0.001$) as predictors of BMs.

Conclusions: Specific tumor characteristics associated with BMs, particularly neuroendocrine histology, higher GGG, and liver mets. This study is the largest to date and highlights the need for further elucidation of patient, tumor, and molecular predictors of BMs in mPCa.

Figure 1. Kaplan-Meier Analysis of Overall Survival in Patients with mPCa Stratified by the Presence of Brain Metastases

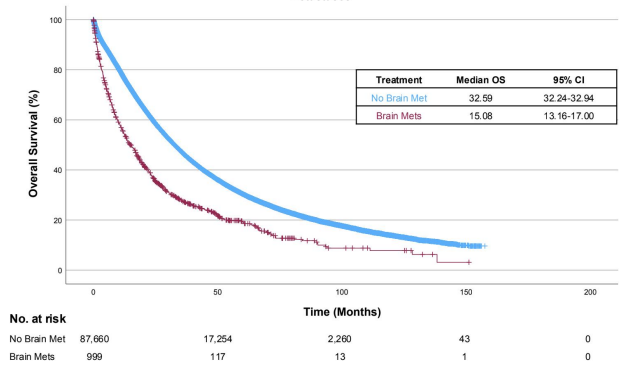

Table 2. Univariable and Multivariable Logistic Regression for the Presence of Brain Metastases in Patients with Metastatic Prostate Cancer

Univariable			Multivariable		
Variable	OR (95% CI)	p-value	Variable	aOR (95% CI)	p-value
Age (continuous)	0.984 (0.955-1.014)	0.288			
CCI (Ref = 0)					
1	0.893 (0.375-2.129)	0.798			
≥2	0.924 (0.361-2.365)	0.868			
cT Stage (Ref = cT<2)					
cT≥2	0.981 (0.134-7.168)	0.985			
cN Stage (Ref = 0)					
1+	0.845 (0.473-1.511)	0.571			
Histology (Ref = Adeno)			Histology (Ref = Adeno)		
Neuroendocrine	7.499 (2.264-24.840)	**<0.001**	Neuroendocrine	3.916 (1.086-14.127)	**0.037**
Other	4.189 (0.562-31.239)	0.162	Other	4.557 (0.597-34.819)	0.144
Gleason (Ref = GG<3)			Gleason (Ref = GG<3)		
GG≥3	3.522 (1.249-9.929)	**0.017**	GG≥3	3.699 (1.279-10.699)	**0.016**
Bone Mets (Ref = No)			Bone Mets (Ref = No)		
Yes	0.451 (0.240-0.847)	**0.013**	Yes	0.549 (0.288-1.045)	0.068
Liver Mets (Ref = No)			Liver Mets (Ref = No)		
Yes	6.035 (2.882-12.639)	**<0.001**	Yes	3.855 (1.681-8.841)	**0.001**
Lung Mets (Ref = No)			Lung Mets (Ref = No)		
Yes	3.006 (1.484-6.089)	**0.002**	Yes	1.833 (0.849-3.958)	0.123
Distant LN Mets (Ref = No)					
Yes	1.455 (0.784-2.702)	0.235			

Poster 19

Perioperative Outcomes of Robotic-Assisted Laparoscopic Prostatectomy with History of Prior Pelvic Radiation: A Comparative National Surgical Quality Improvement Project Analysis

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Introduction and Objective: Prostate cancer recurrence after radiotherapy presents a challenge for urologists. Salvage prostatectomy remains a key treatment option, but prior radiation therapy (XRT) can compromise tissue integrity and increase surgical complications. This study evaluates differences in perioperative outcomes between patients with and without prior XRT undergoing radical prostatectomy.

Methods: Using the National Surgical Quality Improvement Program database, we identified patients who underwent RALP from 2019–2023 and classified them based on prior XRT, defined as any pelvic radiotherapy for a malignancy before prostate cancer. Baseline demographics, 30-day perioperative complications, readmissions, reoperations, operative time, hospital stay, and 30-day mortality were compared using Student's *t*-tests and Pearson's Chi-square. Statistical significance was set at $p < 0.05$.

Results: Among 4895 RALP patients, 43 (0.8%) had prior XRT. These patients had longer operative times (266.1 vs. 213.3 min, $p < 0.001$) and extended hospital stays (2.3 vs. 1.4 days, $p < 0.05$). Prior XRT was associated with higher reoperation (7% vs. 1.3%, $p = 0.008$) and readmission rates (11.6% vs. 4.1%, $p < 0.05$). Major complications included increased organ space infections (7% vs. 1.1%, $p = 0.004$), ventilator dependence (2.3% vs. 0.1%, $p = 0.02$), and prolonged NG/OG tube support (7% vs. 1%, $p = 0.001$). Minor complications included higher rates of AKI (4.7% vs. 0.2%, $p < 0.001$). Urology-specific complications were more common in prior XRT patients, including anastomotic leaks (4.7% vs. 0.2%, $p < 0.001$), ureteral injuries (11.6% vs. 1.5%, $p < 0.001$), and lymphatic leaks/lymphoceles (4.7% vs. 0.6%, $p = 0.01$).

Conclusions: Post-radiation RALP has significantly higher complication rates than primary procedures. As one of the largest multi-institutional analyses on this topic, our findings enhance generalizability and provide contemporary outcome data to guide patient counseling for salvage prostatectomy.

Poster 20

Initial Experience with High-Intensity Focused Ultrasound for Primary Prostate Cancer: Outcomes from the First 60 Patients at the University of Pennsylvania

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Introduction and Objective: High-Intensity Focused Ultrasound (HIFU) has emerged as a minimally invasive therapeutic modality for localized prostate cancer (PCa). Despite growing adoption, limited institutional data exist on its early outcomes and safety profile. This study aimed to evaluate initial experiences and outcomes from the first 60 patients undergoing primary HIFU for prostate cancer at the University of Pennsylvania.

Methods: A retrospective review was performed for 60 consecutive patients treated with primary HIFU for localized prostate cancer between February 2024 and March 2025. Collected data included patient demographics, preoperative prostate-specific antigen (PSA) levels, prostate volume, Gleason scores, treatment parameters, complications, local recurrence, and functional outcomes measured via Sexual Health Inventory for Men (SHIM) and American Urological Association Symptom Score (AUASS). Outcomes were evaluated at 3, 6, and 12 months post-treatment.

Results: The median patient age was 71 years (range 54–82), with median preoperative PSA of 6.8 ng/mL. All patients had D'Amico intermediate-risk prostate cancer (100%). Median prostate volume was 42 cc. Local recurrence occurred in 2% of patients based on biopsy. Complication rates within 30 days were 8% (n = 5), predominantly minor (Clavien-Dindo I–II). No Calvien III or IV complications developed in this early cohort. Functional outcomes measured by the SHIM and IPSS revealed no statistically significant changes post-HIFU therapy.

Conclusions: Our initial experience with primary HIFU at the University of Pennsylvania demonstrates effective short-term oncological outcomes, significant PSA reduction, and minimal complications. Importantly, HIFU preserved urinary and sexual function. These encouraging results support ongoing use and further evaluation of HIFU as a viable primary therapy option for localized prostate cancer.

Poster 21

The use of biparametric MRI in active surveillance for prostate cancer

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Introduction and Objective: Multiparametric Magnetic Resonance Imaging (mpMRI) is widely used for diagnosing and monitoring prostate cancer (PCa) during active surveillance (AS). Recently, biparametric MRI (bpMRI) has gained popularity due to its convenience and lack of intravenous contrast. However, its effectiveness in AS remains unclear. This study aimed to compare oncologic outcomes of PCa patients on AS monitored with bpMRI versus mpMRI.

Methods: We conducted a retrospective analysis of PCa patients who underwent both mpMRI and bpMRI. Data collected included age, time between MRIs, and the number of Prostate Imaging Reporting and Data System (PIRADS) 3–5 lesions. Lesion distribution and PIRADS classification changes between mpMRI and bpMRI were analyzed. A subgroup analysis compared patients who underwent mpMRI, biopsy, bpMRI, and a second biopsy with a matched control group from the Johns Hopkins AS database who had mpMRI at both time points. Grade group reclassification (GGR) rates and PIRADS lesion changes were assessed.

Results: The study group included 129 men (mean age: 69 years) with a 2.7-year interval between MRIs. PIRADS 3–5 lesions increased from 77 in mpMRI to 114 in bpMRI (p = 0.01). Lesion distribution was similar between both: PIRADS 3–5 lesions 53%, 40%, and 6% for mpMRI, and 53%, 37%, and 11% for bpMRI, respectively. PIRADS 3–5 lesions changes remain stable between experimental and control group with no significant differences in lesion changes. In a subgroup of 68 patients, the GGR rate at the second biopsy was 29% vs. 25% in the control group (p = 0.7). The median PIRADS lesion count was comparable between experimental and control group. There were no significant differences in lesion distribution.

Conclusions: Our findings suggest that bpMRI is not inferior to mpMRI for monitoring PCa patients on AS. Both imaging modalities demonstrated comparable lesion classification, stability, and GGR rates, supporting the potential use of bpMRI as an alternative to mpMRI in AS.

Poster 22

Enhanced Detection of Clinically Significant Prostate Cancer through MRI-Fusion Biopsy: A Comparative Analysis of Biopsy Techniques and Fusion Software

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Introduction and Objective: Accurate diagnosis of prostate cancer is essential for minimizing morbidity and mortality for men worldwide. Magnetic resonance imaging combined with ultrasound (MRI-US Fusion) revolutionized prostate biopsy approaches, offering targeted sampling of suspicious lesions. Several studies demonstrated perineal MRI-US fusion biopsies improve detection of clinically significant prostate cancer (csPCa) compared to standard template. This effectiveness may be influenced by software utilized.

Methods: We present a real-world comparative analysis of cancer detection between perineal MRI-US Fusion and standard template biopsies and compare two MRI-US fusion platforms (UroNav and Koelis). We analyzed all MRI-US fusion biopsies completed at a single academic hospital from 1/1/23 through 1/1/25 (N = 476).

Results: The majority of patients are white (93%), non-Hispanic (99%) with average PSA of 9.88 (0.68–183). Detection of csPCa (Gleason 7 or higher) by PIRADS score and fusion software is described in Table 1. There is no difference in detection of csPCa using UroNav (59%, N = 271) vs Koelis (60%, N = 158) software (z = 0.221, p = 0.82, $p < 0.05$). Of the 185 patients without csPCa on their standard template, 20% had csPCa on MRI-US fusion targeted biopsy. For the 195 patients without csPCa on their MRI-US fusion targeted biopsies, 25% had csPCa on their standard template biopsies.

Conclusions: This adds to existing data demonstrating that combining MRI-US fusion with standard template biopsies provide higher detection rates of csPCa than either method on its own. It also compares two different MRI-US fusion software which demonstrate similar cancer detection rates regardless of software used.

Table 1. Clinically significant cancer (Gleason 7 or higher) identified on MRI-US Fusion targeted biopsy

	Any Software	UroNav	Koelis
Any PIRADS Legion	59%	59%, N=271	60%, N=158
PIRADS 3 (N=90)	24%, (22/90)	20% (10/50)	33% (11/33)
PIRADS 4 (N=225)	57%, (129/225)	56% (76/135)	60% (45/75)
PIRADS 5 (N=154)	81%, (126/154)	86% (74/86)	78% (39/50)

Poster 23

Overall Survival in Active Surveillance vs. Primary Intervention for Small Renal Masses: Findings from DISSRM Using Propensity Score and Competing Risks Analysis

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Introduction and Objective: The DISSRM Registry is the largest prospective study comparing Active Surveillance (AS) and Primary Intervention (PI) for Small Renal Masses (SRM). Previous findings show AS has equivalent cancer-specific mortality to PI, but overall survival (OS) appears inferior due to selection bias, with older, comorbid patients opting for AS. To address this, we conducted a propensity score-matching analysis to compare OS between balanced cohorts.

Methods: We analyzed DISSRM data (2009–2022), performing Kaplan-Meier OS analysis after 1-to-1 exact propensity score matching for age, gender, and Charlson Comorbidity Index (CCI). A competing-risks analysis using Fine and Gray's method estimated cancer-specific mortality, progression, and recurrence.

Results: We found 958 Patients enrolled in DISSRM with a median follow up time (MFT) of 4.1 years (IQR2.13–7.18), compromising of 377PI and 581AS patients. After the 1-to-1 exact propensity score matching a pseudo cohort of 754 patients (377PI and 377AS) was created. OS for PI compared to AS at 2-years (98.51%vs97.59%),5-years (94.15%vs90.52%),7-years (91.84% vs 80.09%) log-rank (P = 0.13), with Mortality hazard ratio for AS[HR = 1.49 (95%CI; 0.89–2.49), P = 0.13]. Competing-risk CSS-CIF accounting for other causes of mortality for AS at 4-years and beyond is 0.19%(95%CI;0.3%–1.4%), and for PI at 4-years and beyond is 0.68%(95%CI;0.17%–2.7%). Gray's test (P = 0.4). Progression-CIF accounting for competing-risk of non-RCC mortality at 2-years = 14.87%(95%CI:12.84%–17.20%), and 5-years = 22.96%(95%CI:20.21%–26.03%) until it reaches 33.04%(95%CI:28.31%–38.32%) at 8-years and beyond. Recurrence-CIF accounting for competing-risk of non-RCC death for PI at 4-years = 1.3%(95%CI:0.47%–3.3%), 6-years = 1.7%(95%CI:0.7%–4.0%), and 8-years = 2.2%(95%CI:1.0%–4.8%). Meanwhile, the recurrence CIF for AS who received delayed intervention (DI) at 4-years and beyond is 4.4%(95% CI:1.1%–17.0%). Gray's test (P = 0.511)

Conclusions: After propensity score matching, OS differences between AS and PI were not statistically significant, a finding previously limited by small sample sizes. With 15 years of data, we now demonstrate AS is a safe and non-inferior option for SRM management.

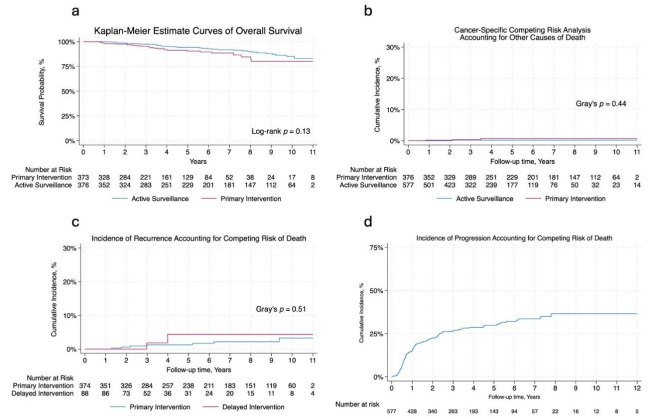

Figure 1 (a) Overall Survival Analysis after propensity score matching by age, gender, and Charlson Comorbidity Index. (b) Competing risk Cancer-specific cumulative incidence function (CIF) accounting for other causes of mortality. (c) Competing risk cumulative incidence function (CIF) of recurrence accounting for other causes of mortality for patients who received intervention, either primary intervention (PI) or delayed intervention (DI). (d) Competing risk cumulative incidence function (CIF) of progression accounting for other causes of mortality

Poster 24

Development of a Novel Risk Calculator for Prostate Cancer using Machine Learning

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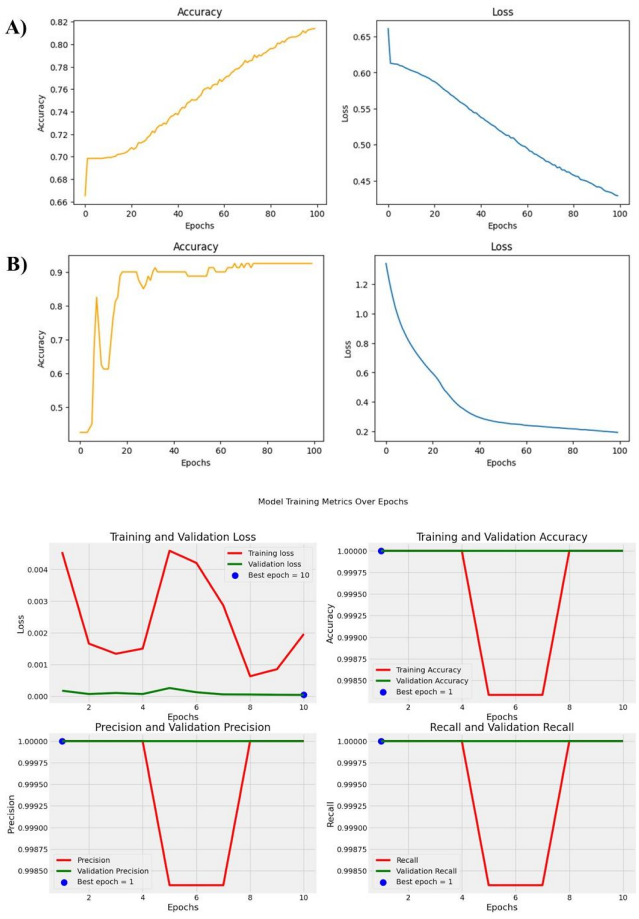
Introduction and Objective: Existing machine learning models to detect prostate cancer rely on biopsy results and PSA levels. This would require a urologist visit. We aimed to build a risk calculator using machine learning to predict tumorigenesis and the grading of prostate cancer.

Methods: This study utilized a combination of three open datasets. The first two contained patient demographics, lower urinary tract symptoms to predict a diagnosis, and the third contained Gleason grading biopsy results. Outcomes included cancerous or benign as well as the grade. Random Forest Classifier, Logistic Regression, and Xception were used to train the model.

Results: The Random Forest classifier was able to achieve an accuracy of 81.2% from an augmented sample of 27,945 patients (Fig. 1A). Based on the risk factor, we advise the patient to visit a urologist. We included a sample of 100 patients with prostate measurements. Using Logistic Regression, we were able to obtain an accuracy of 97% if the tumor site was benign or cancerous (Fig. 1B). Finally, to confirm the diagnosis of Prostate Cancer, 500 biopsy slides of various grades were examined. Through Xception, we obtained an accuracy of 99% (Fig. 2).

Conclusions: Through this study, we have developed a provisional Machine Learning model to detect Prostate Cancer. Our study provides the foundation for more accessible Prostate Cancer screenings worldwide. Future studies could build on this dataset that contains additional symptoms such as nocturia, and racial risk factors to further evaluate the efficacy of integrating Machine Learning practices in diagnosing Prostate Cancer.



Poster 25

Active Surveillance Versus Primary Intervention for Small Renal Masses: A Look at the Impact of the COVID-19 Pandemic

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Introduction and Objective: The COVID-19 pandemic disrupted routine healthcare, altering the management of many malignancies, including small renal mass (SRM). This study examines SRM management trends before, during, and after the pandemic.

Methods: We analyzed adult patients with SRMs (cT1a renal tumors <= 4 cm) who underwent active surveillance (AS) or primary intervention (PI), including partial nephrectomy (PN) or radical nephrectomy (RN), from 2017 to 2022 in two large prospectively maintained registries: the Delayed Intervention and Surveillance for Small Renal Masses (DISSRM) registry and the Michigan Urological Surgery Improvement Collaborative (MUSIC) kidney registry. Tumor characteristics and treatment choices were compared across pre- (2017–2019), during (2020–2021), and post-pandemic (2022) cohorts using Chi-square and the Kruskal-Wallis tests for categorical and continuous variables, respectively. Yearly trends were assessed using the Cochrane-Armitage test.

Results: A total of 348 DISSRM and 4228 MUSIC patients were analyzed. In DISSRM, AS rates for SRMs increased from 73% pre-pandemic to 87% during, then declined to 71% post-pandemic (Chi-square $p = 0.02$ for 3-way comparison); this trend persisted for patients with tumors >3 cm. In MUSIC, AS rates increased from 52% pre-pandemic to 58% during, then decreased to 51% post-pandemic (Chi-square $p = 0.002$ for 3-way comparison). Annual AS rates from 2017 to 2022 ranged from 68%–93% in DISSRM ($p = 0.007$) and 49%–58% in MUSIC ($p = 0.16$), both registries peaking in 2021 (Figure). No significant differences in median tumor size, patient age, or race at enrollment in AS by year were observed.

Conclusions: Utilization of AS for SRMs appeared to increase during the COVID-19 pandemic, with subsequent return to pre-pandemic rates in 2022. Limitations include registry entry criteria differences and reduced DISSRM enrollment during the pandemic; however, no changes in tumor characteristics were noted in either registry.

Poster 26

Factors Contributing to Underutilization of Genetic Evaluation in Patients with Renal Cell Carcinoma

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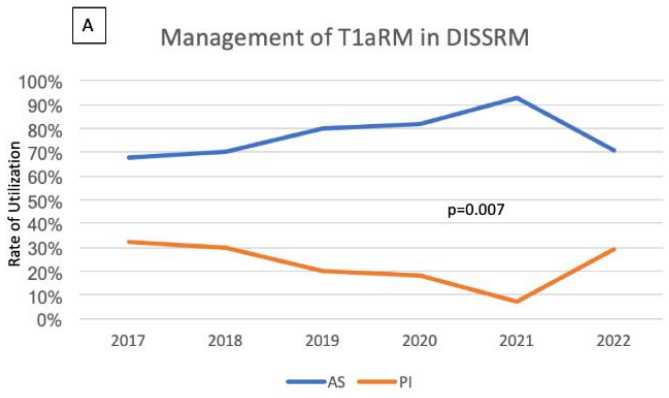
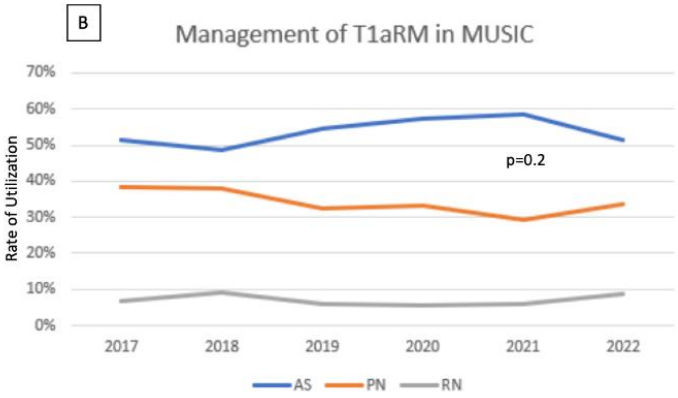
Introduction and Objective: Genetic evaluation plays an important role in renal cell carcinoma (RCC) management. The National Comprehensive Cancer Network and American Urological Association recommend genetic evaluation for patients with early-onset or bilateral RCC. This study evaluated the rate of referral and outcomes of genetic evaluation in patients with early-onset or bilateral RCC.

Methods: We retrospectively identified patients ≥18 years of age with kidney cancer (KCa) at our institution who met one of two genetic referral criteria: (1) early age of RCC diagnosis ≤46 years or (2) bilateral RCC between 01/01/2017 to 01/01/2022. Patient charts were manually reviewed to confirm RCC diagnosis and assess genetic referral outcomes.

Results: In total, 124 patients met referral criteria including 97 (78%) with early-onset and 31 (25%) with bilateral KCa. Out of 42 (34%) patients who were referred for genetic evaluation, 32 (76%) underwent genetic counseling and 27 (64%) completed genetic testing. Among 10 patients who were referred, but did not undergo genetic counseling, the most cited reason was unsuccessful contact or follow-up (7, 70%). Among 5 patients who underwent counseling but not testing, reasons included cost (3, 60%), lack of sample submission (1, 20%), and perceived risk outweighing benefits (1, 20%). The overall median time from referral to receipt of genetic results was 88 days (IQR 41–230). Of 24 patients whose results were available for review, 7 (29%) had a pathogenic germline variant, 5 (21%) in moderate or high penetrance genes, and 2 (8%) in RCC-associated genes including FH (1) and VHL (1).

Conclusions: Although patients with early-onset or bilateral KCa should be offered genetic evaluation based on national guidelines, only 34% were referred. When appropriately referred, most patients completed counseling and testing. This study highlights the underutilization of genetic evaluation in KCa. Exploring factors contributing to lack of referral among oncologists can improve patients' access to precision oncology.





Poster 27

Target Acquired: Predictors and Patterns of Targeting Errors in MRI-Ultrasound Fusion Biopsy

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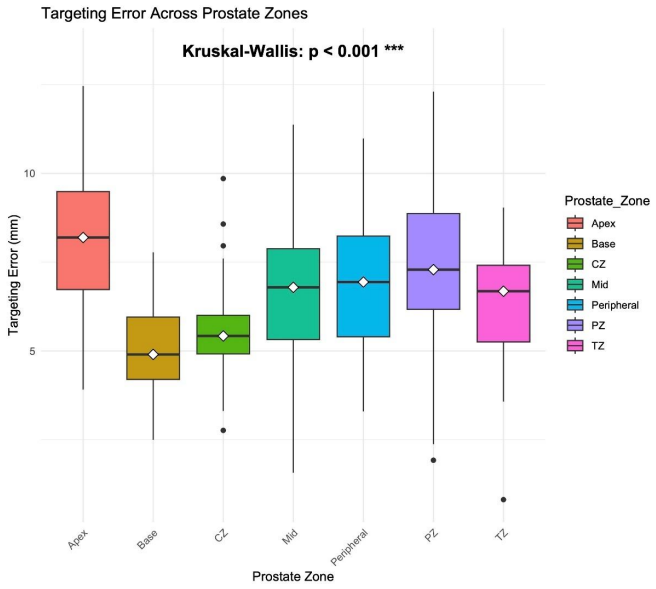
Introduction and Objective: MRI-ultrasound fusion biopsy enhances prostate cancer detection, but targeting errors impact diagnostic accuracy. Prior research shows deviations >5 mm may reduce biopsy precision, while larger errors can affect clinical outcomes. This study quantifies and characterizes clinically significant targeting errors between prostate zones and identifies predictive variables.

Methods: De-identified MRI-ultrasound fusion coordinate (X, Y, Z) biopsy data from 1151 patients in the Prostate-MRI-US-Biopsy dataset, a publicly available resource from The Cancer Imaging Archive (TCIA), were analyzed. Targeting error was computed as the Euclidean distance between biopsy coordinates and lesion centers. Clinically significant deviation was defined as 5–10 mm, while errors ≤5 mm were considered clinically acceptable. Errors >10 mm were excluded. Statistical tests included Wilcoxon rank-sum, Kruskal-Wallis, chi-square, and logistic regression. Analyses examined error distribution across prostate zones and predictive variables included PSA (ng/mL), prostate volume (CC), and UCLA Score (analogous to PIRADS v2).

Results: The mean targeting error was 6.36 mm (SD: ±4.30 mm), with 31.1% of biopsies clinically acceptable (≤5 mm) and 68.9% clinically deviated (5–10 mm). Errors varied significantly by prostate zone (Kruskal-Wallis: $p < 0.001$), with the highest in the Apex (8.1 mm) and Peripheral zones (7.0 mm), and lowest in the Base (5.1 mm) and Central Zone (5.8 mm). Logistic regression identified PSA (OR = 1.08, 95% CI: 1.07–1.09, $p < 0.001$), prostate volume (OR = 0.99, 95% CI: 0.99–0.99, $p < 0.001$), and UCLA Score (OR = 1.07, 95% CI: 1.04–1.11, $p < 0.001$) as predictors of targeting deviation.

Conclusions: In our analysis, MRI-ultrasound fusion biopsy targeting errors vary significantly across prostate zones. Additionally, PSA levels, prostate volume, and UCLA Score are significant predictors of targeting deviation. These findings highlight the importance of refining biopsy techniques to reduce clinically significant targeting errors.



Poster 28

Comparison of Decipher Immune Signatures Across PIRADS Categories

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Introduction and Objective: Multiparametric MRI PI-RADS scoring is used to gauge prostate cancer suspicion on imaging, while Decipher genomic testing provides prognostic insights, including immune-related tumor profiles. We aimed to determine whether Decipher immune signature scores differ by PI-RADS category, and to evaluate any correlation between MRI lesion suspicion and tumor immune genomic activity. This could clarify if MRI-visible tumors exhibit distinct immune environments, informing risk stratification and therapy choices.

Methods: Methods: We analyzed data from prostate cancer patients ($n = 64$) with available Decipher genomic results and pre-treatment MRI reports. Patients were grouped by PI-RADS category (2–5). Eight Decipher-derived immune signature scores (e.g., immune cell infiltration and suppressor indices) were compared across PIRADS groups using ANOVA/Kruskal-Wallis tests. Spearman correlations were calculated between PIRADS (ordinal 2–5) and each immune score. A significance threshold of $p < 0.05$ was used.

Results: No significant differences in immune signature scores were found across PI-RADS categories ($p > 0.3$ for all comparisons). For example, mean Immune effector cells scores were similar for PIRADS 3 vs. 5 (0.19 vs. 0.15; $p = 0.76$). Correlation analysis showed no strong association between PIRADS and immune scores (Spearman $\rho \approx -0.1$, $p > 0.2$). Higher PIRADS lesions exhibited a non-significant trend toward lower immune infiltration signatures and higher immunosuppressive signals, suggesting a slightly more "immune-cold" microenvironment in PI-RADS 4–5 tumors, though these trends did not reach significance.

Conclusions: Decipher immune signatures did not significantly vary with MRI PIRADS category. This indicates that imaging suspicion level is not strongly reflective of the tumor's immune genomic profile. Clinically, MRI and genomic immune markers offer independent insights, and their combined use may enhance prostate cancer risk stratification and guide personalized treatment, rather than relying on MRI alone.

Poster 29

Ambulatory Percutaneous Nephrolithotomy as a New Standard of Care? An Analysis of Over 2400 Cases

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Introduction and Objective: Percutaneous nephrolithotomy (PCNL) has traditionally been considered an inpatient surgery due to the risk of bleeding and systemic infection. The evolution of technology and surgical approaches, such as endoscopic combined intrarenal surgery (ECIRS) and mini-PCNL (mPCNL), have facilitated the adaptation of ambulatory PCNL (aPCNL). In this series, we show that aPCNL can be safely and efficaciously performed in most patients.

Methods: We analyzed patients who underwent aPCNL, including standard PCNL (24–30 Fr) and mPCNL (14–23 Fr), at two free-standing ambulatory surgery centers (ASCs) between 2015–2024. Patient exclusion criteria for the ASC included BMI > 50, severe cardiopulmonary conditions, and prior anesthetic complication. Standard practices included ECIRS technique for renal access, ureteral stent for drainage, hemostatic plug in the access tract, and surgeon-administered rib block for pain control. Patients were observed in the post-anesthesia care unit (PACU) until discharge criteria was met. Descriptive statistics were used for data analysis with statistical significance held at $p < 0.05$.

Results: 2437 cases were analyzed (Table 1). The mean age of patients was 57.8, BMI was 30.3, and ASA score was 2.3. 19.3% had a positive urine culture treated pre-operatively. The mean stone burden was 31.1 mm. Standard tract PCNL was used in 57.3% of cases and 91.7% of cases were done through a single tract. The mean treatment time was 12.5 min and mean PACU time was 81.7 min. The average estimated blood loss was 33.5 mL. Only 1.6% of patients required hospital transfer.

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

	ASC (n=2437)
Age	57.8
Gender (F)	51.5%
Laterality (L)	52.1%
BMI	30.3
ASA	2.3
1	4.1%
2	59.0 %
3	36.5%
4	0.2%
Diabetes Mellitus	27.8%
Hypertension	58.5%
Positive Urine Culture	19.3%
Stone Burden (diameter, mm)	31.07
Hounsfield Units	851.1
Double J Stent Only	98.1%
EBL (mL)	33.5
Fluoroscopy Time (sec)	51.1
Treatment Time (min)	12.49
Operating Room Time (min)	91.5
30F Sheath	17.5%
24F Sheath	39.8%
Mini-PCNL	42.7%
Multiple Accesses	8.3%
PACU Time (min)	81.7
Hospital Transfer	1.6%

Poster 30

An Analysis of Percutaneous Nephrolithotomy in Ambulatory Versus Hospital Setting

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Introduction and Objective: Percutaneous nephrolithotomy (PCNL) has traditionally been considered an inpatient surgery due to the risk of bleeding and infection. Advances in surgical equipment, technique, and careful patient selection have made ambulatory PCNL (aPCNL) possible. In this study, we aimed to compare case characteristics in patients undergoing hospital PCNL versus aPCNL.

Methods: We analyzed patients who underwent aPCNL at two free-standing ambulatory surgical centers (ASCs) and at a tertiary hospital between May 2015-June 2024. Patient exclusion criteria for the ASC included BMI > 50, severe cardiopulmonary conditions, and history of prior anesthetic complication. Patient demographics, pre-operative, and post-operative data were prospectively collected. Descriptive statistics were used for data analysis with statistical significance held at $p < 0.05$.

Results: 2437 ASC and 482 hospital PCNL cases were available for analysis. Patient demographics and outcomes data are depicted in Table 1. Patients who underwent PCNL in the hospital were on average older (65.0 vs 57.8, $p < 0.01$) with higher ASA scores (3.0 vs 2.3, $p < 0.01$) and BMI (32.4 vs 30.3, $p < 0.01$). The hospital series also demonstrated a higher number of patients with pre-operative positive urine cultures (39.0% vs 19.3%, $p < 0.01$), larger stone burden (37.3 mm vs 31.1 mm, $p < 0.01$), and greater Clavien-Dindo grades 2–5 complications (5.6% vs 1.1%, $p < 0.01$). PCNLs performed at the ASC used less fluoroscopy time (51.1 s vs 64.7 s, $p < 0.01$) and had shorter operative times (91.5 min vs 117.0 min, $p < 0.01$). 45% of hospital based PCNLs were discharged on the same day.

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

	ASC (n=2437)	Hospital (n=482)	p-value
Age	57.8	65.0	<0.01
Gender (F)	51.5%	56. 0%	0.02
Laterality (L)	52.1%	48.1%	<0.01
BMI	30.3	32.4	<0.01
ASA	2.3	3.0	<0.01
1	4.1%	0.9%	
2	59.0 %	9.6%	
3	36.5%	81.5%	
4	0.2%	8.0%	
Diabetes Mellitus	27.8%	28.6%	0.17
Hypertension	58.5%	57.7%	0.27
Positive Urine Culture	19.3%	39.0%	<0.01
Stone Burden (diameter, mm)	31.07	37.34	<0.01
Hounsfield Units	851.1	734.0	<0.01
Complications (Clavien-Dindo Grades 2-5)	1.15% (28)	5.6% (27)	<0.01
2	46% (13)	52% (14)	0.46
3	46% (13)	11% (3)	<0.01
4	7% (2)	26% (7)	0.03
5	0% (0)	11% (3)	0.04
Double J Stent Only	98.1%	90.1%	<0.01
EBL (mL)	33.5	41.3	<0.01
Fluoroscopy Time (sec)	51.1	64.7	<0.01
Treatment Time (min)	12.49	15.6	<0.01
Operating Room Time (min)	91.5	117.0	<0.01
30F Sheath	17.5%	9.0%	
24F Sheath	39.8%	67.9%	
Mini-PCNL	42.7%	23.0%	
Multiple Accesses	8.3%	6.2%	0.06
PACU Time (min)	81.7	-	
Hospital Transfer (ASC)	1.6%	-	

Poster 31

Improved Intrarenal Pressure Regulation during Ureteroscopy with Laser Lithotripsy with Gen 2 CVAC Ureteroscope

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Introduction and Objective: Elevated intrarenal pressure (IRP) during ureteroscopy with laser lithotripsy (ULL) can lead to barotraumatic and septic complications, making minimization of IRP crucial. The CVAC™ Aspiration System is a new steerable ureteroscopic renal evacuation device which is capable of simultaneous irrigation and suction, potentially improving its IRP management capabilities. This case report evaluates for improved IRP management with simultaneous suction capabilities during ULL.

Methods: A patient who previously had a nephrostomy tube placed for acute management of septic shock from an obstructing 1.5 cm uretero-pelvic junction stone was selected for real-time IRP measurement during ULL. An arterial line was connected to the nephrostomy tube and to the anesthesia monitor during ULL. (Fig. 1). Measurements were recorded at baseline, during retrograde pyelogram, sheath insertion, laser lithotripsy, and with the CVAC engaged with various settings.

Results: The baseline IRP was 15.41 cmH_2O. IRP was measured at 18.59 cmH_2O during retrograde pyelogram, 18.13 cmH_2O following access sheath placement, 39.89 cmH_2O with CVAC activated without laser, 73.89 cmH_2O during laser lithotripsy with active irrigation and no suction, and 43.58 cmH_2O during laser lithotripsy with both active irrigation and suction (Fig. 2).

Conclusions: The utilization of simultaneous suction while irrigation and laser were active produced a 41% reduction in IRP compared to the active configuration without suction and nearly met the ideal 40 cmH_2O pressure safety threshold previously posed in the literature. This suggests that simultaneous suction capabilities during ULL, as present with CVAC, provide a significant improvement in IRP management and, by extension, improve patient safety during ULL.

Poster 32

Poster 32

The Fate of Vesicostomy in Posterior Urethral Valves: A Temporary Fix or a Permanent Solution?

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Introduction and Objective: Vesicostomy is commonly performed in infants with posterior urethral valves (PUV) who present with severe bladder dysfunction, obstructive uropathy, or early renal impairment. While often considered a temporary measure, its long-term role remains unclear. This study evaluates the typical indications, timing, duration, and long-term outcomes of vesicostomy in PUV patients.

Methods: A retrospective review of PUV patients who underwent vesicostomy was conducted. Data on patient characteristics, timing of vesicostomy, closure rates, and long-term renal and voiding outcomes were analyzed.

Results: Of our 158 PUV valve patients, 36 were noted to have vesicostomy created. Most patients (94%) had antenatal hydronephrosis, and 64% were born prematurely. Vesicostomy was performed at a median age of 1 month (IQR: 0–20). In 56% of cases, it followed valve ablation, with a median interval of 9 months (IQR: 1–21). Closure was achieved in 17 (47%) at a median of 18 months (IQR: 13–48), while 53% remained dependent on vesicostomy at last follow-up (median age: 6.4 years). Among those with closure, 12 voided urethrally, while five required catheterizations—2 via urethra, and 3 underwent creation of a catheterizable channel. Despite vesicostomy, 10 (28%) progressed to kidney failure, requiring renal replacement therapy at a median of 14 months (IQR: 10–30) post-vesicostomy, of whom 7 were transplanted directly into their vesicostomy.

Conclusions: Vesicostomy is most commonly performed in infants with severe PUV-related obstruction and impaired renal function. While nearly half achieve closure, many require long-term diversion, and a substantial proportion progress to kidney failure, emphasizing the need for close monitoring and early risk stratification.

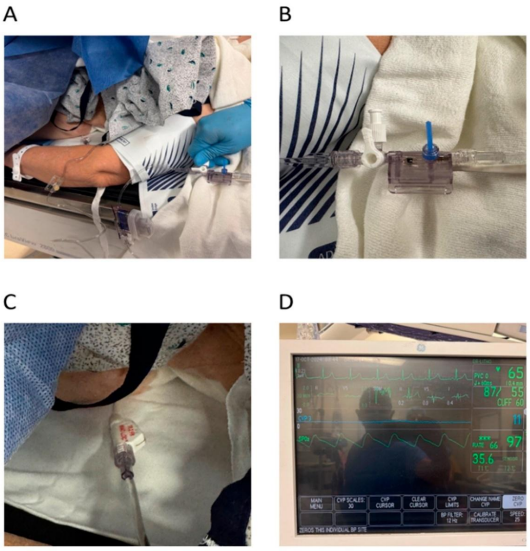

Figure 1: Image A: Setup of Real-Time Intrarenal Pressure (IRP) Monitoring The patient's nephrostomy tube and arterial line are connected to monitoring systems to record IRP during ureteroscopy with laser lithotripsy (ULL). **Image B: Close-Up of Nephrostomy Tube Connection** The nephrostomy tube provides direct access to the renal pelvis for real-time measurement of intrarenal pressures during the procedure. **Image C: Arterial Line for Intrarenal Pressure Transduction.** An arterial line was utilized to transduce intrarenal pressures in real time. **Image D: Real-Time Intrarenal Pressure Monitoring** The monitor displays a baseline IRP of 11 mmHg (15.41 cmH_2O), representing physiological resting pressure before procedural interventions.

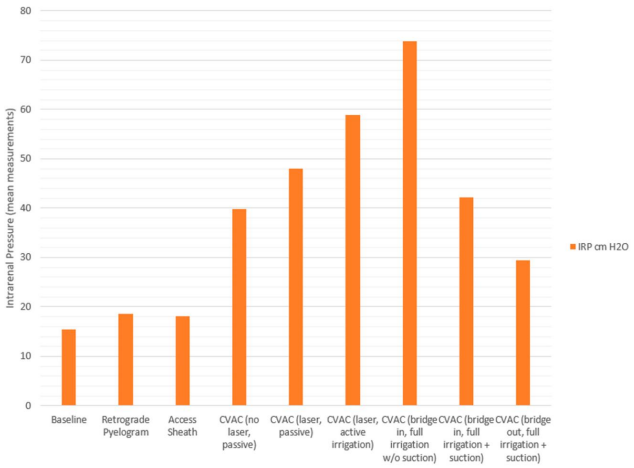

Figure 2: Mean intrarenal pressures (IRPs) across procedural stages and CVAC configurations during ureteroscopy with laser lithotripsy (ULL). IRPs increased from baseline 15.41 cmH_2O to peak values of 73.89 cmH_2O during CVAC use with active irrigation and no suction.

Poster 33

Minimally Invasive Approach to Retroperitoneal Lymph Node Dissection: A Bi-Institutional Case Series

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Introduction and Objective: Retroperitoneal lymph node dissection (RPLND) is a critical surgical procedure for staging and managing paratesticular rhabdomyosarcoma (RMS) in pediatric patients. While minimally invasive surgical (MIS) approaches, including laparoscopic and robot-assisted techniques, are well-documented in adult cases, their utilization in pediatric populations remains limited. This study evaluates the outcomes of MIS RPLND in pediatric patients with paratesticular RMS across two tertiary care centers.

Methods: A retrospective analysis was conducted on patients who underwent MIS RPLND for paratesticular RMS between 2012 and 2024. Data collected included demographics, tumor characteristics, neoadjuvant chemotherapy, operative details, and postoperative outcomes. Descriptive statistics were used to summarize findings.

Results: Eight patients (median age 12.6 years, IQR: 11.6, 13.8) underwent MIS RPLND, with equal distribution between laparoscopic and robot-assisted approaches. One patient (12.5%) received neoadjuvant chemotherapy. A modified template RPLND was performed in all patients, with equal distribution between right and left sided procedures. The median operative time was 436 min (IQR: 418, 450), with a median lymph node yield of 13 nodes (IQR: 11, 18). Three patients had positive lymph nodes. The median hospital stay was 2.5 days (IQR: 2, 3), with no postoperative complications reported. Over a median follow-up of 71.5 months (IQR: 41.3, 119), no retroperitoneal recurrences were observed. Details are depicted in Table 1.

Conclusions: MIS RPLND is a safe and effective surgical option for managing paratesticular RMS in pediatric patients. Broader adoption and further research involving larger cohorts are warranted to validate these findings and refine surgical practices.

Table 1. Details of patients undergoing MIS RPLND for PT-RMS

Patient	Age (years)	BMI (kg/m2)	Largest tumor dimension (cm)	Risk group	RMS	Tumor markers	Surgical approach	Template; Side	LN yield	No. of positive LN	Location of positive LN	FU (months)	Final disposition
1	12.8	20.1	4.1	Low	Embryonal	Normal LDH, AFP, and B-HCG	LP	M; R	10	0	-	116	Alive/ NED
2	12.3	23.1	12.6	Low	Embryonal	Normal LDH, AFP, and B-HCG	RA	M; L	21	0	-	18.37	Alive/ NED
3	16.3	25.7	2.3	Low	Embryonal	Normal AFP and B-HCG	LP	M; L	13	0	-	129.4	Alive/ NED
4	12.9	21.1	4.2	Low	Embryonal	NI/A	LP	M; R	17	0	-	52	Alive/ NED
5	11.8	21.1	4.6	Low	Embryonal	NI/A	LP	M; L	34	1	Para aortic	128	Alive/ NED
6	16.4	23.4	10.5	Low	Embryonal	Normal LDH, AFP, and B-HCG	RA	M; R	11	2	Paracaval; inter-aorta caval	10.1	Alive/ NED
7	11	16.23	3.7	Low	Embryonal	Mildly elevated LDH, normal AFP/B-HCG	RA	M; L	12	1	preaortic	91	Alive/ NED
8	10	19.29	5.4	Low	Embryonal	Elevated LDH, normal AFP/H-HCG	RA	M; R	10	0	-	89	Alive/ NED

RA = robot-assisted; LP = laparoscopic ; M = modified ; R = right ; L = left ; LN = lymph node ; FU = follow-up duration ; NED = no evidence of disease

Poster 35

24-Hour Urinary Calcium Analytes: "The Whole is Greater Than the Sum of the Parts"

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Introduction and Objective: The AUA guideline on urinary stone disease recommends metabolic evaluation of 24-h urine collections for all pediatric stone formers. Several urinary calcium analytes (UCA) are reported on metabolic urine evaluation. The relationship between these analytes and stone recurrence risk remains understudied. We studied the relationship between UCA and stone recurrence in a pediatric cohort to identify which is more predictive of recurrence risk.

Methods: 24-h urine metabolic evaluations of 80 pediatric urinary stone formers were reviewed. Patients with anatomic abnormalities, neurogenic bladder and medical conditions predisposing to urolithiasis were excluded. Only the patient's first 24-h urine collection was included. Cross-tabulation was used to study the association between abnormal 24-h UCA (calcium/kg, calcium/creatinine, SS CaOx, SS CaP) and stone recurrence.

Results: 76 patients (42 females, 55.3%) were analyzed with a median age at initial presentation of 13 (2–19) years. The median stone burden was 5 (2–20) mm and 16 (21.1%) had bilateral disease. The most common abnormality was hypercalciuria in 32 (42.1%) patients. Stone recurrence was observed in 36 (47.4%) patients after a median follow-up of 37.4 (IQR = 16.4–66.9) months. None of the studied UCA was solely associated with stone recurrence. Recurrence was observed in 33.3% of patients with all 4 normal UCA, 38.1% with 2 abnormal UCA, 60% with 3 abnormal UCA and 66.7% with all 4 abnormal UCA (Figure).

Poster 34

Cannabis Use is Associated with Lower Urinary Tract Symptoms in Pediatric Patients—A Large Claims Database Study

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Introduction and Objective: Recent cannabis legislation has raised concerns about cannabis use among adolescents and the associated effects on health. We sought to investigate whether cannabis use disorder (CUD) is associated with the diagnosis of lower urinary tract symptoms (LUTS) in pediatric patients.

Methods: We queried the TriNetX Research Network for previously healthy male and female patients under 18 years of age with or without a diagnosis of CUD. Propensity-score matching was conducted for demographic factors and comorbidities associated with LUTS. The primary outcomes were new diagnoses of all-cause LUTS, pelvic pain, overactive bladder (OAB), dysuria, or urinary tract infection (UTI) among patients with CUD compared to controls without CUD.

Results: We identified 4,859,819 male (12,099 with CUD, 4,847,720 without) and 4,274,461 female (12,349 with CUD, 4,262,112 without) patients for inclusion. After propensity-score matching, there was 11,840 male and 11,810 female patients in each arm with median ages of 15.6 and 15.5 years, respectively.

At 5 year follow up, significant increases in new diagnoses of pelvic pain (OR 2.3 [95% CI 1.8–2.9], $p < 0.01$), OAB (OR 1.6 [95% CI 1.9–2.7], $p < 0.01$), dysuria (OR 1.2 [95% CI 1.1–1.5], $p = 0.01$), and UTI (OR 1.8 [95% CI 1.5–2.1], $p < 0.01$) were observed among female patients with CUD compared to controls.
At 5 years follow up, significant increases in new diagnoses of pelvic pain (OR 3.8 [95% CI 2.4–5.9], $p < 0.01$), dysuria (OR 1.4 [95% CI 1.1–1.8], $p = 0.02$), and UTI (OR 1.7 [95% CI 1.2–2.6], $p < 0.01$) were observed in male patients with CUD compared to controls.

Conclusions: We observed significant increases in first-time LUTS diagnoses in pediatric patients with CUD compared to matched controls. Further investigation of how cannabinoids impact the urinary tract and pelvic floor is warranted.

Male Results

1 Year Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	0.7%	0.6%	1.2	0.9	1.7	0.2
Pelvic Pain	0.3%	0.1%	3.8	1.9	7.6	**< 0.01**
OAB	0.1%	0.1%	1.0	0.4	2.2	1
Dysuria	0.5%	0.2%	2.1	1.3	3.4	**< 0.01**
UTI	0.3%	0.1%	3.4	1.7	6.9	**< 0.01**

3 Years Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	1.3%	1.3%	1.0	0.8	1.3	1.0
Pelvic Pain	0.6%	0.2%	4.1	2.5	6.9	**< 0.01**
OAB	0.2%	0.3%	0.9	0.6	1.6	0.8
Dysuria	0.9%	0.5%	1.7	1.3	2.4	**< 0.01**
UTI	0.5%	0.3%	1.8	1.2	2.8	**< 0.01**

5 Years Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	1.5%	1.8%	0.8	0.7	1.0	0.1
Pelvic Pain	0.8%	0.2%	3.8	2.4	5.9	**< 0.01**
OAB	0.3%	0.4%	0.8	0.5	1.2	0.3
Dysuria	1.0%	0.8%	1.4	1.1	1.8	**0.02**
UTI	0.5%	0.3%	1.7	1.1	2.6	**< 0.01**

Female Results

1 Year Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	1.9%	1.0%	1.8	1.4	2.2	**< 0.01**
Pelvic Pain	1.2%	0.4%	3.0	2.2	4.2	**< 0.01**
OAB	0.4%	0.2%	2.1	1.3	3.4	**< 0.01**
Dysuria	1.5%	0.7%	2.2	1.7	2.9	**< 0.01**
UTI	2.2%	0.6%	3.5	2.7	4.5	**< 0.01**

3 Years Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	3.2%	2.5%	1.3	1.1	1.5	**< 0.01**
Pelvic Pain	2.0%	0.9%	2.4	1.9	3.0	**< 0.01**
OAB	0.9%	0.5%	1.8	1.3	2.6	**< 0.01**
Dysuria	2.5%	1.8%	1.4	1.2	1.7	**< 0.01**
UTI	3.4%	1.5%	2.3	1.9	2.7	**< 0.01**

5 Years Follow Up

	% Case	%Control	OR	95% CI (Lower)	95% CI (Upper)	p-value
All Cause LUTS	3.5%	3.3%	1.1	0.9	1.2	0.4
Pelvic Pain	2.3%	1.0%	2.3	1.8	2.8	**< 0.01**
OAB	1.0%	0.6%	1.6	1.2	2.1	**< 0.01**
Dysuria	2.8%	2.3%	1.2	1.0	1.5	**0.01**
UTI	3.7%	2.1%	1.8	1.5	2.1	**< 0.01**

Conclusions: Within the limitation of the study cohort, none of the 24-h urinary calcium parameters is solely associated with increased stone recurrence. Increasing number of abnormal urinary calcium analytes is associated with increased recurrence risk. Further research is needed to evaluate the relationship between these analytes and stone recurrence risk.

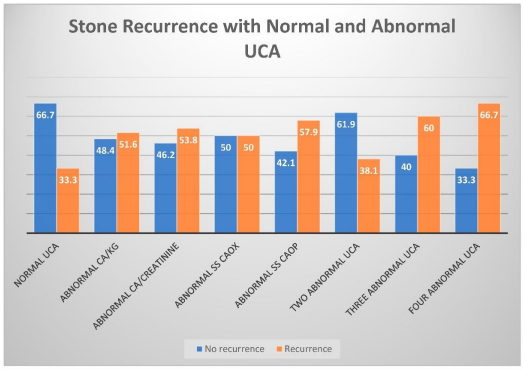

Figure: Stone Recurrence (%) with Normal and Abnormal Urine Calcium Analytes

Poster 36

Outcomes of prestenting versus primary ureteroscopy for pediatric ureteral and renal calculi

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Introduction and Objective: Ureteroscopy (URS) for definitive calculi treatment is often required in pediatric patients. Primary URS can minimize anesthesia exposure, hospital resources, and patient discomfort by reducing the total number of surgeries. However, prestenting can occur due to failed ureteroscopic access or concerns for complicated urinary tract infections (UTIs). In the absence of well-designed studies, some surgeons advocate for routine prestenting before URS in children. Prestenting entails additional exposure to anesthesia and increased healthcare costs. In this study, we compared the outcomes of primary URS and prestenting in children with calculi.

Methods: A retrospective review of all ureteroscopies for calculi over a seven-year period at a single institution by three pediatric urologists was performed. Patients' charts were reviewed for demographics, presentation, stone characteristics, and operative details. The study outcomes were surgical complications, UTIs, emergency department (ED) visits, hospital readmissions, and narcotic use within 30 days of URS.

Results: A total of 131 URS were performed between 2017 and 2024 in pediatric patients at the study institution. Primary URS was attempted in 97 patients, with successful ureteroscopic access in 76/97 (78.4%). Prestenting was required in the other 21 patients, and another 34 patients were prestented due to complicated UTI. When comparing successful primary URS (n = 76) and prestenting (n = 55), patients with primary URS were older. Gender, body mass index (BMI), stone location, and burden were not different. Although not statistically significant, patients who had primary URS had lower rates of overall complications (5.3% vs. 10.9%), UTI (1.3% vs. 3.6%), ER visits (7.9% vs. 10.9%), and hospital readmission (2.6% vs. 5.5%) within 30 days. A lower percentage of patients used opioid analgesics following primary URS (14.5% vs. 18.2%).

Conclusions: Primary URS was successful in most children with renal and ureteral calculi without increased risk of complications. Higher rates of UTI, ER visits, and readmissions were observed following prestenting.

Poster 37

Pubic Diastasis as a Predictor of Continence Outcomes in Isolated Male Epispadias

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Introduction and Objective: Isolated male epispadias presents as an abnormal dorsal opening of the urethral meatus. It occurs in 1:120,000 live male births. Like all pathologies within the Bladder Exstrophy-Epispadias Complex (BEEC), this condition is associated with varying degrees of widened pubic diastasis. This study sought to investigate the correlation between width of diastasis and continence outcomes.

Methods: An IRB-approved, prospectively maintained, single-institutional BEEC database was utilized to identify male patients with isolated epispadias. Electronic medical records were reviewed for data pertaining to patient demographics, their original epispadias revision surgeries, and continence procedures and outcomes. Width of pubic diastasis was recorded through measurements obtained in imaging or physical exam. Continence was described in terms of social continence or >3 h of daytime dry intervals between voids. These factors were assessed for their impact on continence outcomes.

Results: Of the 150 male epispadias cases reported in the database, 63 patients with complete data were identified. Of the 63 patients, 32 (51%) achieved social continence while the remainder are incontinent. Decreasing trends in mean width of pubic diastasis were observed in the continent group (2.13 cm, SD 1.36 vs. 2.65 cm, SD 1.18) when compared to the incontinent cohort. 15 of 32 continent patients did not require additional surgery to achieve continence while the remainder received 1–3 surgeries to achieve dryness. The 17 that required surgery had a significantly wider pubic diastasis (3.0 cm, SD 1.25 vs. 1.2 cm, SD 0.69) when compared to the nonsurgical group ($p < 0.001$).

Conclusions: This is the first study to suggest that width of pubic diastasis is directly correlated to achieving continence in the IME population. These findings can assist in clinical decision making when considering the need for continence surgery in these patients, while also helping to manage patient and parent expectations.

Poster 38

Use of Indocyanine Green for Evaluation of Testicular Viability in Torsion Patients

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Introduction and Objective: The decision of orchiopexy or orchiectomy in patients with testicular torsion is subjective and often biased by the time since the pain onset and the surgeon's judgment of the return of testicular blood flow after detorsion. We present our initial experience in using Indocyanine Green fluorescence imaging (ICG-FI) to objectively support the often-perplexing clinical decision of sparing or removing the ischemic testicle in patients presenting with testicular torsion.

Methods: Eleven patients underwent surgical exploration for testicular torsion at a single institution between September 2023 and September 2024. The primary surgeon made an initial decision of orchiopexy or orchiectomy after the ischemic testicle was de-torsed and wrapped in warm towels for a minimum of 10 min. Then, ICG was intravenously administered. After 30 s, testicular blood flow was examined using near-infrared fluorescence imaging, using the contralateral testis as a reference. The clinical decision of orchiopexy or orchiectomy was revisited according to fluorescence imaging findings.

Results: The average patient age at surgery was 13.3 (11–16) years. Preoperative duplex ultrasound confirmed absent or reduced blood flow to the affected testis in all 10 patients. The median duration (range) between symptom onset and surgery was 8.1 (4–20) hours. Testicular torsion was confirmed on surgical exploration in all patients. The degree of torsion ranged from 180–720°. Overall, 9 patients had orchiopexy and 2 had an orchiectomy of the torsed testicle. Contralateral orchiopexy was done in all patients. Based on clinical judgment, the operating surgeon initially decided on orchiopexy in 7 patients and orchiectomy in 3. ICG-FI findings supported the clinical decision of orchiopexy in all 7 patients and orchiectomy in 2 patients.

Conclusions: ICG-FI can be a valuable objective tool to support intraoperative clinical decision-making in patients with testicular torsion.

Poster 39

Varicoceles and Semen Analysis in Adolescents: What is the Current Practice?

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Introduction and Objective: While varicoceles are common amongst adults, their prevalence is rare in prepubertal patients and increase with pubertal development. Indications for varicocelectomy include (1) testicular hypotrophy, (2) pain or discomfort, and (3) infertility. In adults with varicoceles experiencing infertility, a semen analysis is routinely obtained pre- and post-varicocelectomy with improvement in semen parameters after surgery. In pediatric varicoceles, there are no guidelines regarding obtaining a semen analysis. Limited data from metanalyses suggest that these patients experience improvement in post-varicocelectomy semen analysis. Our objective is to determine the rates at which pediatric patients undergoing varicocelectomy have a post-procedural semen analysis performed.

Methods: Using the TriNetX database, we queried patients aged 13–17 who received a diagnosis of scrotal varices. From there, we queried (1) patients that underwent varicocelectomy and (2) those who underwent surgery and had a post-procedure semen analysis. We compared that to the number of patients aged 13–17 who completed a semen analysis regardless of diagnosis.

Results: Of the 2.79 million patients diagnosed with varicocele within the database from January 2020 to January 2025, 6831 (0.24%) aged 13–17 were identified with a diagnosis of varicocele, with 318 (4.7%) patients undergoing varicocelectomy, 10 (3.1%) received a post-operative semen analysis. There were 52 patients total that underwent a semen analysis, 19.2% of which were post-varicocelectomy.

Conclusions: Despite recommendations in the adult population, our data illustrates that semen analyses are not routinely performed in the pediatric population. Additionally, we found a very small percentage of pediatric and adolescent patients with varicoceles undergo surgical correction, which suggests varicoceles may often be incidental findings. This practice is consistent with data that suggests no significant harm from delayed intervention. Ultimately further studies are needed to demonstrate the effects of varicocelectomy on a pediatric or adolescent patient's semen parameters, which may guide future practice patterns.

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Crossed Paths: A Systematic Review Unveiling Patterns in Crossed Testicular Ectopia

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Introduction and Objective: Crossed Testicular Ectopia (CTE) is a rare congenital anomaly where both testes descend on one side of the body. Although previously believed to be exceedingly uncommon, the number of published cases has grown, suggesting it may be more prevalent than initially thought. CTE is associated with various abnormalities. This systematic review aims to clarify the impact of CTE on fertility, histopathology, associated congenital abnormalities, and potential long-term outcomes.

Methods: A systematic review of the literature to identify relevant studies on CTE. Inclusion criteria covered case reports, case series, and meta-analyses with individual case data published in English. Two reviewers independently extracted data, including demographic details, diagnostic methods, histological findings, and fertility status. Data analysis was performed using JMP software.

Results: We identified 417 cases of CTE, a significant increase from previous review. CTE was diagnosed preoperatively in only 42.6% of cases, with ultrasound and MRI achieving the highest diagnostic success rates. Histological abnormalities were common, observed in 66% of cases, including testicular dysgenesis, Leydig cell hyperplasia, and malignancy. Infertility was reported in 79.2% of patients, notably high even among those with unilateral undescended testes. Fusion anomalies involving the spermatic cord, vas deferens, or testes were documented in 9.5% of cases. Persistent Müllerian Duct Syndrome (PMDS) was the most common associated anomaly, identified in 33.3% of cases, and appeared to reduce the likelihood of fusion anomalies.

Conclusions: This review highlights CTE as a complex and potentially underdiagnosed condition with significant implications for fertility and cancer risk. Early diagnosis and intervention are essential to improving long-term outcomes, while future research should investigate the genetic factors underlying CTE and optimize diagnostic protocols.

Poster 42

Quantitative Analysis of Irrigation Fluid Conservation in Urologic Surgery Following Hurricane Helene-Induced Supply Disruption

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Introduction and Objective: Following Hurricane Helene's damage to Baxter's North Cove facility in September 2024, which produced 60% of the US IV fluid supply, healthcare facilities nationwide faced severe shortages. Urology was especially impacted due to its dependence on irrigation fluids. Despite conservation guidelines from the American Urologic Association, implementation varied across institutions. This study quantifies irrigation fluid usage in endoscopic urologic procedures at an academic medical center before and after the September 29, 2024 supply disruption.

Methods: An IRB-approved retrospective chart review analyzed irrigation fluid usage in endoscopic urologic procedures between July and October 2024, including cystoscopy, ureteroscopy, percutaneous nephrolithotomy, transurethral procedures, and holmium laser enucleation of the prostate. Data collected included procedure type, case duration, irrigation volume, surgeon, and specimen size if applicable. Fluid conservation strategies were implemented at individual surgeons' discretion without formal institutional guidelines. Statistical analysis compared fluid usage patterns across different surgeons and procedure types before and after the shortage ($p < 0.05$).

Results: Analysis of 315 urologic surgeries (244 pre-shortage, 71 post-shortage) revealed that PCNL and HoLEP were the most fluid-intensive (20,490 cc and 58,996 cc pre-shortage, respectively). Despite this, the proportion of these procedures did not significantly decrease post-shortage; PCNLs actually increased from 6.56% to 11.3%. Conversely, TURPs decreased from 6.56% to 0% despite using less fluid than PCNLs or HoLEPs. Individual PCNLs demonstrated substantial fluid conservation (20,490 cc to 11,238 cc, $p = 0.022$), while HoLEPs showed no significant reduction (58,996 cc to 63,500 cc, $p = 0.932$). TURBTs also showed reduced fluid usage (7895 cc to 6000 cc, $p = 0.036$) and shorter durations (67.5 to 41.0 min, $p = 0.003$).

Conclusions: These findings suggest case cancellations at this institution were implemented arbitrarily rather than strategically targeting fluid-intensive procedures, highlighting the need for data-driven conservation strategies during resource shortages.

Percutaneous Cystolitholapaxy And Open Cystolithotomy in Exstrophy-Epispadias Complex: A Comparative Approach To Bladder Stone Management

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Introduction and Objective: Exstrophy-epispadias complex (EEC) patients often present with attenuated fascia. Currently, there is no direct comparison of outcomes between percutaneous cystolitholapaxy and open cystolithotomy in this specific patient population. Thus, we sought to evaluate the therapeutic efficacy and associated morbidity of both surgical approaches in EEC patients.

Methods: Patients who underwent either their first percutaneous cystolitholapaxy or open cystolithotomy between 2003–2023 were identified using an IRB-approved institutional database of 1512 EEC patients. Data were collected on operative times, length of stay, stone-free rates, stone size, recurrence rates, and both intraoperative and postoperative complications.

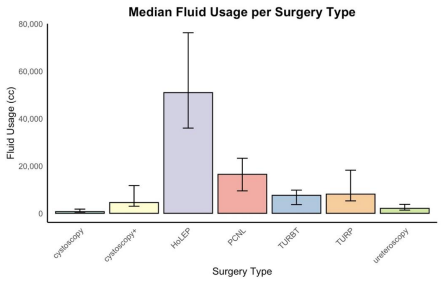
Results: Among 66 patients, 39 (57.58%) underwent percutaneous cystolitholapaxy, and 27 (42.42%) underwent open cystolithotomy. Median stone sizes were comparable between groups (4.00 vs. 4.50 cm, $p = 0.36$). The percutaneous approach resulted in significantly shorter operative times (126.00 vs. 203.00 min, $p < 0.0001$) and reduced hospital stays (1.00 vs. 3.00 days, $p = 0.0003$) relative to the open approach. Notably, both techniques achieved a 100% stone-free rate ($p > 0.99$). There were no differences in recurrence ($p = 0.11$) and cumulative incidence (HR 0.76, 95% CI 0.39–1.48, $p = 0.38$) between groups. Postoperative complications revealed a significantly higher incidence of vesicocutaneous fistulas in the open surgery group, with a rate of 22.22% compared to 0.00% in the percutaneous group ($p = 0.0038$).

Conclusions: Percutaneous cystolitholapaxy provided significant advantages for EEC patients, including shorter operative times and reduced hospital stays, with equivalent stone clearance. Moreover, open cystolithotomy carried a higher risk of vesicocutaneous fistula formation. These findings suggest percutaneous approaches may offer a safer and more efficient alternative for managing bladder stones in EEC patients.

Table 1. Operative course and complications

	Percutaneous	Open	*p*-value
No. Patients	n=39	n=27	
Duration of procedure, min, median (IQR)	126.0 [84.00, 145.00]	203.0 [173.00, 283.50]	**<0.0001**
Length of hospital stay, d, median (IQR)	1.00 [1.00, 1.00]	3.00 [1.00, 5.00]	**0.0003**
Stone free, n (%)	39.00 (100.00)	28.00 (100.00)	>0.99
Primary stone component			
Carbonate Apatite	17.00 (43.59)	13.00 (48.15)	0.85
Ammonium Magnesium Phosphate	17.00 (43.59)	9.00 (33.33)	
Calcium Hydrogen Phosphate Dihydrate	2.00 (5.13)	1.00 (3.70)	
Calcium Oxalate Dihydrate	1.00 (2.56)	1.00 (3.70)	
Ammonium Hydrogen Urate	2.00 (5.13)	2.00 (7.41)	
Unidentified	0.00 (0.00)	1.00 (3.70)	
Stone size, cm, median (IQR)	4.00 [2.50, 5.00]	4.50 [2.30, 6.70]	0.32
Recurrence, n (%)	29.00 (74.36)	15.00 (55.56)	0.11
Intraoperative complications	0.00 (0.00)	0.00 (0.00)	>0.99
Postoperative complications			
Bleeding	1.00 (2.56)	0.00 (0.00)	>0.99
Pain	1.00 (2.56)	0.00 (0.00)	>0.99
Pyelonephritis	1.00 (2.56)	0.00 (0.00)	>0.99
Seroma	0.00 (0.00)	1.00 (3.70)	0.41
Suprapubic tube dysfunction	1.00 (2.56)	0.00 (0.00)	>0.99
Vesicocutaneous fistula	0.00 (0.00)	6.00 (22.22)	**0.0038**

Figure 1: Median fluid usage (cc) by surgery type with the interquartile range



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A Single Institution's Perioperative Management of Cloacal Exstrophy

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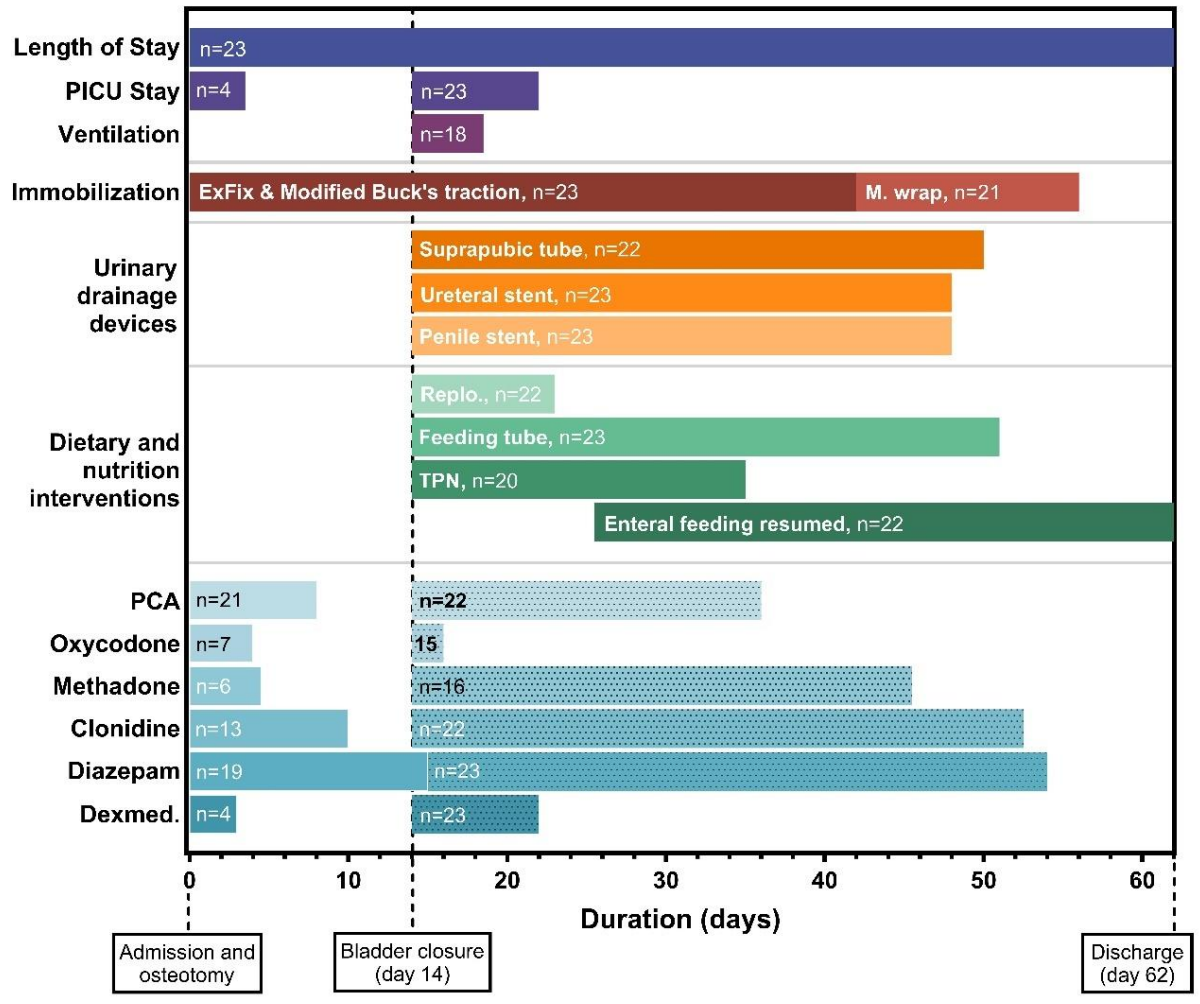
Introduction and Objective: Cloacal exstrophy (CE), the most severe Exstrophy-Epispadias Complex phenotype, requires multiple early-life surgeries. This study sought to describe optimal peri- and postoperative management and how these impact closure outcomes.

Methods: An institutionally approved database was used to identify CE patients who underwent pelvic osteotomy and closure between 2017–2022. Electronic health records were reviewed for demographics and perioperative interventions. Outcomes included closure success, complications, length of stay, and return of enteral feeding. Failed closures were defined as bladder prolapse, vesicocutaneous fistula, or bladder dehiscence requiring repeat operation.

Results: 23 CE patients underwent bladder closure. The median age at pelvic osteotomy was 1.93 years (IQR, 1.48–2.43, range 1–7). A median delay of 14 days (IQR, 10–16) between osteotomy and closure was used in 21/23 patients. External fixation and Buck's traction remained for average of 42 (IQR, 42–47) days. Post-closure, median PICU stay was 8 days (IQR, 7–13) with 78% requiring invasive ventilation for an average of 4.5 days (IQR, 2–13.8). All patients required blood transfusions, median two transfusions (IQR, 1–3). Enteral feeding resumed by day 11.5 (IQR, 5.8–16.5) for all but one and parenteral nutrition averaged 21 days (IQR, 13.5–53). Patient controlled analgesia (PCA) was used in all patients for both pre- and post-closure, morphine most commonly (76% and 48%, respectively). Opioid use totaled 45 days (IQR, 40–60). Acetaminophen use was universally and NSAIDs in 43% (pre) and 57% (post), clonidine in 62% (pre) and 96% (post). Bladder closure was successful in 87%, while 13% required repeat operation. Length of stay averaged 62 days (IQR, 51–86).

Conclusions: Key strategies for CE closure success included analgesia, immobilization, aggressive nutrition, and temporary urinary diversion. Our high success rate highlights this approach's effectiveness.

Figure 1: Average hospital course



Averages are reported as medians for all variables. Durations are reported in consecutive days, except for medications which are reported in cumulative days. Sample sizes: 21 pre-closure patients and 23 post-closure patients.

(*PICU*, pediatric intensive care unit; *ExFix*, external fixation; *M. wrap*, mermaid wrap; *Replo.*, Replogle tube for suction; *TPN*, total parenteral nutrition; *PCA*, patient-controlled analgesia; *Dexmed.*, dexmedetomidine)

Poster 44

Patients diagnosed with Bladder Cancer at a Young Age: Characteristics and Long-Term Outcomes.

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Introduction and Objective: Limited data exist regarding patients diagnosed with bladder cancer at a young age. This study aimed to describe the characteristics, management, and long-term outcomes of individuals diagnosed with bladder cancer at a young age.

Methods: We included all men <40 years and women < 50 years who underwent cystoscopy and had a bladder cancer diagnosis from 2000–2024 at Johns Hopkins. Baseline demographic and oncologic characteristics were collected.

Results: We identified 106 patients, 58% female. Median age at diagnosis was 38 (standard deviation SD 8) years. Median BMI was 26.8 (SD 7.8) kg/m2; 67% patients identified as White and 17% as Black. Thirty-nine (37%) were current or former smokers, with a median of 10 (SD 10) pack-year smoking history. At diagnosis, 51% patients had low grade disease, 49% high grade. Stage at diagnosis was Ta in 60% T1 in 21%, T2 in 9%, T3 in 4%, T4 in 0, and pure Tis in 6%. Histology was pure urothelial in 90% and urothelial with variant subtype present in 10%. Treatment included intravesical therapy (59%), neoadjuvant chemotherapy (13%) adjuvant therapy (10%), and cystectomy (24%); 35% of our cohort had recurrence of disease, 13% had progression. The indication for cystectomy was progression to muscle invasive disease (12%), persistence of non-muscle invasive disease (36%), muscle invasive disease at time of diagnosis (20%), and non muscle-invasive bladder cancer with high-risk variant subtypes (28%). At latest follow-up, 61% patients had no evidence of disease, 9% were being treated for recurrence, 8% had metastatic disease, and 15% were deceased.

Conclusions: Young patients with bladder cancer represent a unique cohort of individuals whose care can be complicated by protracted recurrence.

Table 1: Patient Demographics, Clinical Course, and Outcomes.

Characteristic, n (%)	Total Cohort (n = 104)
Age at diagnosis, years (median, SD)	
Male	38 (8)
Female	40 (8)
Total	38 (8)
Year at Diagnosis, By Quintiles	
Quintile 1	2011
Quintile 2	2015
Quintile 3	2019
Quintile 4	2021
Quintile 5	2024
BMI, kg/m^2 (median, SD)	26.8 (7.8)
Race	
White	70(67%)
Black	18 (17%)
Hispanic	5 (5%)
Asian	5 (5%)
Other	6 (6%)
Sex	
Female	60 (58%)
Smoking History	
Current	22 (21%)
Prior	17 (16%)
Never Smoker	65 (63%)
Pack-Year History (median, SD)	10 (10)
Occupation-related environmental exposure*	
Yes	9 (8%)
None/Unknown	97 (92%)
Grade at Diagnosis	
Low Grade	53 (51%)
Low grade Ta	53 (100%)
Low grade T1	0 (0%)
High Grade	51 (49%)
High Grade Ta	9 (18%)
With concomitant Tis	2 (4%)
High Grade T1	22 (43%)
With concomitant Tis	2 (4%)
High Grade T2	9 (9%)
High Grade T3+	4 (4%)
With concomitant Tis	1 (1%)
Pure Tis	6 (6%)
Histology at Diagnosis	
Pure Urothelial	94 (90%)
Variant Subtypes	10 (10%)
Squamous	8 (80%)
Small Cell/Neuroendocrine	1 (10%)
Glandular	1 (10%)
Papillary Urothelial Neoplasm of Low Malignant Potential (PUNLMP)	3 (3%)
Intravesical Therapy	61 (59%)
BCG	37 (61%)
Mitomycin	23 (38%)
Gemcitabine/ Docetaxel	19 (31%)
Recurrence of Disease, stratified by stage and grade at diagnosis	36 (35%)
LgTa	20 (56%)
HgTa	4 (11%)
HgT1	8 (22%)
HgT1 with CIS	2 (6%)
Tis	2 (6%)
Progression of Disease, stratified by stage and grade at diagnosis	13 (13%)
LgTa	7 (54%)
HgTa	2 (15%)
HgT1	1 (8%)
HgT2	2 (15%)
Tis	1 (8%)
Systemic Therapy	
Neoadjuvant Chemotherapy	14 (13%)
Adjuvant Chemotherapy	10 (10%)
Cystectomy	25 (24%)
Progression to muscle invasive disease	3 (12%)
Muscle Invasive Disease	5 (20%)
Multifocal high volume recurrence	9 (36%)
Variant Histology	7 (28%)
Not a candidate for intravesical therapy	1 (4%)
Clinical Status at Latest follow-Up	
No Evidence of Disease	63 (61%)
Recurrence	9 (9%)
Evidence of Metastatic Disease	8 (8%)
Lost to Follow Up	6 (6%)
Currently undergoing therapy	3 (3%)
Deceased due to disease	12 (12%)
Deceased due to other causes	3 (3%)

*occupations related to environmental exposure included work in the textile industry, construction, coal mining, and house cleaning

Poster 45

GLP1 Agonists Associated with Reduced Metastatic Spread and Mortality in Diabetic Patients with Bladder Cancer.

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Introduction and Objective: While obesity and metabolic syndrome are risk factors for bladder cancer, evidence is inconclusive regarding their effects on long-term survival. GLP-1 agonists (GLP1a) are approved to treat both diabetes and metabolic syndrome. We hypothesized that GLP1a use in Type 2 diabetics would decrease the risk of metastatic progression and mortality of bladder cancer (BCa) as compared to patients on insulin or metformin.

Methods: This retrospective cohort database study with propensity-score matching (PSM) was conducted using the TriNetX database, a global electronic health records database. Cohorts included adults with Type 2 diabetes, who were on either GLP1a and no insulin (cohort A), insulin and no GLP1a (cohort B), GLP1a and no metformin (cohort C), or metformin and no GLP1a (cohort D), and were subsequently diagnosed with BCa. We compared cohorts A with B, and C with D after matching for age, race, obesity, CKD, prior history of malignancy, and economic status. Odds ratios with 95% confidence intervals were calculated.

Results: There were 33,371 patients in this study with an average age of 59.5 years old. 451 (1.4%) were in Cohort A, 17,343 (52.0%) were in Cohort B, 688 (2.1%) were in Cohort C, and 14,889 (44.6%) were in Cohort D.

After 1:1 PSM, the ten-year odds of distant metastases in cohorts A vs B was 2.268% vs 11.268% ($p < 0.0001$). Odds of mortality in cohorts A vs B was 5.973% vs 31.858% ($p < 0.0001$). Odds of distant metastases in cohorts C vs D was 4.441% vs 7.919% ($p = 0.0092$). Odds of mortality in cohorts C vs D was 19.124% vs 30.073% ($p < 0.0001$).

Conclusions: In this large database cohort study of patients with Type 2 diabetes who developed BCa, GLP1a use was associated with a decreased risk of metastatic progression and overall mortality compared to both insulin and metformin.

Poster 46

Hemoglobin, Albumin, Lymphocyte, Platelet (HALP) Score: A Novel Effect Modifier on Frailty in Bladder Cancer

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Introduction and Objective: Frailty is the age-related increased vulnerability to adverse health outcomes due to decreased physiologic reserve. A variety of frailty indices have been validated for prognosticating overall survival in patients with muscle-invasive bladder cancer (MIBC) including the Modified 5 item frailty index (MFI-5). Hemoglobin, Albumin, Lymphocyte, Platelet (HALP) Score is a novel immune-nutritional marker combining common laboratory data which has been demonstrated to predict overall survival in a variety of cancer models. We sought to examine HALP as an effect modifier of MFI-5 in patients with MIBC undergoing radical cystectomy.

Methods: We conducted a retrospective multi-institutional study using the national healthcare organization database TrinetX. We identified 136 patients from 2010–2023 that had cT2-4N0-3M0 urothelial bladder cancer that underwent radical cystectomy. Patients HALP score was calculated 3-months prior to radical cystectomy. Survival outcomes were compared using Kaplan-Meier analyses with Log Rank test.

Results: 53 patients had MFI-5 low while 83 patients had MFI-5 high. The median overall survival of patients with MFI-5 low was 321.38 days (CI: 295.30–347.45) compared to 312.04 days in the MFI-5 high patients (CI: 291.26–332.81) (p = 0.326). Within the subgroup of MFI-5 high, patients with a high HALP had a median overall survival of 333.96 days (CI: 312.72–355.20) while patients with a low HALP had a median overall survival of 277.09 days (CI 238.12–316.06) (p = 0.012).

Conclusions: Patients with MFI-5 low had equivalent overall survival compared to patients with MFI-5 high. Patients with a high HALP score and MFI-5 high had improved overall survival compared to patients with a low HALP score and MFI-5 high. HALP may augment MFI-5′s ability to prognosticate overall survival MIBC by incorporating common laboratory data with a patient's past medical history.

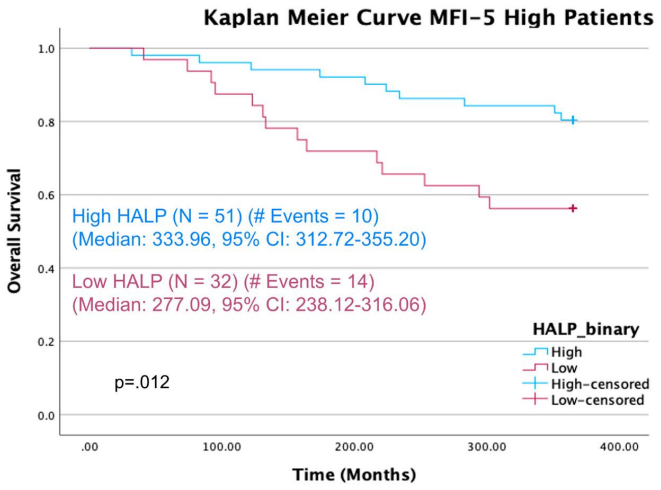

Figure 1. Kaplan Meier Analyses. Patients with MFI-5 high were then stratified by HALP score and overall survival was compared. Comparisons conducted over pooled strata. Log Rank test used to calculate statistical significance. Significance was interpreted as $p \leq 0.05$.

Poster 47

Comparing Outcomes of Bacillus Calmette-Guérin vs Gemcitabine/Docetaxel as First-Line Therapy for High-Risk Non-Muscle Invasive Bladder Cancer

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Introduction and Objective: Due to the ongoing Bacillus Calmette-Guérin (BCG) shortage, gemcitabine/docetaxel (gem/doce) has been proposed as an alternative treatment for non-muscle invasive bladder cancer (NMIBC). Our study aimed to compare cancer-free survival (CFS) between gem/doce and BCG as first-line therapies for high-risk NMIBC.

Methods: We used an in-house retrospective database to identify patients diagnosed with NMIBC at our institution. We selected those with high-risk disease and grouped them based on induction and maintenance treatment with either BCG or gem/doce. Groups were matched 2:1 (BCG:gem/doce) based on smoking status and pack-years. CFS was calculated as the time between initial diagnosis and recurrence (if applicable) or most recent urology follow-up. Statistical analysis included t-tests, Fisher's exact test, and survival analysis.

Results: We identified 161 patients who completed induction and maintenance with either BCG or gem/doce. Of these, 86 had high-risk disease and groups were matched to 36 and 16 patients in the BCG and gem/doce groups, respectively. Baseline demographics are shown in Table 1. No significant difference in overall (p = 0.06) or high-grade (p > 0.9) recurrence was found (Fisher's exact test). The median CFS was 33.5 months for BCG and 18.0 months for gem/doce (p = 0.01, Log-rank, Fig. 1). The hazard ratio for gem/doce vs. BCG was 2.8 (95% CI, 1.3–6.1).

Conclusions: Our study suggests no significant difference in recurrence rates between BCG and gem/doce for high-risk NMIBC. However, the BCG group demonstrated significantly longer CFS. Although limited and retrospective, our findings highlight the need for further prospective studies to clarify these results.

Figure 1. CFS for patients with high risk NMIBC treated with BCG or gem/doce (p=0.01,HR = 2.8).

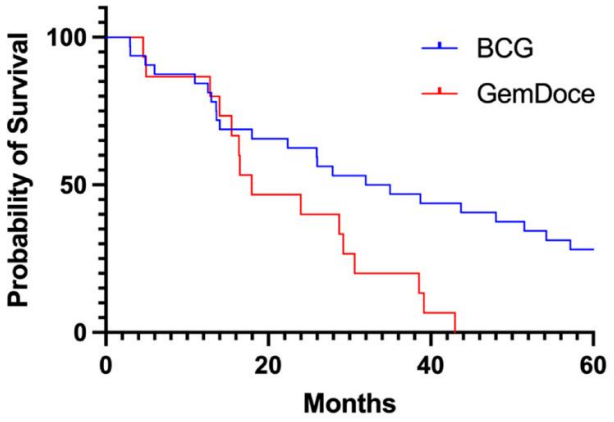

Table 1. Baseline demographics for patients with high risk NMIBC, by treatment

	BCG (n=32)	Gem/Doce (n=16)	p-value
Male	24	12	>0.99
Female	8	4	
Age at diagnosis (mean ± SD)	74.5 ± 9.5	75.6 ± 10.4	0.72
Pack Years (mean ± SD)	35.2 ± 20.3	33.4 ± 20.1	0.82

Poster 48

Intravesical Bacillus Calmette-Guerin Therapy and Disseminated Infection: A VigiBase Analysis

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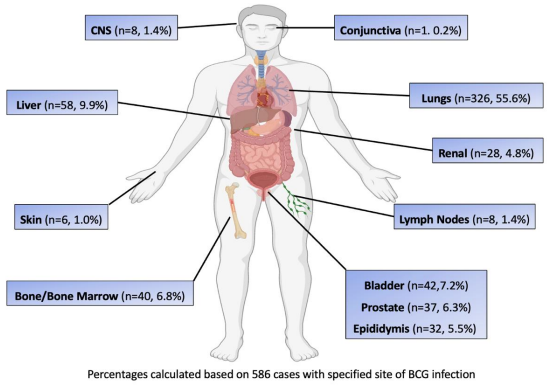
Introduction and Objective: Bacillus Calmette-Guerin (BCG) is the most common intravesical therapy for non-muscle invasive bladder cancer. While most adverse drug reactions (ADRs) are minor, disseminated BCG infection can cause serious effects. We analyzed ADRs, focusing on disseminated infection, using an international pharmacovigilance database.

Methods: The World Health Organization's global database of individual case safety reports (VigiBase) was queried for de-duplicated records of ADRs associated with intravesical BCG administration for bladder cancer in adult patients between 1987 and 2024. A descriptive analysis of all unique reports of disseminated BCG infection was performed. Disproportionality analysis with a case/non-case approach was also performed to measure the reporting odds ratio (ROR) of disseminated BCG infection with intravesical BCG administration.

Results: A total of 5455 unique reports with 15020 ADRs to intravesical BCG were identified. Disseminated BCG infection was the most reported ADR (n = 1715, 11.4%), followed by fever (n = 982, 6.5%), fatigue (n = 416, 2.8%), dysuria (n = 412, 2.7%), and hematuria (n = 386, 2.6%); 93.6% (n = 1606) of reported BCG infections were severe or life-threatening. Disseminated BCG infection was recorded in 1534 unique reports, 92 (6%) of which included patient death as an ultimate outcome. Most reports were in Europe (n = 997, 65%) and peaked in 2017 (n = 164, 11%). Common ADRs concurrently listed in reports of disseminated BCG infection included fever (n = 268, 17.5%), fatigue (n = 136, 8.9%), sepsis (n = 72, 4.7%), chills (n = 79, 5.1%), and hematuria (n = 65, 4.2%). Specific sites of dissemination, when reported, are displayed in Fig. 1. On disproportionality analysis, disseminated BCG infection showed a significant signal for intravesical BCG (ROR = 9681, 95%CI: 8697–10774).

Conclusions: This study provides the first detailed report on disseminated BCG infection from intravesical therapy using an international pharmacovigilance database. Urologists should remain vigilant to prevent patient harm.

Figure 1. Reported Sites of Disseminated BCG Infection



Percentages calculated based on 586 cases with specified site of BCG infection

Poster 49

Tumor Size is Associated with Mortality for High-Grade Upper-Tract Urothelial Carcinoma

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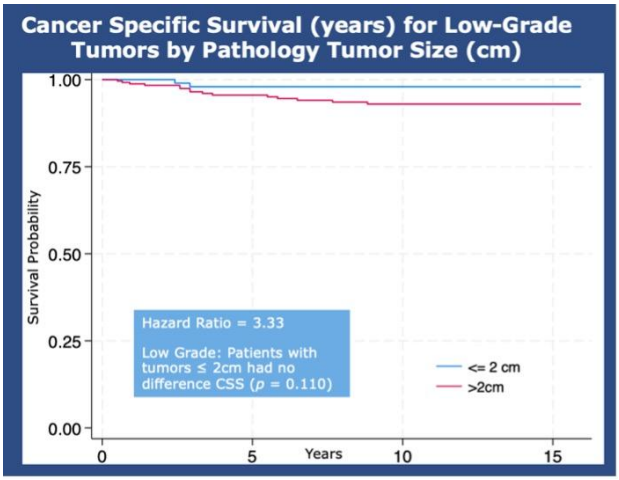
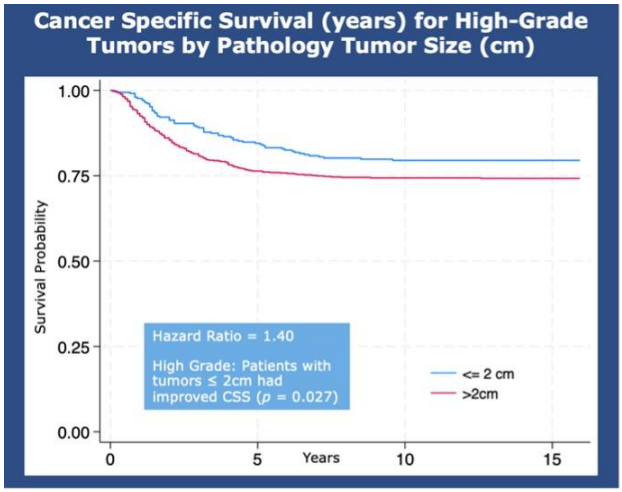
Introduction and Objective: Tumor size may impact disease outcomes for Upper-Tract Urothelial Carcinoma (UTUC). In that regard, guidelines panels lack consensus. The EAU UTUC guidelines factor tumor size in risk stratification whilst the AUA UTUC guidelines do not. Here, we evaluate UTUC tumor size and association with cancer outcomes factoring in stratification by pathologic grade (low vs. high).

Methods: A retrospective cohort study was performed of patients who underwent radical nephroureterectomy (RNU) between January 2000 and December 2020 at seven high-volume tertiary care centers in the United States. STATA 18.5 was used for Kaplan-Meier survival analysis.

Results: 2182 patients with a median age at RNU of 71 were included. Over 90% of the cohort was Caucasian and two-thirds were male. One-fifth of tumors were low grade, half of the tumors were located in the renal pelvis, one-fourth were multifocal. At a median follow-up of 33 months, 905 patients (41.9%) died of which 379 patients (45.3%) died of UTUC. For low-grade tumors, there was no difference in cancer-specific survival based on tumor size (p = 0.110) (Fig. 1). In patients with high-grade tumors, tumor size smaller than 2 cm was associated with improved cancer-specific survival (HR = 1.40, p = 0.027) (Fig. 2). Further analysis sub-stratifying by tumor location (renal pelvis or ureter) did not identify different cancer-specific survival metrics (p = 0.143).

Conclusions: Larger tumor size is associated with inferior cancer-specific survival for high-grade but not low-grade UTUC. These considerations are critical for patient counseling as well as construction of surveillance regimens following RNU.





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Impact of Detrusor Muscle Sampling on Recurrence in Low Grade Ta Urothelial Carcinoma of the Bladder

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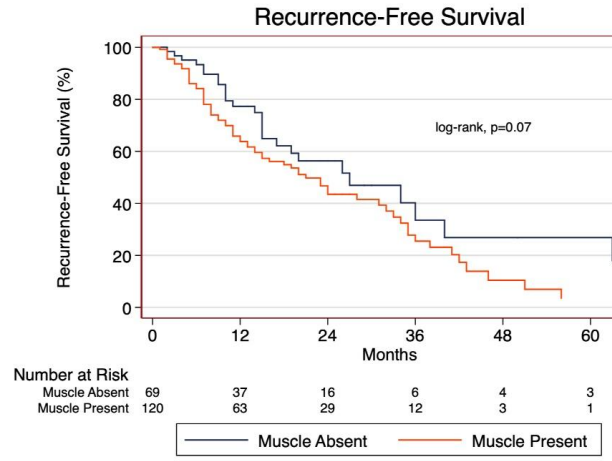
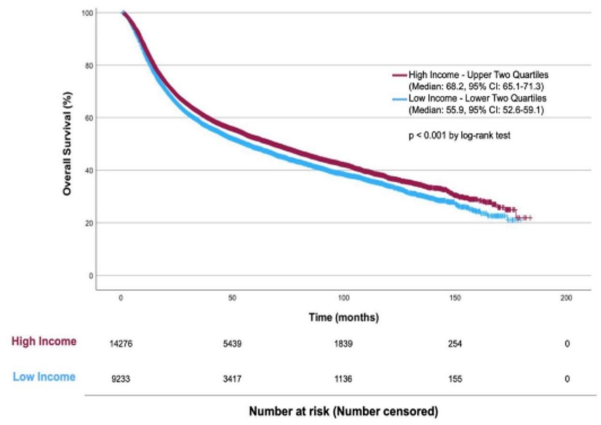
Introduction and Objective: Transurethral resection of bladder tumor (TURBT) is the primary diagnostic and treatment approach for bladder cancer. Obtaining detrusor muscle (DM) in the pathology report indicates resection quality and lowers early recurrence risk. However, DM resection may contribute to bladder dysfunction. In low-grade pTa (LgTa) bladder cancer, the need for DM sampling is under-researched. We examine the impact of DM sampling on recurrence-free survival (RFS) in LgTa patients.

Methods: A retrospective analysis of adult patients with diagnosed LgTa bladder tumor who underwent TURBT at JHU from 2010 to 2024 was performed. The Kaplan-Meier method and log-rank test compared RFS between patients with and without DM. Univariable and multivariable Cox regression analyses evaluated DM sampling's impact on recurrence risk.

Results: Among 189 patients, 120 (63%) patients had DM present in the pathologic report. Over a 12 month follow-up, 95 (50%) patients experienced recurrence: 27 (39%) in the DM-absent group and 68 (57%) in the DM-present group. There was no significant difference in RFS between the 2 groups (log-rank $p = 0.07$); 1-year RFS was 77.3% (95% CI 63.4–86.5%) in the DM-absent group and 63.8% (95% CI 53.6–72.3%) in the DM-present group (Fig. 1). The absence of DM was not significantly associated with recurrence risk (hazard ratio (HR) = 0.7, 95% CI: 0.4–1.1, $p = 0.07$). On multivariable analysis adjusting for tumor size, multifocality, and perioperative intravesical therapy, there was no significant association between DM sampling and tumor recurrence (HR = 0.7, 95% CI: 0.4–1.2, $p = 0.2$).

Conclusions: We found that the absence of DM sampling during TURBT for LgTa disease had no impact on tumor recurrence. Given the potential complications associated with DM sampling, our findings suggest that detrusor sampling may be omitted in the management of LgTa tumors.





Income Disparities in Survival and Receipt of Neoadjuvant Chemotherapy and Pelvic Lymph Node Dissection for Muscle-Invasive Bladder Cancer

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Introduction and Objective: uscle-invasive bladder cancer (MIBC) is a potentially fatal disease, especially in the setting of locally advanced or node-positive disease. Adverse outcomes have also primarily been associated with low-income status, as has been reported in other cancers. While the adoption of neoadjuvant cisplatin-based chemotherapy (NAC) followed by radical cystectomy (RC) and pelvic lymph node dissection (PLND) has improved outcomes, these standard-of-care treatments may be underutilized in lower-income patients. We sought to investigate the economic disparities in NAC and PLND receipt and survival outcomes in MIBC.

Methods: Utilizing the National Cancer Database, a retrospective cohort analysis of cT2-4N0-3M0 BCa patients with urothelial histology who underwent RC was conducted. The impact of income level on overall survival (OS) and the likelihood of receiving NAC and PLND was evaluated.

Results: A total of 25,823 patients were included. This study found that lower-income patients were less likely to receive NAC and adequate PLND (≥15 LNs). Moreover, lower-income patients exhibited worse OS (Median OS 55.9 months vs. 68.2 months, $p < 0.001$). Our findings also demonstrated that higher income, treatment at academic facilities, and recent years of diagnosis were associated with an increased likelihood of receiving standard-of-care modalities and improved survival.

Conclusions: Even after controlling for clinicodemographic variables, income independently influenced the receipt of standard MIBC treatments and survival. Our findings identify an opportunity to improve the quality of care for lower-income MIBC patients through concerted efforts to regionalize multi-modal urologic oncology care.

	Treatment Receipt		
	RC	RC + NAC + PLND	*p*-Value *
	Count (%)	Count (%)	
Median Age	70	66	**<0.001**
Sex			
Male	13,226, 75.9%	6365, 75.8%	0.864
Female	4200, 24.1%	2032, 24.2%	
Race			
White	15,563, 89.3%	7513, 89.5%	0.909
Black	993, 5.7%	468, 5.6%	
Other	870, 5.0%	416, 5.0%	
CCI			
0	11,597, 66.5%	6069, 72.3%	**<0.001**
1	3933, 22.6%	1564, 18.6%	
2	1304, 7.5%	496, 5.9%	
3+	592, 3.4%	268, 3.2%	
Insurance			
No Insurance	391, 2.2%	185, 2.2%	**<0.001**
Private	5133, 29.5%	3232, 38.5%	
Medicaid	777, 4.5%	470, 5.6%	
Medicare	11,125, 63.8%	4510, 53.7%	
Income			
Low Income	7132, 40.9%	2994, 35.7%	**<0.001**
High Income	10,294, 59.1%	5403, 64.3%	
Facility Type			
Non-Academic	9117, 52.3%	3720, 44.3%	**<0.001**
Academic	8309, 47.7%	4677, 55.7%	
Year of Diagnosis			
2004–2011	7246, 41.6%	1544, 18.4%	**<0.001**
20012–2019	10,180, 58.4%	6853, 81.6%	
cT Stage			
2	14,187, 81.4%	6702, 79.8%	**0.009**
3	2011, 11.5%	1045, 12.4%	
4	1228, 7.0%	650, 7.7%	
cN Stage			
0	16,336, 93.7%	7532, 89.7%	**<0.001**
1	547, 3.1%	457, 5.4%	
2	463, 2.7%	324, 3.9%	
3	80, 00.5%	84, 1.0%	

Poster 52

Clinical Characteristics, Management Patterns, and Survival Outcomes of Testicular Germ Cell Tumors in Younger Versus Older Patients: A Population-Based Analysis

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Introduction and Objective: There has been an increase in the incidence of testicular germ cell tumors (TGCTs) among older men aged over 45 in the past two decades. Given the current lack of comprehensive up-to-date comparative data, we sought to characterize clinicopathologic features, management patterns, and survival outcomes among men diagnosed with TGCTs at a younger versus older age.

Methods: The Surveillance, Epidemiology, and End Results database was used to identify all patients aged 15–70 years who were diagnosed with TGCTs after orchiectomy between 2004 and 2021. Comparative statistics assessed differences in clinicopathologic characteristics and management patterns between younger (15–44) and older (45–70) patients. The Kaplan-Meier method and log-rank test were used to evaluate cancer-specific survival (CSS) by age group.

Results: A total of 34,738 patients were included in the analysis, of whom 5719 (16.5%) were in the older age group. Differences in clinicopathologic characteristics between age groups are shown in Table1. Notably, older patients presented with more seminomas and stage I disease compared to younger patients. Among stage I patients, there were no significant differences in management patterns by age. Older men with TGCTs exhibited worse 5-year CSS compared to younger men across different histology and stage groups; however, while statistically significant, differences in CSS were clinically significant mostly for stage III disease (Table2).

Conclusions: Older men with TGCTs appear to present with higher rates of seminomas and stage I disease, as well as potentially more aggressive stage III disease, compared to younger men. Understanding how age influences TGCT phenotype can help inform management strategies.

Table 1. Clinicopathologic characteristics of patients in the analytic cohort.

Characteristic	N (%)			p-value
	Total	Group 1 (15-44 yo)	Group 2 (45-70 yo)	
Number of Patients	34738 (100)	29019 (83.5)	5719 (16.5)	
Race				
White	30960 (89.1)	25809 (88.9)	5151 (90.1)	**<0.001**
Black	908 (2.6)	731 (2.5)	177 (3.1)	
Other	1938 (5.6)	1678 (5.8)	260 (4.5)	
Unknown	932 (2.7)	801 (2.8)	131 (2.3)	
Marital Status				
Single	18464 (53.2)	16748 (57.7)	1716 (30.0)	**<0.001**
Married/Partnership	14106 (40.6)	10505 (36.2)	3601 (63.0)	
Unknown	2168 (6.2)	1766 (6.1)	402 (7.0)	
Year of Diagnosis				
2004-2009	10588 (30.5)	8915 (30.7)	1673 (29.3)	**0.010**
2010-2015	11839 (34.1)	9795 (33.8)	2044 (35.7)	
2016-2021	12311 (35.4)	10309 (35.5)	2002 (35.0)	
Histological Subtype				
Seminoma	18989 (54.7)	14489 (49.9)	4500 (78.7)	**<0.001**
NSGCT	4869 (14.0)	4492 (15.5)	377 (6.6)	
Mixed GCT	10880 (31.3)	10038 (34.6)	842 (14.7)	
Detailed Histological Subtype				
Seminoma	18989 (54.7)	14489 (49.9)	4500 (78.7)	**<0.001**
NSGCT, unspecified	665 (1.9)	620 (2.1)	45 (0.8)	
Embryonal carcinoma	2737 (7.9)	2534 (8.7)	203 (3.6)	
Yolk sac tumor	315 (0.9)	277 (1.0)	38 (0.7)	
Teratoma	515 (1.5)	468 (1.6)	47 (0.8)	
Teratocarcinoma	491 (1.4)	461 (1.6)	30 (0.5)	
Choriocarcinoma	146 (0.4)	132 (0.5)	14 (0.2)	
Mixed GCT	10880 (31.3)	10038 (34.6)	842 (14.7)	
Clinical Stage at Presentation				
I	24486 (70.5)	20318 (70.0)	4168 (72.9)	**<0.001**
II	3884 (11.2)	3269 (11.3)	615 (10.7)	
III	4298 (12.4)	3722 (12.8)	576 (10.1)	
Unknown	2070 (5.9)	1710 (5.9)	360 (6.3)	
Median Tumor Size (cm)	4.0 [2.5-6.0]	4.0 [2.5-5.9]	4.4 [2.8-6.0]	**<0.001**
Lymphovascular Invasion				
Absent	27385 (78.8)	22832 (78.7)	4553 (79.6)	0.1
Present	7353 (21.2)	6187 (21.3)	1166 (20.4)	

NSGCT = nonseminomatous germ cell tumor; GCT = germ cell tumor

Table 2. Five-year cancer-specific survival probabilities for patients with testicular germ cell tumors.

Group	5-year CSS (95% CI)			
	Overall	Group 1 (15-44 yo)	Group 2 (45-70 yo)	Log-rank p-value
All GCT	96.9% (96.7-97.1%)	97.0% (96.8-97.2%)	96.3% (95.8-96.9%)	**0.0013**
Seminoma - All	98.7% (98.6-98.9%)	99.0% (98.8-99.2%)	97.9% (97.4-98.3%)	**<0.001**
Stage I	99.5% (99.3-99.6%)	99.6% (99.5-99.7%)	99.0% (98.6-99.3%)	**<0.001**
Stage II	97.3% (96.3-98.0%)	97.6% (96.5-98.4%)	96.3% (94.0-97.8%)	0.2
Stage III	90.5% (88.5-92.2%)	92.2% (89.9-94.0%)	86.0% (81.2-89.7%)	**<0.001**
NSGCT/Mixed GCT - All	94.6% (94.2-94.9%)	94.9% (94.5-95.3%)	90.3% (88.4-91.9%)	**<0.001**
Stage I	98.6% (98.3-98.8%)	98.6% (98.3-98.9%)	97.8% (96.3-98.7%)	**0.012**
Stage II	97.8% (97.0-98.4%)	97.9% (97.1-98.5%)	96.4% (91.4-98.5%)	0.2
Stage III	80.3% (78.7-81.7%)	81.6% (80.0-83.1%)	65.7% (59.3-71.4%)	**<0.001**

CSS = cancer-specific survival; 95% CI = 95% confidence interval; GCT = germ cell tumor; NSGCT = nonseminomatous germ cell tumor

Poster 53

Assessment of Depression, Metabolic, Renal and cardiovascular outcomes in testicular cancer survivors, real-world long term U.S. population national study.

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Introduction and Objective: The focus of Testicular Cancer (TC) has shifted towards survivorship due to the high cure rates. With the increase in TC survivors population, long-term cardiovascular disease events (CVD) have been suggested to be strongly linked with having a history of TC by various hospital-based small studies. As it is crucial to investigate this relationship at a population level to develop early prevention strategies to improve TC survivors' overall quality of life (QoL), we analyzed the U.S. The Behavioral Risk Factor Surveillance System (BRFSS) describe the long-term outcomes of TC survivors in a real-world random population sample.

Methods: Using BRFSS cycles between 2014 and 2022, we pulled all patients who reported having a history of TC and compared them to the rest of the men's population sample who had no history of cancer diagnosis. Using national complex weights, we estimated each group outcomes proportions. Further, we several complex-weighted logistic regression models adjusted for different covariates to describe the association of the development of depression, high blood pressure, high cholesterol, diabetes, BMI of >25, angina, myocardial infarction (MI), coronary heart disease (CHD), stroke, and chronic kidney disease (CKD).

Results: Out of 3,077,806 participants, we identified 308 with a history of TC and 1,169,061 men with no history of cancer. Our modeling analysis showed a consistently significant association in reporting history of Angina (OR range from 3.84 to 4.27), CHD or MI (OR range from 2.92 to 3.14), details are shown in Table 1.

Conclusions: Real-world data indicate alarming results of high prevalence CVD in TC survivors; our results confirm previously reported results from hospital-based cohorts. Our findings support immediate actions to develop preventative strategies in TC patients.

Table1

Model	OR [95% CI]	P value
Depression		
A	**1.711 [1.148 - 2.55]**	**0.008**
B	**1.761 [1.182 - 2.624]**	**0.005**
C	**1.661 [1.002 - 2.753]**	**0.049**
D	1.617 [0.94 - 2.782]	0.082
High blood pressure diagnosis		
A	**2.231 [1.238 - 4.022]**	**0.008**
B	**2 [1.048 - 3.817]**	**0.036**
C	1.39 [0.637 - 3.034]	0.408
D	1.386 [0.617 - 3.111]	0.429
High cholesterol diagnosis		
A	1.325 [0.697 - 2.522]	0.391
B	1.175 [0.632 - 2.185]	0.611
C	0.687 [0.332 - 1.421]	0.311
D	0.677 [0.323 - 1.417]	0.300
Diabetes Diagnosis		
A	1.082 [0.67 - 1.747]	0.747
B	1.018 [0.628 - 1.649]	0.943
C	0.952 [0.532 - 1.703]	0.867
D	0.935 [0.517 - 1.691]	0.823
BMI of >25 (Overweight or Obese)		
A	**1.518 [1.007 - 2.288]**	**0.046**
B	1.391 [0.917 - 2.111]	0.120
C	1.029 [0.659 - 1.608]	0.899
D	0.994 [0.638 - 1.548]	0.977
History of angina		
A	**3.844 [2.168 - 6.815]**	**<0.001**
B	**4.273 [2.255 - 8.099]**	**<0.001**
C	**3.918 [2.003 - 7.665]**	**<0.001**
D	**3.977 [2.018 - 7.838]**	**<0.001**
Ever had an MI		
A	**2.495 [1.297 - 4.801]**	**0.006**
B	**2.614 [1.281 - 5.334]**	**0.008**
C	**2.425 [1.047 - 5.617]**	**0.039**
D	2.376 [0.994 - 5.675]	0.051
Coronary heart disease (CHD) or myocardial infarction (MI)		
A	**2.917 [1.782 - 4.776]**	**<0.001**
B	**3.143 [1.806 - 5.469]**	**<0.001**
C	**3.024 [1.568 - 5.481]**	**<0.001**
D	**3.01 [1.635 - 5.542]**	**<0.001**
History of stroke		
A	1.289 [0.477 - 3.485]	0.617
B	1.269 [0.451 - 3.567]	0.652
C	1.394 [0.403 - 4.821]	0.600
D	1.418 [0.409 - 4.924]	0.582
Chronic kidney disease		
A	**2.427 [1.141 - 5.16]**	**0.021**
B	**2.349 [1.119 - 4.933]**	**0.024**
C	1.521 [0.651 - 3.551]	0.333
D	1.562 [0.667 - 3.656]	0.304

A Complex-weighted Logistic regression model (non-adjusted)

B Complex-weighted Logistic regression model adjusted for Age

C Complex-weighted Logistic regression model adjusted for Age, Race, Income, Education, marital status, reported health status, exercise, and smoking status

D Complex-weighted Logistic regression model adjusted for Age, Race, Income, Education, marital status, reported health status, exercise, smoking status, physical status, and mental health status.

Poster 54

Navigating the Treatment Maze: Equitable Long-Term Survival in Patients with Clinical Stage I Nonseminomatous germ cell tumor Upstaged Post-Retroperitoneal Lymph Node Dissection

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Introduction and Objective: Adjuvant chemotherapy is recommended after retroperitoneal lymph node dissection (RPLND) for non-seminomatous germ cell tumors (NSGCT) based on pathologic nodal staging. However, the benefit of adjuvant versus salvage treatment is disputed, as upfront therapy may overtreat many with pathologic stage II disease. We investigated overall survival in clinical stage I NSGCT patients upstaged to node-positive disease at RPLND, comparing outcomes between those who did and didn't receive adjuvant chemotherapy.

Methods: Patients with clinical stage I NSGCT (TanyN0M0S0) were identified within the national cancer database testis cancer dataset from 2004 to 2021. Descriptive statistics compared demographics and clinical characteristics between patients undergoing surgery versus surveillance. Overall survival was analyzed using Cox proportional hazards regression, focusing on differences in survival outcomes among patients upstaged at RPLND based on chemotherapy receipt.

Results: Of 3610 men with clinical stage I NSGCT, 615 (17%) underwent RPLND. Demographic and clinical characteristics of patients, stratified by management strategy, are summarized in Table 1. A significantly higher frequency of lymphovascular invasion in the orchiectomy specimen was observed in patients undergoing RPLND ($p < 0.05$). Among those upstaged at RPLND (n = 158, 26%), 87 (55%) received adjuvant chemotherapy. Ten-year survival rates were comparable between men who received chemotherapy and those managed with surveillance following RPLND (Fig. 1). Notably, pN3 status was associated with a hazard ratio for death of 3.3, though this did not reach statistical significance ($p = 0.07$).

Conclusions: In this large multi-institutional cohort, clinical stage I NSGCT patients upstaged to pN1-3 disease showed equivalent 10-year overall survival regardless of adjuvant chemotherapy receipt. Further research is necessary to identify patients who may benefit from adjuvant therapy versus those who could safely forgo it, particularly considering cases with pN3 status.

Table 1: Patient Demographics and Pathologic Outcomes by Management Strategy

		Surveillance (n=2995)	RPLND (n=615)
Age (mean (SD))		30.64 (10.15)	29.29 (8.79)
Race (%)			
	White/Caucasian	2475 (82.6)	522 (84.9)
	Black/African American	61 (2.0)	9 (1.5)
	Latino/Hispanic	331 (11.1)	61 (9.9)
	American Indian/Alaskan Native	10 (0.3)	1 (0.2)
	East Asian	39 (1.3)	6 (1.0)
	Hawaiian/Pacific Islander	5 (0.2)	0 (0.0)
	Indian/South Asian	11 (0.4)	4 (0.7)
	Other/Unknown	63 (2.1)	12 (2.0)
Histology (%)			
	Non-seminoma NOS	95 (3.2)	24 (3.9)
	Embryonal Carcinoma	949 (31.7)	185 (30.1)
	Yolk Sac Tumor	21 (0.7)	3 (0.5)
	Teratoma	176 (5.9)	29 (4.7)
	Choriocarcinoma	17 (0.6)	6 (1.0)
	Mixed Germ Cell Tumor	1737 (58.0)	368 (59.8)
Charlson Score (%)			
	Charlson 0	2832 (94.6)	574 (93.3)
	Charlson 1	148 (4.9)	36 (5.2)
	Charlson 2	10 (0.3)	2 (0.3)
	Charlson 3	5 (0.2)	1 (0.2)
LVI Present (%)		1034 (37.4)	264 (51.2)
Embryonal Predominant (%)		949 (31.7)	185 (30.1)
pN Stage (%)			
	pN0	---	452 (74.1)
	pN1	---	99 (16.2)
	pN2	---	52 (8.5)
	pN3	---	7 (1.1)

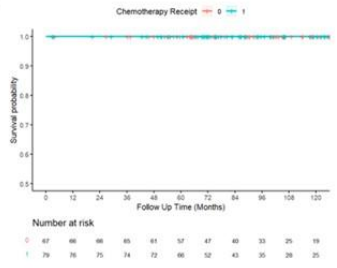

Figure 1: Overall Survival of Clinical Stage I NSGCT Patients Upstaged to Node-Positive Disease Post-RPLND.

Poster 55

Evolving Treatment Strategies for Clinical Stage I Seminoma: From Surveillance to Systemic Therapy and Surgery

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Introduction and Objective: Recent clinical trials have highlighted the efficacy of retroperitoneal lymph node dissection (RPLND) for management of early-stage seminoma germ cell tumors, but guidelines urge active surveillance to minimize treatment toxicity. We assessed national administrative data to track the evolution and trends of treatment approaches for seminoma over time.

Methods: Patients diagnosed with clinical stage I seminoma with negative tumor markers (TanyN0M0S0) were identified within the national cancer database testis cancer dataset from 2004 to 2021. Descriptive statistics assessed patient characteristics. A Cochran-Armitage trend test assessed changes in the proportion managed with active surveillance over time. Chi-square tests examined whether the distribution of active treatments changed over time. Post-hoc analysis using adjusted residuals identified which treatment modalities contributed to these changes.

Results: A total of 15,090 patients with clinical stage I seminoma were identified. While most patients were managed with surveillance, those receiving active treatment were more likely to have lymphovascular invasion in the orchiectomy specimen (Table 1). Over time, the proportional use of active surveillance significantly declined (Fig. 1A, Cochran-Armitage trend test, $p < 0.05$). Among patients receiving active treatment, there was a notable shift in treatment patterns, with a significant decline in the use of radiation therapy and a corresponding increase in systemic chemotherapy in the last decade (Fig. 1B, $p < 0.05$). The utilization of RPLND also modestly increased.

Conclusions: While surveillance remains a common strategy for clinical stage I seminoma, an increasing shift toward systemic chemotherapy as the primary active treatment was observed, with a concurrent decline radiation therapy. As of 2021, RPLND remained uncommon. Further studies are needed to refine patient selection criteria for active treatment versus surveillance to optimize outcomes and treatment-related toxicity.

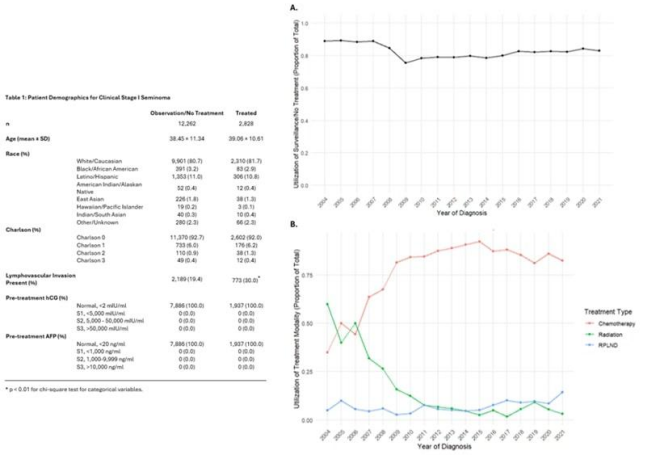

Figure 1: Trends in Treatment Utilization for Clinical Stage I Seminoma Yearly. **A.** Proportion of patients receiving active surveillance by diagnosis year. **B.** Distribution of treatment methods by diagnosis year among patients receiving active treatment.

Poster 56

Clinical Stage II Nonseminomatous Germ Cell Tumor: Key Predictors in Treatment Decisions for Chemotherapy and Surgery

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[1]Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA; [2]University Hospitals, Lyndhurst, OH, USA

Introduction and Objective: Guidelines recommend active treatment for patients with clinical stage II non-seminomatous germ cell tumors (NSGCT) For those with negative tumor markers, surgery and chemotherapy are viable options. However, the factors influencing treatment selection and the national variation in treatment trends are poorly described.

Methods: Patients with clinical stage II NSGCT and negative tumor markers (TanyN1-3M0S0) were identified within the national cancer database testis cancer dataset from 2004 to 2021. Demographics and clinical characteristics were compared between surgery and chemotherapy groups and logistic regression assessed predictors of chemotherapy.

Results: 816 men with clinical stage II NSGCT and negative tumor markers were identified, with treatment data available for 776 patients. A majority of patients ($n = 447$, 58%) received chemotherapy; 91 patients (12%) underwent surgery alone; and 238 (31%) received both. Patients receiving chemotherapy only were significantly more likely to exhibit high-risk features in their orchiectomy specimens (lymphovascular invasion & predominance of embryonal carcinoma) and present with cN2 disease ($p < 0.05$) (Table 1). Patients who underwent retroperitoneal lymph node dissection (RPLND) alone were more likely to have teratoma present in the primary tumor ($p < 0.05$).

Conclusions: Predictors of chemotherapy receipt in tumor-marker-negative clinical stage II NSGCT patients should identify those at highest risk for occult metastatic disease. In the current study, these include increasing clinical nodal (cN) stage. High-risk features in the primary tumor were also predictive, despite unknown predictive value as markers of distant metastatic disease. Conversely, the presence of teratoma, which is known to be resistant to chemotherapy, was predictive of receiving RPNLD. Further research is needed to determine which patients with clinical stage II NSGCT benefit most from chemotherapy and who are suitable candidates for RPNLD.

Table 1: Patient demographics for patients receiving a single treatment

		Chemotherapy Only	RPLND Only
n		447	91
Age [Mean (SD)]		30.03 (8.73)	30.38 (9.72)
Race Distribution [n (%)]			
	White/Caucasian	361 (80.8)	79 (86.8)
	Black/African American	14 (3.1)	0 (0.0)
	Latino/Hispanic	50 (11.2)	6 (6.6)
	American Indian/Alaskan Native	0 (0.0)	0 (0.0)
	East Asian	9 (2.0)	3 (3.3)
	Hawaiian/Pacific Islander	2 (0.4)	0 (0.0)
	Indian/South Asian	1 (0.2)	0 (0.0)
	Other/Unknown	10 (2.2)	3 (3.3)
Histology Distribution [n (%)]			
	Non-Seminoma NOS	16 (3.6)	4 (4.4)
	Embryonal Carcinoma	222 (49.7)	23 (25.3)
	Yolk Sac Tumor	1 (0.2)	1 (1.1)
	Teratoma	9 (2.0)	18 (19.8) *
	Choriocarcinoma	2 (0.4)	0 (0.0)
	Mixed Germ Cell Tumor	197 (44.1)	45 (49.5)
Charlson Comorbidity Index [n (%)]			
	Charlson 0	420 (94.0)	86 (94.5)
	Charlson 1	24 (5.4)	4 (4.4)
	Charlson 2	1 (0.2)	0 (0.0)
	Charlson 3	2 (0.4)	1 (1.1)
Lymphovascular Invasion Present [n (%)]		268 (66.3) *	34 (42.0)
Embryonal Predominance [n (%)]		222 (49.7) *	23 (25.3)
Clinical N Stage [n (%)]			
	cN1	213 (48.1)	63 (72.4)
	cN2	190 (42.9)*	20 (23.0)
	cN3	38 (8.6)	4 (4.6)

*, p<0.05

Poster 57

Rethinking Chemotherapy Timing in Stage II Nonseminomatous Germ Cell Tumor: Balancing Survival and Minimizing Toxicity

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Introduction and Objective: Adjuvant treatment of stage II nonseminomatous germ cell tumors (NSGCT) following retroperitoneal lymph node dissection (RPLND) requires balancing the risks and benefits of adjuvant versus salvage therapy. While early adjuvant chemotherapy improves recurrence-free survival, its impact on overall survival compared to salvage treatment is disputed.

Methods: Patients with tumor marker-negative clinical stage II NSGCT (TanyN1-3M0S0) were identified within the national cancer database testis cancer dataset from 2004 to 2021. Inclusion criteria were patients undergoing RPLND with confirmed nodal disease on final pathological staging, and who received postoperative chemotherapy. Mean time to chemotherapy by nodal stage was compared using ANOVA with post-hoc pairwise *t*-tests. A multivariable Cox model, incorporating patient comorbidities, tumor characteristics, and chemotherapy receipt at any time, assessed overall survival by nodal stage.

Results: Among 186 patients with pathologically confirmed nodal disease, demographic data (Table 1) showed nominal differences and general staging concordance. Fig. 1A suggests earlier chemotherapy for pN3 disease (median 7.5 weeks) versus pN1 (11.2 weeks) and pN2 (10.2 weeks), though not statistically significant (p = 0.056). With a median follow-up of 86 months, mortality was rare (7 patients: 3 pN1, 2 pN2, 2 pN3). The 10-year overall survival curves showed no significant difference (Fig. 1B), and early chemotherapy timing did not predict survival (HR 0.99, 95% CI 0.87–1.135).

Conclusions: Chemotherapy timing does not impact overall survival when accounting for receipt at any time. Delaying systemic therapy post-RPLND should be considered for this high-risk population prone to chemotherapy-associated adverse effects. Further studies are needed, particularly for patients with pN3 disease, who were underrepresented in this study.

Table 1: Patient Characteristics by pathologic N stage

Characteristic	pN1	pN2	pN3
Number of Patients	64	97	25
Age (years; mean [SD])	31.20 (12.65)	31.24 (9.20)	31.56 (11.60)
Race (%)			
White/Caucasian	55 (85.9)	75 (77.3)	24 (96.0)
Black/African American	0 (0.0)	1 (1.0)	0 (0.0)
Latino/Hispanic	6 (9.4)	13 (13.4)	0 (0.0)
American Indian/Alaskan Native	0 (0.0)	0 (0.0)	0 (0.0)
East Asian	2 (3.1)	1 (1.0)	0 (0.0)
Hawaiian/Pacific Islander	0 (0.0)	1 (1.0)	0 (0.0)
Indian/South Asian	1 (1.6)	1 (1.0)	1 (4.0)
Other/Unknown	0 (0.0)	5 (5.2)	0 (0.0)
Charlson-Devo Index (%)			
Charlson 0	60 (93.8)	93 (95.9)	23 (92.0)
Charlson 1	4 (6.2)	4 (4.1)	2 (8.0)
Charlson 2	0 (0.0)	0 (0.0)	0 (0.0)
Charlson 3	0 (0.0)	0 (0.0)	0 (0.0)
Clinical N Stage (%)			
cN1	48 (88.9)	17 (17.7)	3 (12.5)
cN2	4 (7.4)	75 (78.1)	1 (4.2)
cN3	2 (3.7)	4 (4.2)	20 (83.3)
Histology Distribution (%)			
Non-seminoma NOS	9 (14.1)	7 (7.2)	2 (8.0)
Embryonal Carcinoma	19 (29.7)	31 (32.0)	3 (12.0)
Yolk Sac Tumor	0 (0.0)	1 (1.0)	0 (0.0)
Teratoma	1 (1.6)	7 (7.2)	4 (16.0)
Choriocarcinoma	0 (0.0)	1 (1.0)	0 (0.0)
Mixed Germ Cell Tumor	35 (54.7)	50 (51.5)	16 (64.0)
Lymphovascular Invasion (%)	37 (62.7)	54 (64.3)	6 (37.5)
Embryonal Predominance (%)	19 (29.7)	31 (32.0)	3 (12.0)
Pre-Orchiectomy AFP (%)			
Normal, <20 ng/ml	64 (100.0)	97 (100.0)	25 (100.0)
Pre-Orchiectomy HCG (%)			
Normal, <2 mIU/ml	64 (100.0)	97 (100.0)	25 (100.0)

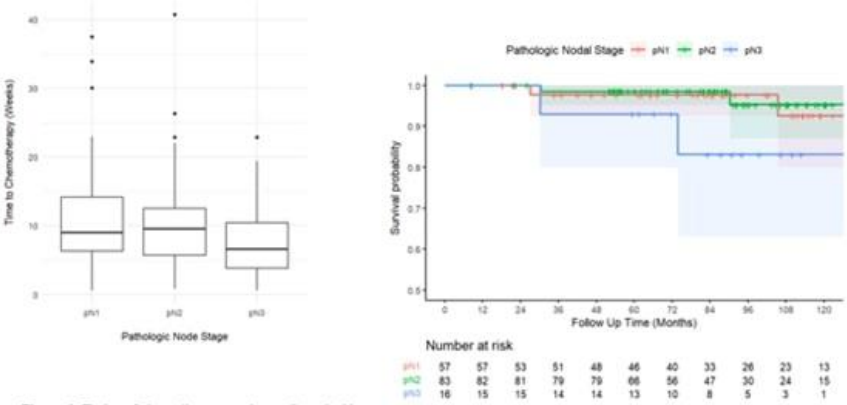

Figure 1: Timing of chemotherapy and overall survival by pathologic nodal stage. **A.** Forrest plot of median weeks from surgery to chemotherapy. **B.** Survival curve from multivariable Cox regression.

Poster 58

The Evolution of Telemedicine in Virginia: Legislative Landmarks

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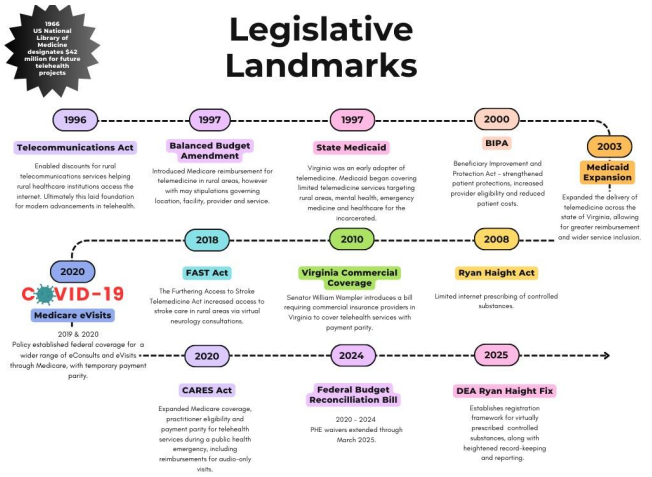
Introduction and Objective: The evolution of telemedicine has played a crucial role in expanding healthcare access, particularly in response to the COVID-19 pandemic. The need for social distancing and increased demand for medical care accelerated the adoption of virtual health services. This study outlines key legislative milestones in the development of telemedicine in Virginia.

Methods: A review of health policy literature and clinical advancements in telemedicine was conducted. Key legislative events that influenced telehealth expansion were identified and summarized. The findings are presented in a timeline format (Fig. 1).

Results: Early telemedicine efforts focused on improving rural healthcare access. Medicaid expansion at the state level preceded Medicare reimbursement parity, which significantly increased during the pandemic. The federal public health emergency extended telehealth reimbursement policies until March 2025, ensuring temporary continuity of virtual care. These legislative actions have shaped the integration of telemedicine into routine urologic practice.

Conclusions: Telemedicine has evolved over the past three decades, with the COVID-19 pandemic acting as a catalyst for widespread adoption and reimbursement reform. Urology, a field historically at the forefront of healthcare innovation, has embraced telehealth despite ongoing challenges. Addressing connectivity barriers and achieving sustainable reimbursement models will be critical to ensuring equitable access. Future advancements may integrate remote robotic surgery, further revolutionizing urologic care delivery.



Poster 59

Self-Reported Barriers and Racial Disparities in Renal Cell Carcinoma: Findings from the All of Us Research Program

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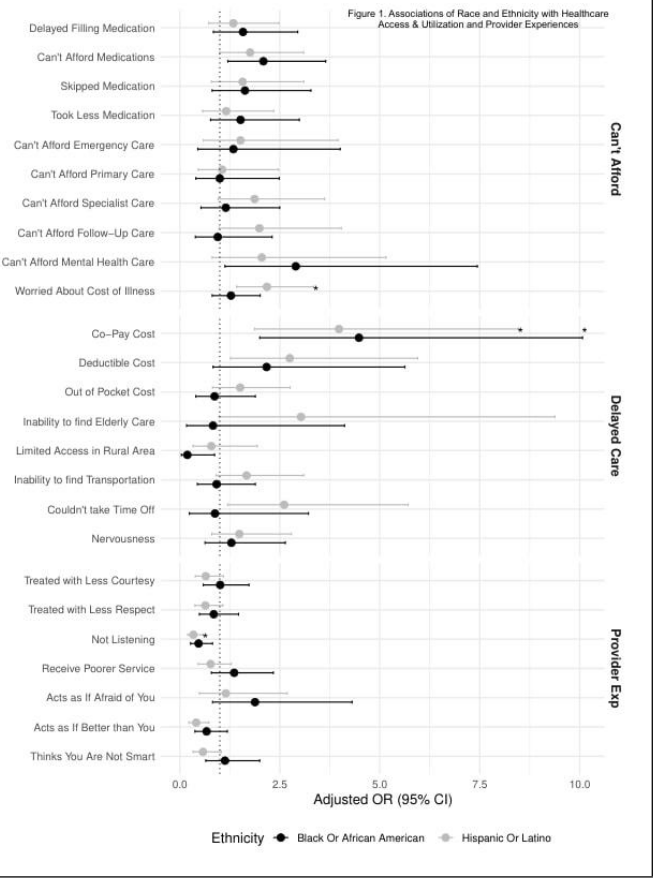
Introduction and Objective: Racial disparities in renal cell carcinoma (RCC) disproportionately affect Black and Hispanic patients, who face delayed diagnosis and limited access to therapies. This study examines self-reported barriers among RCC patients.

Methods: We performed a cross-sectional study using version 8 of the All of Us Research Program (2018–2023) among participants with RCC. Demographic and survey data on overall health, healthcare access and utilization (HCA&U), and social determinants of health (SDoH) were obtained. We compared responses across White, Black, and Hispanic groups using chi-square tests and multivariable logistic regression controlling for age, sex, education, insurance, and income.

Results: Among 2215 RCC participants, 100% completed the Overall Health survey, 54.5% the HCA&U survey, and 42.6% the SDoH survey. In the HCA&U survey, compared to White participants, Hispanic and Black participants more frequently cited "Can't Afford Medications" (18.8%, 23.8%, 8.2%; $p < 0.0001$) and expressed greater concern about illness costs (60.7%, 46.2%, 32.3%; $p = 0.026$). From the SDoH survey, Black participants were more likely to report poorer service than White and Hispanic participants (50.8% vs 36.0% and 38.8%; $p < 0.0001$). Hispanic and Black participants rated their health as poor or fair more often than White respondents (44.4%, 48.8%, 29.0%; $p < 0.0001$) and reported greater difficulty with health materials ($p < 0.0001$). In multivariable models, compared to White participants, Black participants had twice the odds of being unable to afford medications (aOR 2.09 [1.20–3.65], $p = 0.0096$), and Hispanic participants were four times more likely to delay care due to co-pay (aOR 3.98 [1.87–8.47], $p = 0.00033$).

Conclusions: In this large RCC cohort, minority participants reported more cost-related barriers, perceived discrimination, and lower self-rated health. Targeted interventions may help notably narrow overall RCC care gaps among underserved populations.



Poster 60

The Current Landscape of Global Health Training in Urology Residency

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Introduction and Objective: The current state of global surgery training in U.S. urology residency programs remains undefined. Limited access to urologic care is a significant global health burden, especially in low- and middle-income countries. Academic institutions are key in addressing this gap, and introducing global health opportunities in residency is essential. This study aims to describe the landscape of global health opportunities in U.S. urology residency programs and identify areas for improvement.

Methods: An electronic survey was e-mailed to Program Directors of accredited U.S. Urology Residency Programs. Descriptive statistics summarized responses.

Results: Of 30 responses, 24 were included after excluding duplicates and incomplete entries without program identifiers (16.2% response rate, total 148 programs). Program characteristics are in Table 1. Eleven (50%) programs offer international urology opportunities for residents. The most common barrier is insufficient funds for travel/supplies; additional barriers are in Table 2. Among programs with global health opportunities, 100% of program directors support these experiences, noting their educational value and exposure to diverse health systems. Most programs offer 1–2 trips/year, all less than two weeks, with one resident per trip. PGY4 is the most common level for participation (n = 8, 72.7%). Most of the voluntary services provided include general urology (63.6%) and genitourinary/reconstructive surgery (63.6%). Thirteen (65%) programs plan to expand global health opportunities for residents.

Conclusions: Program directors of U.S. urology residencies offering global health opportunities support these experiences, and most programs plan to expand opportunities. Major barriers include insufficient funds, lack of coverage for home clinical duties, and systemic healthcare challenges.

Table 1: Residency Program Characteristics

Variable	Count (%)
Number of respondents	24 (16.2)
AUA section	
Southeastern	6 (25.0)
Mid-Atlantic	5 (20.8)
Western	5 (20.8)
North Central	4 (16.7)
New England	1 (4.2)
New York	1 (4.2)
Northeastern	1 (4.2)
South Central	1 (4.2)
Number of Residents/Year	
1	1 (4.2)
2	5 (20.8)
3	11 (45.8)
4	6 (25.0)
5	1 (4.2)
Number of Faculty	
<10	4 (16.7)
10-15	1 (4.2)
15-20	8 (33.3)
20-25	6 (25.0)
>25	5 (20.8)
Fellowship Training Programs	
Yes	18 (75.0)
No	6 (25.0)

Poster 61

Single Institution Analysis on The Impact of Social Vulnerability Measures on Management Strategies for cT1 Small Renal Masses

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Introduction and Objective: There are several treatment options available for small renal masses (SRMs). The recent development of deprivation indices, which are composite measures of population demographics and socioeconomic conditions in a given geographical area, provide an avenue to assess the way socioeconomic factors impact both health care delivery and health outcomes. We examined the relationship between area-level social vulnerability and management strategies for SRMs.

Methods: This retrospective study analyzed our institution's SRM database, composed of patients whose masses were reviewed in a monthly SRM conference. Conference recommendations were presented to patients and shared-decision making was used to choose a management strategy. Area deprivation index (ADI), created by the University of Wisconsin, was used to differentiate patients into low (ADI = 1–34), moderate (ADI = 35–65), and high disadvantage (ADI = 66–100) groups. Logistic regression was used to estimate odds ratios (OR) for treatment vs active surveillance (AS) between disadvantage groups.

Results: Among 73 patients included, 100 were categorized as low, 230 as moderate, and 143 as high disadvantage. Compared to those in the low disadvantage group, those in the high disadvantage group and in the moderate disadvantage group had higher odds (OR = 1.8, 95% CI 1.07–3.11, p = 0.027; OR = 1.6, 95% CI 1.00–2.63, p = 0.049; respectively) of receiving definitive treatment for their SRM versus being followed by AS. Adjusting for covariates led to an attenuation in ORs (OR = 1.60, p = 0.11 and OR = 1.41, p = 0.20 for high vs low and moderate vs low disadvantage, respectively) with non-significance. Larger mass size (OR = 1.62, p < 0.01), higher baseline eGFR (OR = 1.01, p = 0.012), and younger age (OR = 0.98, p = 0.018) were associated with a greater likelihood of receiving definitive treatment for SRM.

Conclusions: Patients from disadvantaged areas are more likely to undergo definitive treatment for their SRMs than be followed by AS. Future studies are needed to understand why disadvantaged patients are more likely to get definitive treatment.

Table 2: Reasons for Unavailability of Global Health Opportunities in Urology Residency Programs

	Count (%)
Programs without Global Health Opportunities	11
Insufficient funds for travel costs and supplies	6 (54.5)
Home clinical responsibilities prevent international experiences due to lack of coverage	5 (45.5)
Insufficient salary funding for residents	3 (27.3)
Concerns of malpractice, health, geopolitical issues	3 (27.3)
Lack of accreditation for cases performed abroad	2 (18.2)
Low resident interest	1 (9.1)

Poster 62

The impact of mentorship for women authors: A 10-year analysis of gender-based authorship trends in leading urology journals

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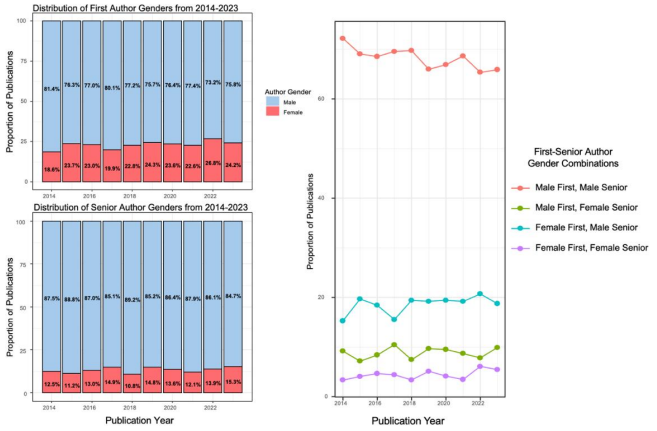
Introduction and Objective: Despite the low representation of women (11.8% in 2023) among practicing urologists, the increasing number of women trainees (40.6% in 2024) has shifted gender distributions in the field. Authorship in scientific journals is a marker of academic success, yet women remain underrepresented as first and senior authors in urologic literature. This study assessed trends in authorship by gender over time in the highest impact urology journals and identified predictors of women authorship.

Methods: All scientific articles from the 10 highest impact urology journals between 2014–2023 were analyzed using a protocol developed with an expert biomedical librarian. The gender R package was used to predict the gender of first and senior authors based on first names. Descriptive statistics and logistic regression assessed trends and predictors of women authorship.

Results: A total of 19,978 articles were evaluated, with gender assigned to 11,839 (60%). Women represented 22.8% of first authors and 13.1% of senior authors. From 2014–2023, the proportion of women first authors increased from 18.5% to 24.2% (p = 0.002), while women senior authorship rose from 12.5% to 15.3% (p = 0.06). Dual female first and senior authorship increased from 3.3% to 5.4% (p = 0.017). On multivariate logistic regression, predictors of women first authorship included later publication year (OR: 1.02 [1.00, 1.04], p = 0.022), having a woman senior author (OR: 2.12 [2.43, 1.88], p < 0.001), and, unique to our analysis, having a senior author who had previously published with a woman first author (OR: 3.65 [3.34, 3.99], p < 0.001).

Conclusions: Women authorship has increased, but disparities in senior authorship persist. Intentional mentorship from both genders is crucial to advancing gender parity in the field.



Poster 63

Sipuleucel-T: Understanding the differences in outcomes amongst African American and Caucasian prostate cancer patients. A TriNetX study

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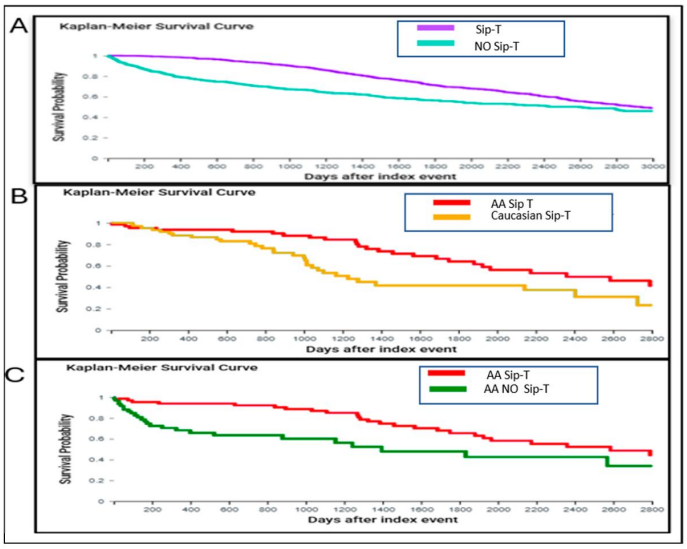
Introduction and Objective: Metastatic castration-resistant Prostate Cancer (mCRPC) poses many challenges for clinical management. Sipuleucel-T (sip-T, Provenge), an immunotherapy agent, leverages a patient's immune system to target prostate cancer antigens and has shown improved survivorship outcomes for patients, particularly among African American with mCRPC. Our study aims to examine the survivorship differences between African American (AA) and Caucasian men on sip-T for mCRPC.

Methods: We used TriNetX, a global network of healthcare organizations, to query for mCRPC treated with sip-T. Groups were created on demographic identification of African American or Caucasian. Groups were matched for ethnicity, prostatic specific antigen, testosterone, diabetes, hypertension, hyperlipidemia and social determinants of health. Mortality was the outcome of interest. Statistical analysis was done with Kaplan-Meier and log rank testing.

Results: Of 819,683 prostate cancer patients, 185,314 had mCRPC and 1014 were treated with Sip-T. Sixty-nine patients were AA and 789 were Caucasian. For all mCRPC patients, those treated with sip-T showed a longer median survival time and proportionality when compared to no sip-T (p < 0.0001, Fig. 1a). Additionally, AA males demonstrated significantly improved survival probability and survival time when compared to Caucasian males (p < 0.01, Fig. 1b) and AA males not treated with sip-T (p < 0.01, Fig. 1c).

Conclusions: Prior trials have demonstrated a survival advantage for AA patients treated with sip-T and our analysis emphasizes this. Despite observed benefits, sip-T remains clinically underutilized particularly for AA patients. Studies that promote better understanding of barriers to care will be crucial in addressing healthcare disparities.

Figure 1: Kaplan-Meier survival assessing mortality in men with mCRPC. A) Median survival 2,937 days (sip-T) vs 2,599 days (No sip-T), survival probability at end of window 49% (sip-T) vs 46% (no sip-T); p<0.0001. B) Median survival 2,359 days (AA sip-T) vs 1,229 days (Caucasian sip-T), survival probability at end of window 41% (AA sip-T) vs 23% (Caucasian sip-T); p<0.01. C) Median survival 2,585 days (AA sip-T) vs 1,395 days (AA no sip-T), survival probability at end of window 44% (AA sip-T) vs 34% (AA no sip-T); p<0.01.



Poster 64

AUA-SAU Match at a Glance: Unpacking a Decade of Trends

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Introduction and Objective: The AUA-SAU match is a competitive process with a spectrum of highly qualified candidates seeking to enter urology residency. We examined the evolution of match rates, applicant and program trends, and demographic factors over the past decade.

Methods: Publicly available urology residency match data were obtained for the years 2015–2024 from auanet.org. Statistical testing included linear regression, ANOVA tests, and two-sided *t*-tests.

Results: The overall match rate has fluctuated over the past 10-years (mean 75%; SD 5.7%) with a range of 66% (2022) to 85% (2019). Residency positions have increased from 296 to 394 with trending increases of 13 applicants ($p = 0.01$) and 11 positions ($p < 0.001$) annually (Fig. 1). Match rates for senior medical students (81%) were greater than previous medical graduates (57%) and international applicants (32%) (p for both < 0.001) although the latter two groups are notable for upward trends (Fig. 2). Male applicants outnumbered female applicants (313 vs. 134, $p < 0.001$) with similar 10-year match rates (77.8% female vs 73.4% male, $p = 0.168$) while female match rates surpassed male rates over the past five years (82.2% vs 73.4%; $p = 0.049$). Ethnicity data was only available for 2024 with higher match rates for White (82%) and Asian (78%) applicants compared to Black (70%) and Hispanic (65%) applicants ($p = 0.006$ for White vs. Hispanic applicants).

Conclusions: Over 10-years, urology residency positions and applicants have increased. Match rates remain highest for senior medical students with significant increases in female applicants and female match rates.

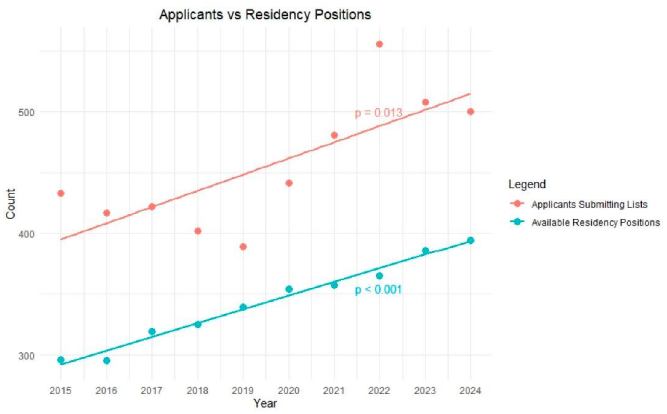

Figure 1: Applicants vs Residency Positions

Figure 2: Match Rates by Training Status

Poster 65

ERAS Application Fees in Surgical Subspecialties: A Barrier to a Diverse Healthcare Workforce?

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Introduction and Objective: High residency application fees disproportionately impact applicants from low-income backgrounds. In response, several specialties have implemented measures to mitigate these costs. This study aims to evaluate trends in total and per-applicant Electronic Residency Application Service (ERAS) fees over time across various surgical subspecialties.

Methods: Data from the National Resident Matching Program and the American Urological Association (2019–2024) were analyzed across six surgical subspecialties (Neurologic Surgery, Orthopedic Surgery, Otolaryngology, Plastic Surgery, Urology, and Vascular Surgery). Average number of applications per applicant, total applicants, and annual ERAS fee structures were used to calculate both per applicant and total application fees by specialty and year. Trends and specialty-specific variations were described.

Results: Orthopedic Surgery consistently incurred the highest total costs, with a mean per applicant fee of $1661 (Fig. 1) and total annual fees exceeding $2 million (Fig. 2). Urology and Otolaryngology also demonstrated high per applicant costs, reflecting the financial strains of their competitive landscapes. In contrast, Plastic Surgery and Vascular Surgery were associated with fewer applications and lower fees. Introduction of residency program preference signaling appeared to reduce application volume and costs for specialties adopting this approach, while Neurologic and Vascular Surgery, lacking such interventions, did not exhibit similar declines.

Conclusions: Significant variability in application costs exist among surgical subspecialties, contributing to financial barriers that undermine equitable access to training. Addressing these financial challenges, such as through targeted interventions and widespread adoption of program preference signaling, may help foster greater diversity and inclusion in surgical specialties.

Figure 1: Average cost of ERAS application fees per applicant for six surgical subspecialties from 2019 to 2024.

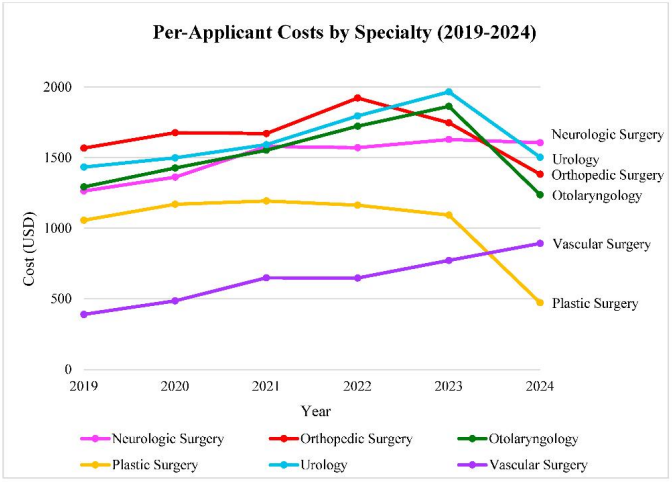
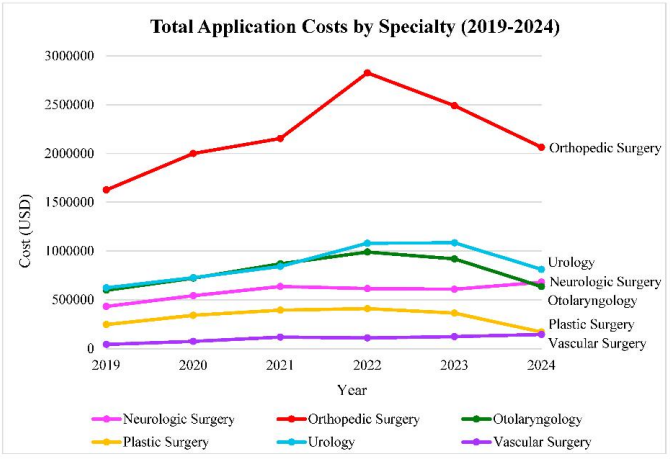


Figure 2: The total yearly ERAS application costs for six surgical subspecialties from 2019 to 2024.



Poster 66

Penile Cancer in Hispanic/Latino and Non-Hispanic/Latino Men:

Poster 67

Prevalence of Artificial Intelligence Guidance Statements in

A Risk Comparison of Social Determinants of Health and Outcomes

F. Aguirre, R. Thompson, P. Bloch, L. Gomella, P. Gomella, E. Glucksman, J. Izes, C. Lallas, M. Shah and A. Metwalli

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

Introduction and Objective: Despite penile cancer being a rare diagnosis, disparities along racial/ethnic lines have previously been documented. Social determinants of health (SDOH) are one way to estimate disparities. Our study aimed to explore differences in SDOH and outcomes of penile cancer between Hispanic/Latino (H/L) and non-H/L men

Methods: We used TriNetX, a global network of health organizations, to find men diagnosed with penile cancer (ICD-10CM C60) and categorized them on demographic identification of H/L or non-H/L. SDOH were analyzed using ICD-10CM Z55-Z65. Groups were balanced without matching. Data was collected on March 7, 2025. Measures of association are reported.

Results: Among 10,635 penile cancer diagnoses, 791 (7.4%) were H/L men and 9844 (92.6%) were non-H/L men. H/L men had higher risks for tobacco or alcohol use and for experiencing SDOH across various domains. Education and employment SDOH showed the largest risk ratios for H/L men. There was no significant difference in 5-year mortality between the groups. However, H/L men were more likely to undergo partial ($p < 0.0001$) or complete ($p < 0.001$) penectomy within 5 years of diagnosis.

Conclusions: H/L men with penile cancer face higher risks for SDOH, particularly in education and employment. They are also more likely to undergo penectomy (partial or complete), though mortality rates did not differ. Further research is needed to understand how these disparities affect penile cancer outcomes.

Table 1. Risk of SDOH After Penile Cancer Diagnosis.

	H/L (n=791)	Non-H/L (n=9,844)	Risk Difference (%)	p-value	Risk Ratio (95% CI)
Tobacco Use	109	1,056	3.3	<0.01	1.3 (1.1, 1,6)
EtOH Disorder	38	248	2.3	<0.001	1.8 (1.4, 2.6)
SDOH - All	41	192	3.2	<0.0001	2.6 (1.9, 3,7)
Education/ Literacy	10	19	1.0	<0.0001	6.5 (3.0, 13.9)
Employment	10	13	1.1	<0.0001	9.5 (4.2, 21.5)
Physical Environment	0	10	-0.1	0.36	N/A
Housing	23	77	2.1	<0.0001	3.7 (2.3, 5.8)
Problems related to primary support	10	45	0.8	<0.01	2.8 (1.4, 5.5)

Table 2. Five-year Outcomes of Penile Cancer

	H/L (n=791)	Non-H/L (n=9,844)	Risk Difference (%)	p-value	Risk Ratio (95% CI)
Mortality	115	1,623	-2.2	0.1	0.87 (0.73, 1.0)
Partial Penectomy	107	581	7.6	<0.0001	2.3 (1.9, 2.7)
Complete Penectomy	43	298	2.4	<0.001	1.7 (1.3, 2.4)

Urologic Literature

M. Yudovich[1], M. Hsu[2] and J. Raman[1]

[1]Penn State Health Milton S. Hershey Medical Center, Hershey, PA, USA; [2]Penn State College of Medicine, Penn State University, Hershey, PA, USA

Introduction and Objective: With increasing use of artificial intelligence (AI) in medicine, many journals have created AI guidance statements for authors during manuscript submission. This study aims to characterize the prevalence and types of AI guidance statements among urologic journals.

Methods: A total of 112 PubMed-indexed urologic journals were identified. Each journal website was searched for an AI guidance statement. We identified features pertaining to manuscript content generation, manuscript writing, and manuscript editing. Journal data, region, subspecialty, society affiliations, and impact factor were collected for descriptive statistics.

Results: Sixty-one of 112 (54.5%) urologic journals had an AI guidance statement. The presence of an AI guidance statement was not significantly associated with society affiliation ($p = 0.32$), region ($p = 0.07$), or subspecialty ($p = 0.955$) (Fig. 1). Average impact factors for journals with and without guidance statements were 3.13 and 2.13 ($p = 0.22$) respectively. Most journals with AI guidance statements ($n = 58$, 95.1%) allow for AI to edit manuscripts (Fig. 2). Fifty-three of these journals (86.9%) explicitly allow for AI to write manuscripts. No journals definitively prohibit AI use for manuscript editing. Twenty-three (37.7%) journals allow AI use for generating manuscript content, 11 (18%) explicitly do not, and 27 (44.3%) are unclear on their stance. Sixty (98.4%) journals require a statement on AI use, and one journal (1.6%) has no guidance on this.

Conclusions: Over 50% of urologic journals provide author guidance on AI use. These instructions are not standardized and are highly variable. As AI continues to permeate in the medical literature, consensus policies are advisable.

Figure 1: Percentage of Journals with AI Guidance Statements, Stratified by Society Affiliation, Region, and Subspecialty

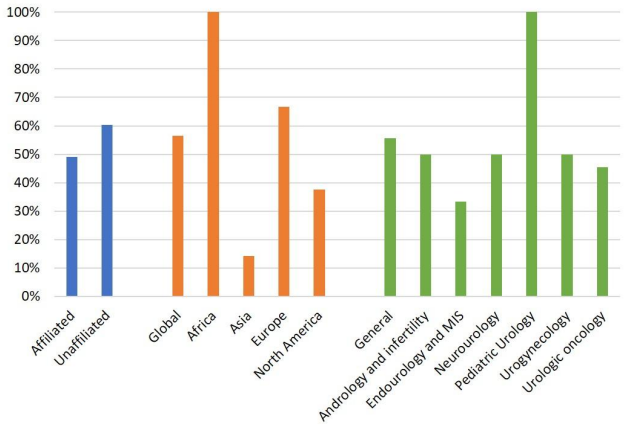
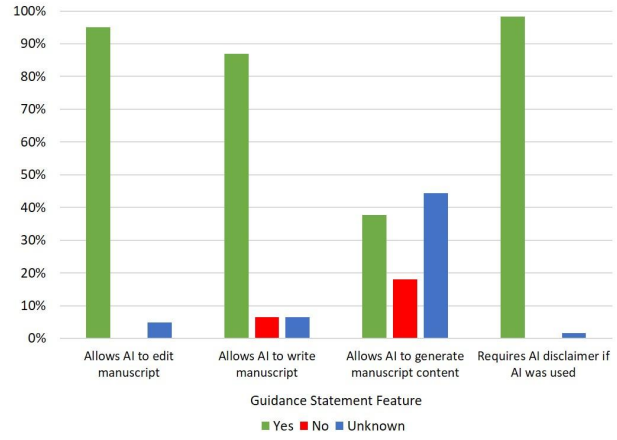


Figure 2: Urology Journal AI Guidance Statements by Feature



Poster 68

Can Artificial Intelligence Effectively Interpret Urologic Imaging Studies?

M. Yudovich and J. Raman

Penn State Health Milton S. Hershey Medical Center, Hershey, PA, USA

Poster 69

Novel Robotic Bedside Assist Training for Fourth Year Medical School Students To Enhance Surgical Training Opportunities

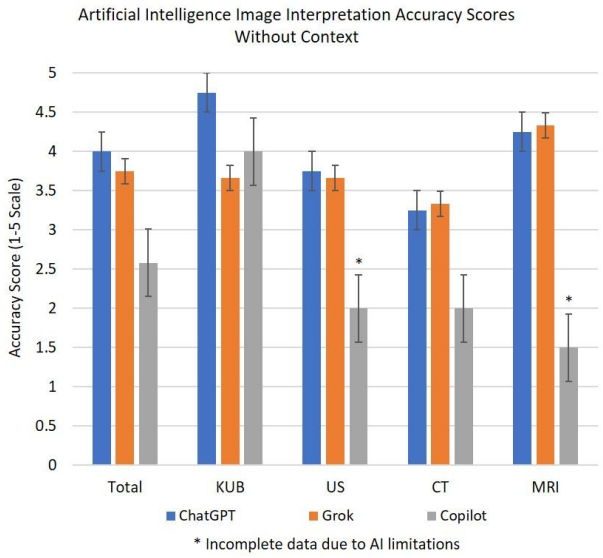
L. Lefbom, M. Lange, L. Gonzales Miranda, K. Chen, K. Berry, K. Greene, N. Schenkman and N. Kern

Introduction and Objective: Artificial intelligence (AI) models with vision capabilities are now publicly available for image interpretation. ChatGPT has previously performed poorly in general radiologic evaluation. This study assesses multiple AI language models in interpreting urologic imaging.

Methods: Sixteen publicly available urologic images representing radiographs (KUB), ultrasound (US), computed tomography (CT), and magnetic resonance imaging (MRI) were provided to four large language models (ChatGPT, Grok, Gemini, and Copilot). Each model was asked to identify the imaging modality and interpret the image. Images were then modified with a context arrow to provide highlight a critical finding and queries were repeated. Responses were scored on a 1–5 Likert scale for accuracy.

Results: ChatGPT and Grok correctly identified the imaging modalities in all cases. Copilot was correct for 10 images, incorrect for two, and refused to interpret four (US and MRI) due to unfounded concerns for sensitive content. Gemini refused to interpret all images. Mean accuracy scores for ChatGPT were similar with and without context (4.0 vs. 4.3, $p = 0.31$) across imaging modalities ($p = 0.25$) (Figure). Grok scored 3.75 without context and 3.4 with context ($p = 0.33$), without differences among imaging modalities ($p = 0.27$). Copilot ($n = 12$ responses) scored 2.6 without context and 3.2 with context ($p = 0.15$), with US and MRI performing significantly worse ($p < 0.0001$). ChatGPT and Grok both outperformed Copilot without context ($p = 0.006$, $p = 0.047$, respectively), but only ChatGPT outperformed Copilot with context ($p = 0.006$).

Conclusions: ChatGPT and Grok perform well at identifying critical findings in urologic imaging. Future AI iterations may assist with image interpretation in a busy clinical setting.



University of Virginia, Charlottesville, VA, USA

Introduction and Objective: Medical students typically gain operating room experience informally, but robotic-assisted surgeries often limit their roles to observation, reducing engagement and learning. To address this, we created a robotic bedside assist training protocol for fourth-year Urology sub-interns. This study evaluates students' experiences with the program.

Methods: The training program included an online introductory video from the Intuitive Surgical Learning Center, a didactic session by an Intuitive Surgical representative, and an orientation by urology faculty or residents on the bedside assist role. Students then served as bedside assistants in robotic cases during their sub-internship. Before and after surveys assessed engagement and confidence in assisting robotic surgeries using a 5-point Likert scale.

Results: A total of twelve medical students participated in the study. Before the study, 1 participant (8.3%) had formal training, 9 (75%) had informal training, and 2 (16.6%) had no prior experience in the robotic bedside assist role. All participants expressed either "strong interest" or "interest" in being offered a formal training program. Among the 8 participants who completed the post-sub-internship survey, 7 participants (87.5%) reported an increase in confidence in the bedside assist role, 7 participants (85.7%) noted an increased level of involvement in robotic cases, 6 participants (75%) reported the training program to be a good use of their time, and 5 students (62.5%) said it was "very beneficial" to their educational experience. The mean number of robotic bedside assist tasks completed by each medical student out of six predefined skills rose from a mean of 1.9 before the training program to 3.6 after the program.

Conclusions: The integrated robotic bedside assist training protocol improved medical students' confidence and engagement in robotic surgeries during their Urology sub-internship. Future research should focus on evaluating student skill development following simulation-based training.

Poster 70

The "death" of telemedicine … perhaps not in urology—trends of surgical visits over four years post-pandemic

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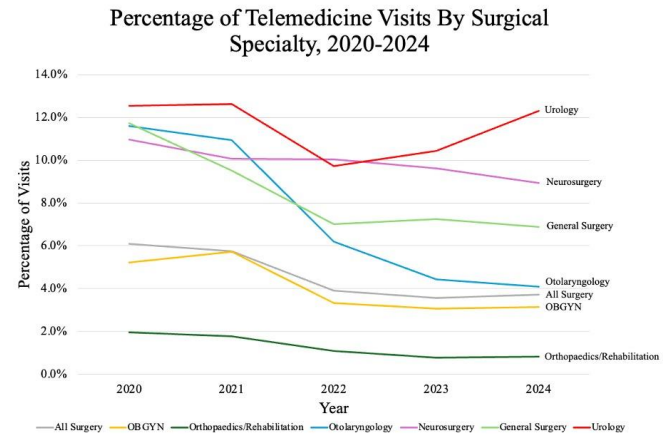
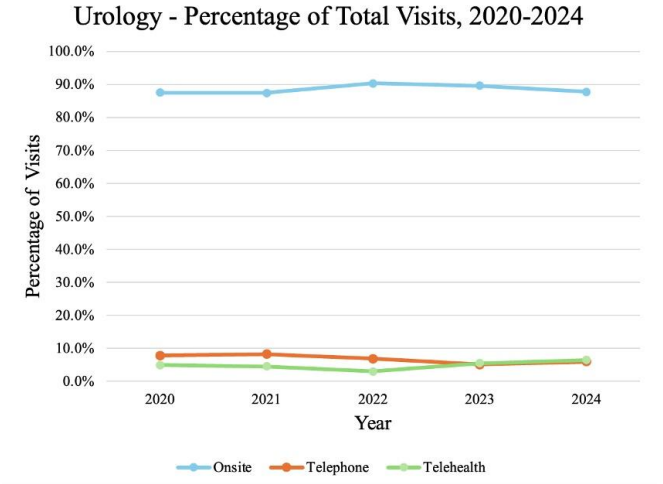
Introduction and Objective: During the COVID-19 pandemic, there was rapid expansion of telemedicine to deliver healthcare. It was speculated that this would drastically change healthcare delivery, but financial reports and the closure of commercial virtual care models suggest otherwise. This study aims to describe how telemedicine use in urology and other surgical specialties has evolved four years post-pandemic.

Methods: Retrospective analysis of surgical visits at an academic health system from July 2020-July 2024 was conducted. Visits for Urology, General Surgery, OB/GYN, Orthopedics, Otolaryngology, and Neurosurgery were categorized as on-site, telephone, or telehealth. Basic descriptives, frequencies, and one-way ANOVA were utilized to compare visit types within and between specialties.

Results: A total of 1,514,060 visits occurred in the study period; 4.5% of which were telemedicine. Besides Urology, all surgical specialties had a net decline in telemedicine use during this interval. Urology had the highest proportion of telemedicine use (11.3%) compared with other surgical specialties, including Neurosurgery (9.9%), General Surgery (8.3%), Otolaryngology (7.2%), OB/GYN (4.1%), and Orthopedics (1.2%) (Fig. 1). Urology used telephone visits (6.7%) more frequently than other specialties, particularly Otolaryngology (0.3%, $p = 0.011$) and Orthopedics (0.5%, $p = 0.049$). On average, 88.7% of Urology visits were onsite, while telephone and telehealth comprised of 6.7% and 4.6% of visits respectively. Telephone visits decreased by1.8%, while telehealth visits increased by 1.6% in Urology (Fig. 2).

Conclusions: Compared with other surgical specialties, Urology has continued stable use of telemedicine thereby encouraging continued investments in building infrastructure for this care delivery mechanism.





Poster 71

Combining an Offset Olympus Nephroscope with Shock Pulse-SE Lithotripter and Resectoscope Sheath to Efficiently Remove Large Bladder Calculi

J. Patel, M. Yudovich, L. Khosla and P. Singh

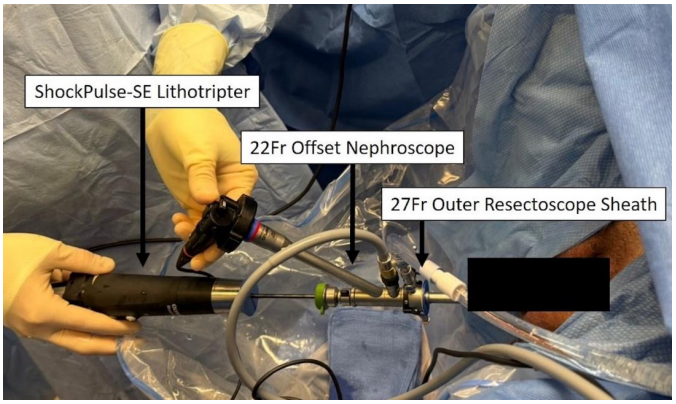
Penn State Health Milton S Hershey Medical Center, Hershey, PA, USA

Introduction and Objective: Although bladder calculi make up 5% of all urinary stones, they can be large in patients with bladder outlet obstruction. Prior studies of cystolitholapaxy have reported that continuous flow leads to shorter operative time with similar stone-free result and pain when compared to traditional cystoscopy. We present a case series of two patients who underwent a cystolitholapaxy using an offset Olympus nephroscope with ShockPulse-SE Lithotripter and resectoscope sheath for continuous flow.

Methods: Patient A is a 83-year-old male with a history of BPH on finasteride and tamsulosin with >5 cm of bladder stones. Patient B is a 66-year-old male with a history of prostate cancer treated with radical prostatectomy followed by adjuvant radiation therapy resulting in bladder neck contracture requiring reconstruction with 4 cm of stones at the bladder neck.

Results: After identifying bladder stones, a 27 Fr resectoscope with a visual obturator was inserted. The visual obturator was replaced with a 22 Fr Olympus offset nephroscope, which attached to the 27 Fr outer sheath, allowing for continuous irrigation without over-distending the bladder or needing to break the scope. The ShockPulse lithotripter was inserted into the nephroscope and used to fragment and extract all the bladder stones (Figure). Once all the stones were removed, the visual obturator was reinserted to perform a pancystoscopy and check for residual fragments. Operative times were 89 and 44 min, respectively.

Conclusions: The Olympus offset nephroscope allows use of a ShockPulse-SE lithotripter and can be attached to a 27 Fr resectoscope sheath for optimal irrigation and stone fragment outflow. This technique appears to be more efficient than other methods of cystolitholapaxy and can avoid the morbidity of percutaneous suprapubic or open cystolithotomy procedures for large bladder stones.



Poster 72

A Comparison of Outcomes of Primary versus Revision Robotic Ureteral Reconstruction for Distal Disease

K. Zhao, M. Lee, L. Shumaker, R. Lee and D. Eun

Fox Chase-Temple Urologic Institute, Philadelphia, PA, USA

Introduction and Objective: Robotic ureteral reconstruction (RUR) is increasingly utilized for surgical management of distal ureteral stricture disease. There is limited data comparing outcomes of primary versus secondary distal ureteral reconstruction. Our study aims to evaluate the safety and efficacy of RUR for revision surgery for distal ureteral strictures.

Methods: We retrospectively reviewed our multi-institutional Collaborative of Reconstructive Robotic Ureteral Surgery (CORRUS) database to identify all patients undergoing RUR for surgical repair of distal ureteral strictures between 2012 and 2022. Patients were grouped according to whether they underwent primary versus secondary RUR (defined as those who had undergone prior failed intervention for stricture disease, including endourologic, robotic, and open interventions). Peri-operative variables between both groups were compared using multivariate analysis; $p < 0.05$ was considered statistically significant.

Results: A total of 287 patients were included; 62 (21.6%) had recurrent stricture disease after prior intervention. Prior interventions included balloon dilation (50.0%), endoureterotomy (21.0%), and robotic or open ureteral reconstruction (22.6%). Those who had undergone re-intervention had significantly greater median body mass index compared to those undergoing primary intervention for ureteral stricture disease (p = 0.0112) (Table 1). Furthermore, the secondary group had a higher prevalence of diabetes mellitus (p = 0.0059) and a greater proportion of male patients (p = 0.0452). There were no significant differences in intraoperative characteristics between the two cohorts, including RUR technique performed, operative time, estimated blood loss, stricture length, and quality of stricture. Overall surgical success was similar between the two cohorts (p = 0.7013); 30-day postoperative complications greater than Clavien-Dindo classification II was noted in 7.8% of our cohort.

Conclusions: Robotic ureteral reconstruction remains a safe and viable option for the management of recurrent distal ureteral stricture disease after prior intervention.

Table 1

	Total Cohort (n = 288)	No prior intervention (n = 225)	Prior intervention (n = 62)	P value
Age (years)	56.0 (IQR 43.0 - 69.0)	56.0, (IQR 42.0 - 70.0)	59.0, IQR = (48.0, 67.0)	0.4634
BMI (kilograms/squared meters)	27.44 (IQR 24.13 - 31.5)	27.0, IQR = (23.55, 30.81)	29.2, IQR = (26.22, 32.51)	0.0112
Sex (%)	Female: 170/286 (59.4%) Male: 116/286 (40.6%)	Female: 140/224 (62.5%) Male: 84/224 (37.5%)	Female: 30/62 (48.4%) Male: 32/62 (51.6%)	0.0452
Smoking History (%)	None: 171/287 (59.6%) Prior/Current: 116/287 (40.4%)	None: 134/225 (59.6%) Prior/Current: 91/225 (40.4%)	None: 37/62 (59.7%) Prior/Current: 25/62 (40.3%)	0.9862
History of Abdominopelvic Radiation (%)	49/287 (17.1%)	35/225 (15.56%)	14/62 (22.58%)	0.1930
History of Diabetes Mellitus (%)	39/287 (13.6%)	24/225 (10.67%)	15/62 (24.19%)	0.0059
History of Immunocompromised State (%)	11/287 (3.8%)	7/225 (3.11%)	4/62 (6.45%)	0.2251
Preoperative Ureteral Rest (%)	184/287 (64.1%)	145/225 (64.44%)	39/62 (62.90%)	0.8228
Procedure Type				
• Refluxing (%)	168/286 (58.7%)	138/225 (61.33%)	30/62 (49.18%)	0.0872
• Side-to-side (%)	51/286 (17.8%)	36/225 (16.00%)	15/62 (24.59%)	0.1200
• Ureteroureterostomy (%)	36/286 (12.6%)	29/225 (12.89%)	1/17 7/62 (11.48%)	0.7678
• Non-refluxing (%)	18/286 (6.3%)	12/225 (5.33%)	6/62 (9.84%)	0.1990
• Buccal Ureteroplasty (%)	8/286 (2.8%)	6/225 (2.67%)	2/62 (3.28%)	0.7971
• Appendiceal bypass (%)	5/286 (1.7%)	4/225 (1.78%)	1/62 (1.64%)	0.9417
Operative Time (minutes)	188.5 (IQR 141.0 - 264.5)	188.0 minutes, IQR = (141.0, 260.5)	189.0 minutes, IQR = (148.0, 272.5)	0.7405
Estimated Blood Loss (milliliters)	50.0 (IQR 25.0 - 100.0)	50.0 mL, IQR = (25.0, 100.0)	50.0 mL, IQR = (25.0, 100.0)	0.8192
Stricture length (centimeters)	2.0 (IQR 1.3-4.0)	2.0 cm, IQR = (1.3, 4.0)	2.0 cm, IQR = (1.25, 5.0)	0.6195
Quality of Stricture (%)	Narrow: 179/244 (73.4%) Obliterated: 42/244 (17.2%) Avulsed: 23/244 (9.4%)	Narrowed: 136/193 (70.47%) Obliterated: 35/193 (18.13%) Avulsed: 22/193 (11.40%)	Narrowed: 43/51 (84.31%) Obliterated: 7/51 (13.73%) Avulsed: 1/51 (1.96%)	0.0699
ICG usage intraoperatively (%)	115/284 (40.5%)	93/225 (41.33%)	22/59 (37.29%)	0.5732
Length of Stay (days)	1.0 (IQR 1.0-2.0)	1.0 days, IQR = (1.0, 2.0)	1.0 days, IQR = (1.0, 2.0)	0.7855
30-Day Postoperative Complications Greater than Clavien II (%)	14/280 (7.8%)	12/220 (5.45%)	2/60 (3.33%)	0.504
Surgical Success (%)	263/287 (91.6%)	206/224 (91.96%)	57/61 (93.44%)	0.7013

Poster 73

Utilization of Emergency Services Following Outpatient Urologic Surgery: A Retrospective Analysis

A. Majeed[1], M. Hsu[1], M. Carraher[2], J. Patel[2] and J. Clark[1,2]

[1]Penn State College of Medicine, Hershey, PA, USA; [2]Penn State Health Milton S Hershey Medical Center, Hershey, PA, USA

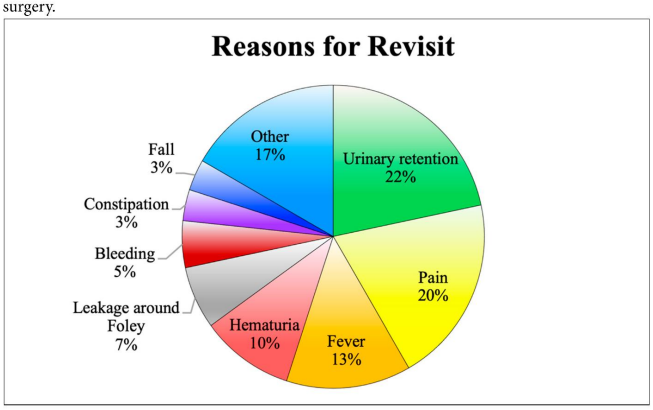
Introduction and Objective: Outpatient urologic surgeries have become increasingly common, offering benefits such as reduced hospital stays and enhanced recovery experiences. However, unplanned emergency department (ED) visits following these procedures pose challenges for both patients and healthcare systems. This study aimed to evaluate the frequency and causes of unplanned ED visits within seven days of outpatient urologic surgeries at a single institution and to identify potential areas for improvement in post-discharge care.

Methods: A retrospective cohort study was conducted using data from 1616 outpatient urologic surgeries performed in adults during fiscal years 2023 and 2024. The study analyzed revisit rates, timing of returns, reasons for revisits, patient demographics, procedure types, and discharge processes to identify trends and opportunities for intervention. This study was approved by Penn State Institutional Review Board.

Results: Among the 1616 procedures, 3.5% (n = 56) resulted in an unplanned visit to the ED within seven days. The highest revisit rates were observed for 30% of prostate resection procedures (3/10), 20% of scrotal/testicular surgeries (1/5), and 6.98% of mixed procedures (6/86). The most common reasons for revisits were urinary retention (n = 13), pain (n = 12), and fever (n = 8) (Fig. 1). Only 32.1% of patients contacted their physician before reporting to the ED.

Conclusions: The study highlights the importance of addressing unplanned ED visits following outpatient urologic surgery by improving the clarity and accessibility of discharge instructions, implementing follow-up communication, and streamlining pathways for patients to contact their physician. Future research should explore the effectiveness of strategies, such as follow-up calls, to address these obstacles and improve patient outcomes.

Figure 1: Distribution of reasons for ED visits within 7 days following outpatient urologic surgery.



Poster 74

Management of Dog Bites to the External Genitalia: A Retrospective Analysis

K. Petrillo[1], D. Boyd[2], T. Lulla[2], D. Portal[2], C. De Klerk[3], J. Reinisch[3], N. Shaw[1,2], A. van der Merwe[3] and K. Venkatesan[1,2]

[1]Georgetown University, Washington, DC, USA; [2]MedStar Georgetown University Hospital, Washington, DC, USA; [3]University of Stellenbosch—Tygerberg Hospital, Cape Town, South Africa

Introduction and Objective: Approximately 4.5 million dog bites occur each year in the US with more than 800,000 requiring medical attention. Trauma to the external genitalia from dog bites is rare, with a larger focus in pediatric populations. We sought to characterize incidence and management of genital trauma from dog bites at two level one trauma centers.

Methods: A retrospective review was performed to identify patients treated for genitourinary trauma at two level one trauma centers from January 2015 to May 2024. Injury resulting from dog bites were examined. Demographics, injury location, and clinical presentation were identified with subsequent analysis of management and outcomes.

Results: Ten patients sustained external genitalia trauma secondary to dog bites (Fig. 1). All were male; the median age was 25 years (3–66). Isolated penile injury was the most common presentation (n = 7, 70%). Two patients presented with gross hematuria and had urethral injuries requiring urethroplasty. One patient had microscopic hematuria without urethral injury. No case resulted in testicular trauma. Seven patients underwent operative management; penoscrotal debridement (n = 4, 40%) was the most common. Non-operative management included bedside washout with laceration repair (n = 2, 20%) or antibiotics only (n = 1, 10%). The two urethroplasty patients had follow-up retrograde urethrography without strictures. The sole complication was a distal urethral stricture in a patient that required glans amputation completion.

Conclusions: Trauma to external genitalia secondary to dog bites is rare yet requires prompt urologic evaluation and possible intervention. Clinicians should have a high index of suspicion for urethral injury in these patients, particularly if gross hematuria is present. Despite no testicular involvement in our study clinicians should maintain a low threshold for scrotal imaging and exploration.

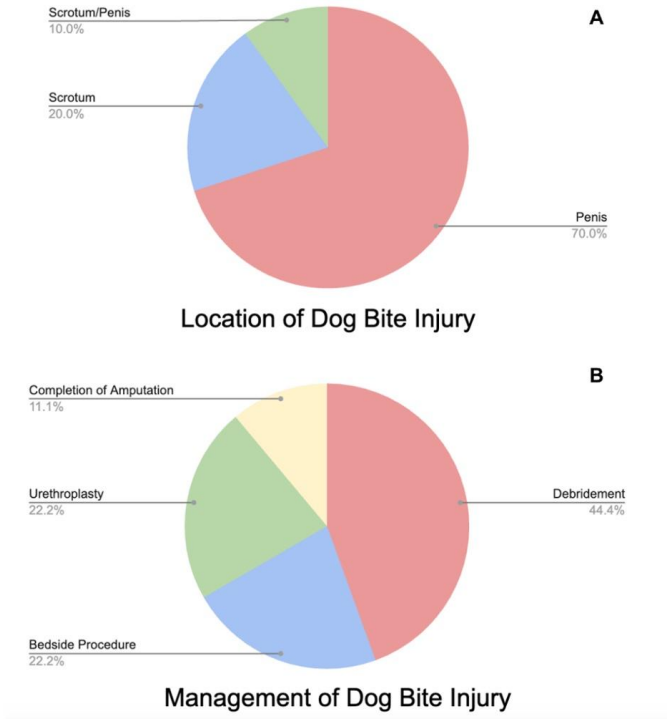


Figure 1. A) Presenting location of injury secondary to dog bite. B) Management of dog bite injury

Poster 75

Urinary Diversion for Non-Malignant Conditions: A Case Series

R. Fogg[1], B. Wilson[1], G. Mayer[1], A. Klausner[1], J. Roseman[1], L. Hampton[1], S. Krzastek[2] and G. Georgi[1]

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Introduction and Objective: Common non-malignant conditions requiring urinary diversion include neurogenic bladder, interstitial cystitis/painful bladder syndrome (IC/PBS), hemorrhagic/radiation cystitis, infectious diseases of the bladder, severe incontinence, and refractory genitourinary fistulae. While some have questioned the need for concomitant cystectomy in patients requiring urinary diversion for benign conditions, pyocystis and bladder cancer remain rare but worrisome complications of the defunctionalized bladder. In this study, we reviewed our records to determine operative outcomes of urinary diversion for non-malignant conditions.

Methods: We retrospectively analyzed patients who underwent urinary diversion from December 2008 to February 2025 at VCU Medical Center and The Richmond Veterans Affairs Medical Center. Patients were excluded from the cohort if they underwent urinary diversion for active malignancy. Demographics, indications for surgery, type of diversion, operative time, estimated blood loss, length of hospital stay, and complications of surgery were reviewed.

Results: Ninety-six patients (mean age 55, range 14–83, 75% male) were identified during study period. Sixty-nine patients had a cystectomy together with urinary diversion, while 27 had urinary diversion only. Most patients received an ileal conduit (82/97, 85.4%), followed by continent diversion (11/96, 11.5%) and colon conduit (3/96, 3.1%). Average operative time was 308 min, EBL was 427 mL, and length of hospital stay was 7 days. Average operative time for the patients who underwent diversion without cystectomy was 234 min. While cystectomy was performed in patients with interstitial cystitis, radiation cystitis and hematuria, the bladder was retained in patients with fistulas and incontinence. We encountered no occurrences of pyocystis in patients with a retained bladder.

Conclusions: Cystectomy performed for non-malignant conditions does not add significant operative time or morbidity to urinary diversion, while eliminating possible complications related to the defunctionalized bladder. Based on these data, concomitant cystectomy can be avoided in patients with fistulas and incontinence.

Poster 76

Robotic bladder neck reconstruction for management of vesicourethral anastomotic stenosis: An institutional experience

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Introduction and Objective: Vesicourethral anastomotic stenosis (VUAS) is a challenging complication that can arise following robotic-assisted laparoscopic prostatectomy. Treatment often involves multiple endoscopic interventions with varying degrees of success. Promising robotic interventions exist, however, evidence regarding their effectiveness in treating VUAS is limited. In this study, we demonstrate our institutional experience of robotic-assisted bladder neck reconstruction (BNR) via the transvesical approach for the management of VUAS.

Methods: We retrospectively reviewed data from patients undergoing robotic-assisted transvesical BNR by a single surgeon for the management of VUAS from April 2021 to August 2024. All BNR was performed via circumferential excision of scar tissue followed by 360° vesicourethral anastomosis. Surgical success was defined as resolution of pre-operative obstructive symptoms and/or patients requiring no further endoscopic interventions. Perioperative outcomes were reported using frequencies, median, and interquartile range (IQR), with complications classified by the Clavien-Dindo system (CDC).

Results: Thirteen patients were included in our analysis (Table 1). Six (46%) patients experienced pre-operative stress incontinence. Median duration between index surgery and robotic intervention was 36 months (IQR 12–84). Eleven (85%) patients failed at least one endoscopic procedure prior to robotic transvesical BNR. Median operative time and estimated blood loss was 201 (IQR 142–246) minutes and 100 (IQR 50–100) milliliters respectively. No patients experienced CDC complications > 2. One (8%) patient had new postoperative stress incontinence. At a median follow-up time of 3 months (IQR 1–9), nine (90%) were surgically successful.

Conclusions: Our experience demonstrates that robotic transvesical BNR may be a safe and effective approach for the management of VUAS. Additional research is necessary to further define long-term outcomes and identify the best candidates for robotic BNR.

Perioperative Variables Associated with Robotic Transvesical Bladder Neck Reconstruction	
Variable	**N=13**
Preoperative	
Median Age (IQR), Years	65 (58-69)
Median Body Mass Index (IQR), Kilograms/Meters²	29 (28-32)
Patients with preoperative stress incontinence (%)	6 (46)
Etiology of vesicourethral anastamotic stenosis/index surgery (%)	
Robotic-assisted laparoscopic prostatectomy (RALP)	11 (84)
RALP, salvage radiation	1 (8)
Radiation, salvage RALP	1 (8)
Median duration between index surgery and robotic intervention (IQR), Months	36 (12-84)
Patients with prior endoscopic intervention (%)	11 (85)
One intervention	2 (18)
Two interventions	3 (27)
Three or more interventions	6 (55)
Patients with preoperative suprapubic tube placement (%)	6 (46)
Median duration of urethral rest prior to robotic intervention (IQR), Months	2.5 (1.3-3)
Intraoperative	
Median size of stricture (IQR), French size	8 (5-10)
Median Operative Time (IQR), Minutes	201 (142-246)
Median Estimated Blood Loss (IQR), Milliliters	100 (50-100)
Patients with Clavien ≥2 Complications (%)	2 (15)
Clavien II: urinary tract infection (UTI)	1 (8)
Clavien II: small bowel obstruction & UTI	1 (8)
Postoperative	
Patients with new postoperative stress incontinence (%)	
Yes	1 (8)
No	10 (77)
Unknown	2 (15)
Patients with surgical success (%)	
Yes	9 (69)
No	1 (8)
Unable to assess	3 (23)
Median follow up time (IQR), Months	3 (1-9)

Poster 77

Critical Analysis of Direct-To-Consumer Extracorporeal Shock Wave Therapy Devices Marketed for Erectile Dysfunction Treatment on Amazon.com

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Introduction and Objective: Many men seek erectile dysfunction (ED) treatments via direct-to-consumer (DTC) websites/products. Extracorporeal shock wave therapy (ESWT) devices are now being marketed to men online. In this study, we analyze listings of ESWT devices being marketed for ED treatment on Amazon.com.

Methods: We identified DTC ESWT devices using the search term "shock wave therapy erectile dysfunction" on Amazon.com. We collected data on listing descriptions/claims, ratings/reviews, cost, and ESWT directions for use.

Results: Of the 65 devices analyzed, 48% (31/65) were specifically advertised for ED in listing title, while 97% (63/65) were marketed for multiple uses outside of men's health. Device cost range was $159.95–11,999.00 (median, $487.99 (IQR 197.99 to 1149.99)). Overall, 54% (35/65) devices were reviewed by consumers, with a median rating of 3.6 of 5 total stars (IQR 3.25 to 4.2). Median number of overall reviews per device was 10 (IQR 5 to 43). With regards to ED treatment, there were a total of 29 positive reviews (3 stars or greater) and 27 negative reviews (2 stars or less). Most common claim was improved penile blood flow (38%, 25/65) (Table 1). Overall, 85% (55/65) of listings offered no information on recommended ED treatment settings including frequency (Hz), duration, or frequency of use. A full list of treatment instructions included in listings can be found in Table 2.

Conclusions: Despite AUA guidelines, DTC ESWT devices are being sold and marketed for ED treatment. There exists great variety in cost and claims and majority of listings offer limited information on how to use device for ED treatment.

Claims	# of devices with claim (% of total devices)
Improved penile blood flow	25 (38)
Stronger erections	18 (28)
Increased erection duration	16 (25)
Vague ED treatment claims*	11 (17)
Use with or without ED	8 (12)
Treat penile plaques	6 (9)
High efficacy	5 (8)
Regenerate erectile tissue	5 (8)
Avoid surgery/medication	4 (6)
Improved sex life	4 (6)
Minimal side effects	4 (6)
Increase spontaneity	2 (3)
Increase penile size	1 (2)

Table 1. Post-treatment claims included in ESWT device listings that specifically addressed ED. (*listings mentioning "ED treatment" or "ED therapy" without additional details included)

Treatment time	Treatment duration	Treatments per week	Frequency setting (Hz)
5 minutes	3 weeks	Twice per week	3 to 8
15 minutes	5 times	Every 2-3 days	
10 to 15 minutes	3-5 treatments		
10 to 20 minutes			
1300 shocks			
1500 total shocks			
2000-2500 times			

Table 2. Various instructions included in listings on how to use ESWT device specifically for treatment ED.

Poster 78

Every Centimeter Counts: A Corporal Length Distribution Chart for Patient Counseling

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Introduction and Objective: Inflatable penile prosthesis (IPP) implantation remains the gold standard for treating refractory erectile dysfunction (ED). While most patients report satisfaction with restored sexual function, perceived penile shortening remains the most common long-term complaint, with up to 70% of men endorsing a loss of length. Previous studies have examined the relationship between preoperative stretched penile length (SPL) and optimal prosthesis cylinder length, but no standardized metrics exist to manage patient expectations. We propose a corporal length distribution chart to aid in pre and post operative counseling.

Methods: We conducted a retrospective analysis of the Coloplast™ penile prosthesis device database (2014–2024). Corporal length (CL) was determined by summing cylinder and rear-tip extender (RTE) lengths and used as a surrogate for implant size. Descriptive statistical analysis was performed, and a bar graph was generated to illustrate implant size distribution.

Results: A total of 55,066 devices were included in our analysis. Corporal Lenth ranged from 12 cm to 32 cm with a mean of 20.89 (SD = 2.21) The 10th and 95th percentiles for implant size were 18 cm and 24.25 cm, respectively, indicating that 85% of implants fell within this range.

Conclusions: Implant sizes followed a normal distribution, with an average length of 21 cm, aligning with previous studies. This corporal length distribution chart may be valuable for setting realistic patient expectations during preoperative counseling.

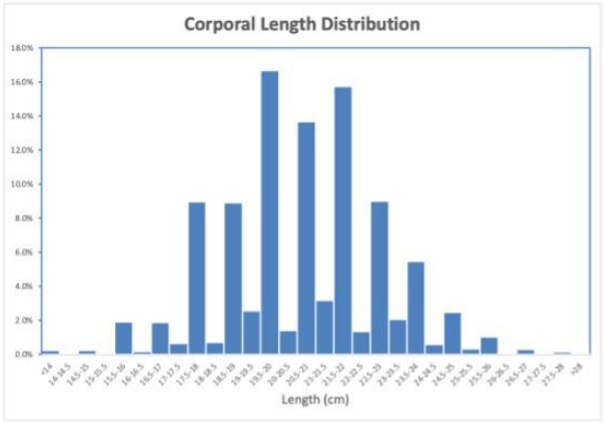

Figure 1: Corporal Length Distribution

Poster 79

Long-term Sexual Function Declines but Remains Stable After Primary and Salvage Prostate Ablation

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Introduction and Objective: Long term impacts on sexual function after primary and salvage prostate ablation remains unclear. The present study aims to compare pre-ablation characteristics, risk factors, and long-term sexual function in patients undergoing primary or salvage ablation in a single-surgeon, single-institution setting.

Methods: We retrospectively reviewed data from 107 patients undergoing prostate ablation as primary or salvage treatment. Primary ablation was almost always focal whereas salvage ablation was almost always whole gland. Sexual Health Inventory for Men (SHIM) scores and characteristics were compared between and within the groups.

Results: Of the 107 patients, 23 (21%) underwent primary ablation and 84 (79%) underwent salvage ablation after failed radiotherapy (Table 1). Frequencies of comorbidities between the groups were not significantly different, but age (68 vs 78) was significantly different between the primary and salvage ablation groups. In the primary group, 14 (60%) underwent irreversible electroporation whereas in the salvage group 78 (93%) underwent cryoablation (both $p < 0.001$). Baseline, post-ablation, and follow up SHIM scores were significantly higher in the primary ablation group as compared to the salvage group. Within each group, paired *t*-tests showed a significant decline in SHIM scores pre- and post-ablation (Δ 7.4 for primary and Δ 3.7 for salvage), but an insignificant change at subsequent follow-up (Fig. 1).

Conclusions: Patients undergoing salvage ablation had significantly lower SHIM scores at each time point—likely attributable to prior radiotherapy and age. Both groups experience an initial decline that later stabilizes. Patients undergoing primary prostate ablation should be counseled on potential decline in baseline sexual function.

	Primary Ablation	Salvage Ablation	P-value
N	23	84	
Mean Age (SD)	68 (5.4)	78 (7)	**<0.001**
Comorbodities | N (%)			
Diabetes Mellitus	2 (8.6)	16 (19)	0.35
Hypertension	18 (78)	56 (67)	0.42
Coronary Artery Disease	4 (17)	8 (9.5)	0.28
Renal Insufficiency	2 (8.7)	8 (9.5)	1
Heart Failure	1 (4.3)	2 (2.4)	0.51
None	1 (4.3)	9 (11)	0.68
Modality of Ablation | N (%)			
Cryoablation	9 (39)	78 (93)	**<0.001**
Irreversible Electroporation	14 (60)	0 (0)	**<0.001**
High-Intensity Focused Ultrasound	0 (0)	6 (7)	0.337
Median Pre-ablation SHIM Score (IQR)	22 (6)	10.5 (13)	**<0.001**
Median Days Assessed Prior to Ablation (IQR)	125 (311)	62.5 (70)	**<0.001**
Median Post-ablation SHIM Score (IQR)	15.5 (15)	2 (12.5)	**0.01**
Median Days Assessed After Ablation (IQR)	189 (129)	202 (255)	0.87
Median Post-ablation Follow up SHIM Score (IQR)	12.5 (14.75)	1.5 (3.75)	**0.004**
Median Days Assessed After Ablation (IQR)	438 (259)	460 (216)	0.98

Table 1: Primary and Salvage Ablation Characteristics and SHIM Scores

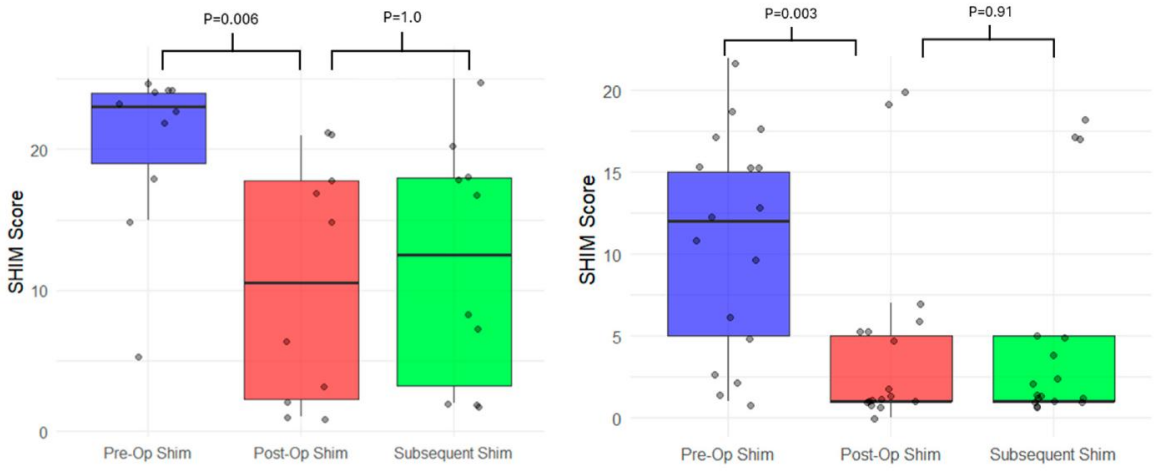

Figure 1: Left | Primary Ablation SHIM Score Distribution; Right | Salvage Ablation SHIM Score Distribution.

Poster 80

Trends in use of Rear Tip Extenders in Inflatable Penile Prosthesis Surgery

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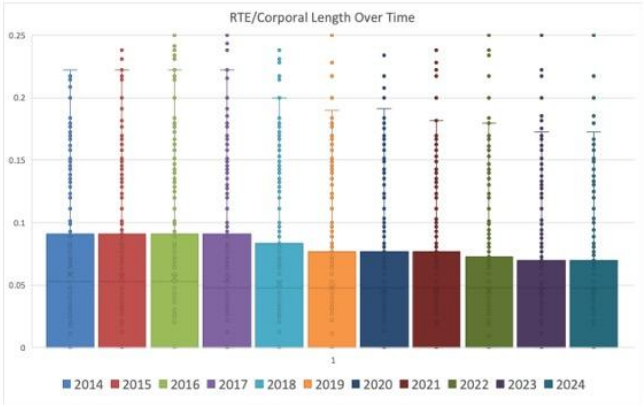
Introduction and Objective: Rear tip extenders (RTE) help optimize sizing in inflatable penile prosthesis (IPP) surgery but may reduce axial rigidity. This study evaluates trends in RTE use over time and the impact of surgical approach (penoscrotal vs. infrapubic) on RTE utilization.

Methods: We retrospectively analyzed the Coloplast™ IPP database (2014–2024) assessing corporal length (CL) as the sum of cylinder and RTE lengths. Trends in RTE use were evaluated using *t*-tests, linear regression, and logistic regression. The proportion of CL composed of RTE was compared between surgical approaches.

Results: Among 55,066 devices, average CL increased by 0.91 cm ($p < 0.001$), while median RTE length remained unchanged. The proportion of CL made up by RTE declined from 5.26% in 2014 to 4.76% in 2024 ($p < 0.001$).

Of the implants, 66.6% were placed via a penoscrotal and 33.4% via an infrapubic approach. RTE use was higher in the penoscrotal group (68.6% vs. 63.6%, $p < 0.001$), and among RTE users ($n = 36,744$), the proportion of CL composed of RTE was also greater (5% vs. 4%, $p < 0.001$). The penoscrotal approach had 1.25 times higher odds of RTE use ($p < 0.001$).

Conclusions: RTE use in IPP surgery has slightly decreased over the past decade, possibly reflecting efforts to maximize rigidity. The penoscrotal approach is associated with greater RTE utilization, which is likely related to tubing positioning.



Poster 81

Hydrocelectomy Complication Rates in the United States

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Introduction and Objective: Hydrocelectomy is the gold standard treatment for hydrocele. Recent data from Europe has found hydrocelectomy complication rates between 16–25%, however the rate within the United States has not previously been assessed. We examined rates of postoperative complications, emergency department visits, readmissions, and reoperations after hydrocelectomy in the United States.

Methods: We performed a retrospective cohort study of 27,418 individuals who underwent hydrocelectomy in the United States between the years 2004–2024 identified in the TriNetX US Collaborative Network using diagnosis and procedural codes. Exclusions were age < 18, testicular neoplasm, and orchiectomy. The primary outcome was rate of any emergency department visit, tissue complication, readmission, or reoperation within 90 days of hydrocelectomy. Statistical analysis used *t*-tests, and chi-squared tests.

Results: The complications rate was 9% within 30 days and 13% within 90 days of surgery (Fig. 1). The emergency department visit rate was 6.7%, tissue complication rate was 5.6%, readmission rate was 2.6%, and reoperation rate was 2.6%. The complications group had higher proportions of African American patients ($p < 0.001$) and patients with obesity ($p < 0.001$), hypertension ($p < 0.001$), diabetes ($p < 0.001$), coagulation defects ($p < 0.001$), and nicotine dependence ($p < 0.001$) (Table 1).

Conclusions: The complications rate after hydrocelectomy in the United States is 13%, with 9% occurring in the first 30 days. There was a 2.8% risk of reoperation within 90 days. These observations emphasize surgical optimization for patients with obesity, hypertension, diabetes, coagulation defects, or nicotine dependence and close follow-up evaluate for developing complications.

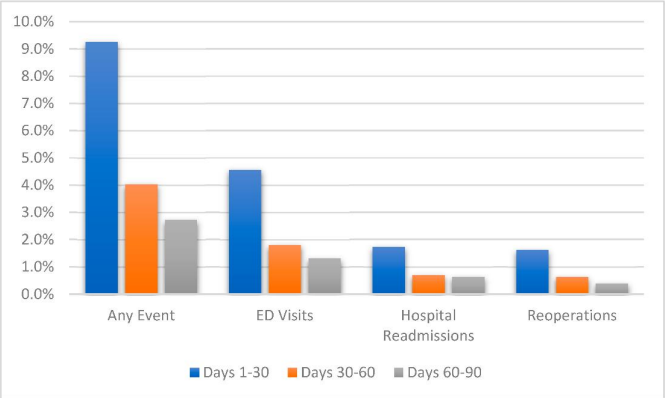

Figure 1- Rates of adverse events.

*Table 1-Hydrocelectomy cohort characteristics. * indicates significance at p < 0.05.*

	COMPLICATION	NO COMPLICATION	P-VALUE
TOTAL	3,628 (13.2%)	23,790 (86.8%)	
AGE			
MEAN (SD)*	54.8 (17.4)	50.6 (19.8)	< 0.001; t-test
ETHNICITY			
NOT HISPANIC OR LATINO	2,813 (77.5%)	16,727 (70.3%)	
HISPANIC OR LATINO	270 (7.8%)	2,060 (8.7%)	
UNKNOWN	5536 (14.8%)	5,003 (21.0%)	
RACE			
WHITE	2,525 (70%)	16,762 (70%)	
BLACK OR AFRICAN AMERICAN*	572 (16%)	2,333 (10%)	< 0.001; chi-squared
ASIAN	48 (1%)	436 (2%)	
UNKNOWN RACE	374 (11%)	3,315 (14%)	
COMORBIDITIES			
OBESITY*	1,046 (29%)	4,374 (18%)	< 0.001; chi-squared
HYPERTENSIVE DISEASES*	2,109 (58%)	9,539 (40%)	< 0.001; chi-squared
DIABETES MELLITUS*	861 (23%)	3,255 (14%)	< 0.001; chi-squared
COAGULATION DEFECTS*	322 (9%)	830 (3.5%)	< 0.001; chi-squared
NICOTINE DEPENDENCE*	739 (20%)	3,316 (14%)	< 0.001; chi-squared

Poster 82

Prevalence and Clinical Associations of Low Testosterone in Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CP/CPPS)

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Introduction and Objective: Chronic Prostatitis/Chronic Pelvic Pain Syndrome (CP/CPPS) is a complex condition with unclear pathophysiology. While hormonal influences have been considered, the relationship between CP/CPPS and testosterone remains poorly understood. This study examines the prevalence of low testosterone (T) in CP/CPPS patients and its associated clinical characteristics.

Methods: A retrospective analysis was conducted on CP/CPPS patients, excluding those with urethral stricture, cancer, radiation history, fistula, or opioid use. Patients were categorized into normal (≥300 ng/dL) and low (<300 ng/dL) testosterone groups. Low T was defined as two morning testosterone measurements <300 ng/dL, while those with a normal level in confirmatory test and/or diagnostic level were classified as normal. Symptom prevalence and comorbidities were compared using chi-square analysis.

Results: Among 56 CP/CPPS patients, 30% had low testosterone. Compared to the normal T group (n = 39), those with low T (n = 17) had a higher prevalence of weak urinary stream (29.4% vs. 7.7%, p = 0.047). Additionally, a trend toward increased fibromyalgia (11.8% vs. 0.0%, p = 0.088) was observed in the low testosterone group. No significant differences were found in erectile dysfunction (35.3% vs. 30.8%, p = 0.982), anxiety (29.4% vs. 28.2%, p = 1.000), or depression (11.8% vs. 12.8%, p = 1.000).

Conclusions: Low testosterone was observed in approximately one-third of CP/CPPS patients. While no significant differences were found in psychological symptoms, the trend toward increased fibromyalgia in the low testosterone group may suggest a potential relationship between hypogonadism, systemic pain disorders, and CP/CPPS pathophysiology. These findings underscore the importance of further research to clarify the role of testosterone in CP/CPPS and explore potential implications for patient management and treatment strategies.

Poster 83

Challenging the Hydrophilic Penile Prosthesis Surface: Maximizing Vancomycin and Gentamicin Concentrations

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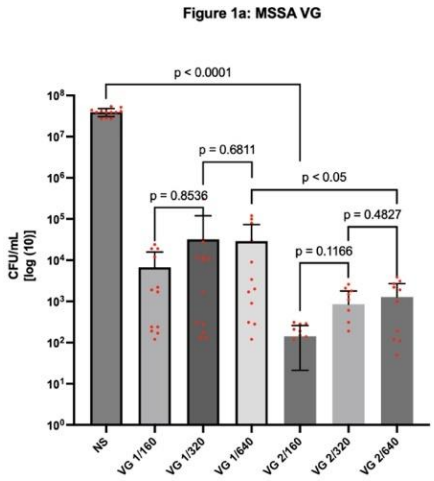
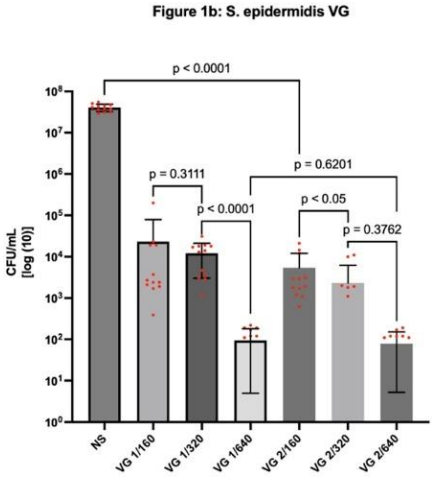
Introduction and Objective: Hydrophilic penile prosthesis (PP) surfaces can adsorb a finite amount of antibiotics. We evaluate the optimum dosing of vancomycin and gentamicin to confer maximum gram-positive and -negative coverage without compromising spectrum of antimicrobial coverage in PP surgery.

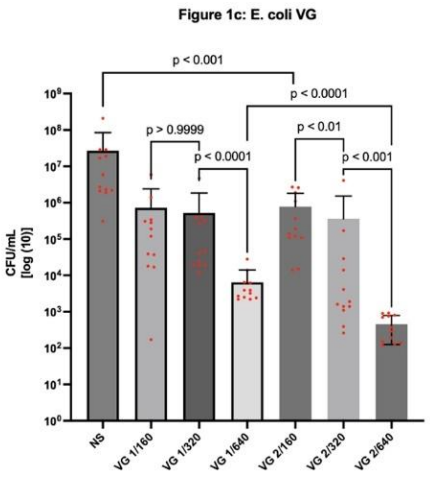
Methods: Sterile 8 mm PP discs (Coloplast, Minneapolis, MN) were submerged for 3 min in 3 mL of normal saline (NS) or the following antibiotic solutions: 1 or 2 mg/mL VAN + 160, 320, or 640 ug/mL GEN. PP discs were rinsed in NS, incubated with 105 colony forming units per milliliter (CFU)/mL of methicillin-sensitive Staphylococcus aureus sourced from a clinical PP infection, Staphylococcus epidermidis 35984, or Escherichia coli 33694 for 48 h. Biofilm was removed by shaking in 0.3% Tween-20. Suspended bacteria were diluted, plated, and counted. Mann-Whitney U and one-way ANOVA tests were performed to compare outcomes, $p < 0.05$ considered significant.

Results: Average bacterial counts with 95% CI are plotted in Fig. 1a–c. Against MSSA, all discs dipped in 2 mg/mL VAN resulted in a ~4.5 log reduction in bacterial counts relative to NS controls, irrespective of GEN dosing ($p < 0.001$). Against S. epi, discs dipped in 1 mg/mL VAN and 640 ug/mL GEN resulted in a peak 5 log reduction in bacterial counts ($p < 0.001$). Against E. coli, all discs dipped in 640 ug/mL GEN resulted in a ~3.5 log reduction in bacterial counts, irrespective of VAN dosing ($p < 0.001$).

Conclusions: A 2 mg/mL VAN 640 ug/mL GEN solution provided the best antimicrobial efficacy against MSSA, S. epidermidis, and E. coli combined in this *in vitro* model. Further studies are indicated to compare the antimicrobial efficacy of VG against other antibiotic combinations and evaluate the cost-feasibility of these antibiotic concentrations.







Poster 84

Factors Associated with Selective Use of Urethral Imaging After Urethroplasty

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Introduction and Objective: Postoperative imaging after urethroplasty is traditionally performed before catheter removal. Recent studies suggest that postoperative urethral imaging (POUI) may not be necessary after urethroplasty in patients with an uncomplicated postoperative course. This study aims to evaluate the factors associated with the use of POUI among Urologists who perform urethroplasty.

Methods: We surveyed practicing Urologists who perform urethroplasty between August and September 2024 via social media and direct email to the members of the Society of Genitourinary Reconstructive Surgeons (GURS). Based on their responses, surgeons were grouped into those who routinely obtain POUI (rPOUI) and those who either selectively obtain or omit POUI (sPOUI). Descriptive statistics were used to summarize provider responses and Fisher's exact test was used to compare provider responses between the rPOUI and sPOUI groups.

Results: Our survey received a total of 67 responses from Urologists who perform urethroplasties. A total of 45 respondents (67.2%) routinely use POUI, compared to 13 (19.4%) who selectively use POUI and 9 (13.4%) who do not use POUI. When comparing the rPOUI and sPOUI groups, we found a significant difference in practice setting (Academic vs Private vs Other, $p = 0.019$) and in POUI practices learned during fellowship ($p < 0.001$). In the sPOUI group, the most common reason for not obtaining imaging was: "I don't think it is necessary" (n = 14, 63.6%). Other responses are summarized in Table 1.

Conclusions: The use of POUI among survey respondents was influenced by the surgeon's practice setting and the training they received in fellowship. Factors such as the surgeon's experience or the patient's travel time were not different for those who use routine or selective POUI.

Table 1. Surgeon Reasoning for Not Obtaining POUI

Question	
If you do NOT obtain urethral imaging for POSTOPERATIVE EVALUATION after urethroplasty, why is that the case? (Select all that apply)	
Response	**n (%)**
I don't think it is necessary	14 (63.6)
I believe it is inconvenient for my patients	3 (13.6)
It is inconvenient for me	3 (13.6)
I am trying to limit my radiation exposure	3 (13.6)
I am trying to limit my patient's radiation exposure	1 (4.5)
Other	4 (18.2)
"Cystoscopy"	
"Cystoscopic examination of a widely patent urethra suffices. If a recurrent stricture develops over time, I repeat imaging evaluation prior to any revision procedures."	
"Difficult access to fluoroscopy (I only have access approx 1 day q 2 weeks). […] I keep catheter 3 weeks for EPA and 4 weeks for grafted repair."	
"I use PROMS evaluation, clinical followup"	

Poster 85

Preservation of Safety and Efficacy Outcomes Across Races Among Men Undergoing Aquablation

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Introduction and Objective: Disparities exist in the treatment of lower urinary tract symptoms associated with benign prostatic hyperplasia (BPH). Black males are significantly less likely than White males to undergo surgical treatment for BPH. Additionally, non-White men are underrepresented in clinical trials, raising concerns about untreated BPH. Approximately 13–14% of the U.S. population is Black, and 34% of U.S. Black males are over 45 years old. The WATER I trial established the safety and efficacy of Aquablation for men with 30–80 g prostates, but only 8/117 (6.8%) participants in the Aquablation arm were non-White, with only 2 (1.7%) being Black. We present analysis of the short-term safety and efficacy of Aquablation in a diverse population at a large US academic center.

Methods: A prospective database study assessed men undergoing Aquablation by a single surgeon from February 2022 to September 2024. Baseline demographics, peri-operative details, and short-term safety and efficacy outcomes were analyzed and stratified by race (White vs Non-White). Multivariate regression identified predictors of improved post-operative IPSS.

Results: Of 109 patients, 15 (14%) were Black, 3 (2.8%) were Asian, and one (1%) had unspecified race. There were no significant differences in baseline characteristics or peri-operative outcomes between groups. No patients required blood transfusion. Similar improvements in post-operative PVR, IPSS, and IPSS QOL scores were observed at 2–3 months. Multivariate linear regression showed no predictive value of race on post-operative IPSS. Pre-operative IPSS was an independent predictor of improved post-operative IPSS (2.92 [1.89, 4.52], $p< 0.001$).

Conclusions: These results demonstrate that Aquablation at a large U.S. academic center has a favorable safety and efficacy profile across racial groups. Future studies with larger, more diverse populations and longer follow-up will assess continued treatment response.

Characteristic	Non-White (N=19)	White (N=90)	p-value
Age at time of procedure	66 (62, 73)	67 (61, 72)	0.8
BMI	28.3 (25.8, 32.0)	27.4 (24.8, 29.9)	0.5
Baseline PSA	3.9 (2.3, 9.3)	3.6 (2.6, 6.5)	0.9
Baseline PVR	138 (32, 383)	139 (56, 301)	0.9
Baseline prostate size (cc)	69 (57, 108)	80 (61, 100)	0.5
Pre-operative IPSS	21 (17, 31)	22 (18, 26)	0.9
Pre-operative IPSS-QoL	5.00 (4.00, 6.00)	5.00 (4.00, 6.00)	0.6
Previous BPH Procedures			0.8
None	16 (84%)	73 (81%)	
Photoselective vaporization of the prostate	0 (0%)	3 (3.3%)	
Prostatic urethral lift	3 (16%)	9 (10%)	
Transurethral microwave therapy	0 (0%)	1 (1.1%)	
Water vapor thermal therapy	0 (0%)	5 (5.6%)	
BPH complications			0.9
Bladder stones	1 (5.3%)	9 (10%)	
Gross hematuria	1 (5.3%)	2 (2.2%)	
Urinary retention	6 (31.5%)	39 (43%)	
UTI	1 (5.3%)	15 (16.7%)	
In urinary retention pre-operatively	4 (21%)	21 (25%)	0.9
Uroflow, Qave (mL/sec)	3.95 (2.45, 5.10)	3.30 (2.50, 5.05)	0.7
Uroflow, Qmax (mL/sec)	7.3 (6.0, 8.6)	7.9 (5.0, 10.7)	0.9
Number of Aquablation passes	2.00 (2.00, 2.00)	2.00 (2.00, 2.00)	0.6
Length of stay/hospitalization (days)	1.00 (1.00, 1.00)	1.00 (1.00, 1.00)	0.7
Duration of catheterization (days)	4.0 (1.0, 5.0)	4.0 (1.0, 5.0)	0.7
Change in IPSS	14 (8, 22)	13 (10, 21)	0.9
Change in IPSS-QoL	2.50 (2.00, 3.50)	4.00 (2.00, 5.00)	0.3
Change in PVR	-11 (5, -30)	-71 (8, -173)	0.3
Median (Q1, Q3); n (%)			
p-value calculated with Wilcoxon rank sum test; Fisher's exact test			

Poster 86

Evaluation of Artificial Intelligence-Generated Urological Imaging

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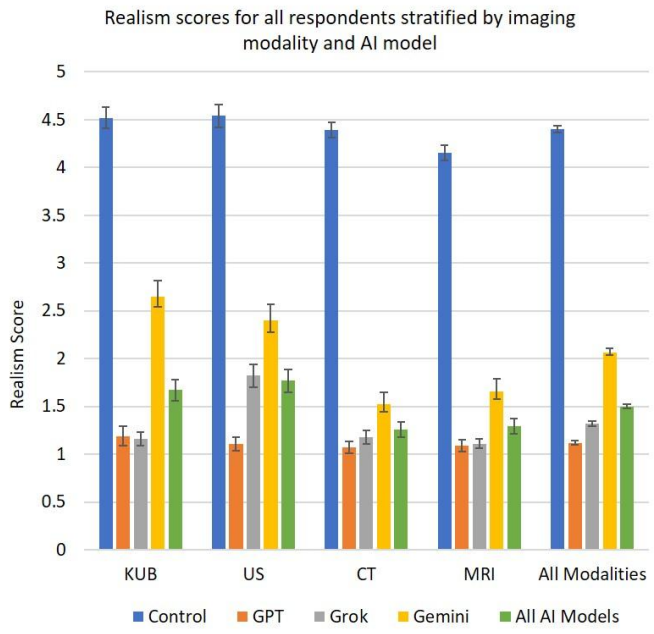
Introduction and Objective: Artificial intelligence (AI) has become capable of generating realistic images. AI has been studied and found to be realistic with creation of plain film radiographs, however this has not been examined within urology. This study aims to evaluate the medical realism of AI-generated urologic images.

Methods: Three AI platforms (ChatGPT, Grok, and Gemini) were asked to generate four images each of radiographs (KUB), ultrasound (US), computed tomography (CT), and magnetic resonance imaging (MRI). Similar control images were sourced online. A survey was sent to urologists who were asked to rate the images on a 1–5 Likert scale for medical realism.

Results: Twenty-five trainees and 16 faculty responded to the survey. Mean realism scores for control images, GPT, Grok, and Gemini, and all AI models combined were 4.40, 1.12, 1.32, 2.06, and 1.50, respectively with significant differences between control and AI-generated images ($p < 0.0001$) (Figure). For KUB, Gemini outperformed ChatGPT and Grok (2.65 vs 1.19 and 1.16; $p < 0.0001$). For US, Grok and Gemini outperformed ChatGPT (1.82 and 2.4 vs 1.11; $p < 0.0001$). For CT, Gemini scored higher than ChatGPT and Grok (1.52 vs 1.07 and 1.18; $p < 0.0001$). Gemini was superior to ChatGPT and Grok for MRI (1.66 vs 1.09 and 1.11; $p < 0.0001$). KUB and US images scored higher than CT and MRI ($p < 0.0001$). There was no difference between scores by urology trainees and faculty for any imaging modality ($p = 0.11$).

Conclusions: AI models cannot currently produce medically realistic radiologic images. Further AI model training is required to achieve sufficient accuracy for educational purposes.



Poster 87

Digital Health Patient Education for Ambulatory Urology Patients: Pre-Clinic Interventions

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Introduction and Objective: Digital health platforms are increasingly used to enhance patient engagement and improve chronic disease management. For conditions like benign prostatic hyperplasia (BPH) and overactive bladder (OAB), early education is essential for symptom recognition, treatment selection and adherence, and quality of life. EPIC Systems' MyChart Care Companion, a patient-facing digital tool, provides targeted educational content and symptom questionnaires before clinic visits to facilitate more meaningful discussions with providers. Care Companion was recently launched at our institution; this study aims to describe the initial implementation, utilization, and engagement of Care Companion in delivering tailored pre-clinic education.

Methods: This is a retrospective study integrating Care Companion into the pre-visit workflow for ambulatory urology patients at a single academic institution. Collaboration between urologists and EPIC information technologists enabled iterative modifications during beta testing to refine eligibility criteria and customize Care Companion for urology. After launch, initial enrollment and engagement metrics were assessed using descriptive statistics.

Results: Care Companion was launched in November 2024. Eligible patients, including adults with BPH or OAB symptoms, were automatically enrolled based on their documented reason for visit. Patients received condition-specific educational videos and articles curated by urologists, along with relevant symptom surveys including IPSS or LURN SI-10 two weeks prior to initial visit.

Since inception 382 patients have enrolled. 72% completed educational tasks via push notifications in the MyChart app. 62% completed one symptom score, and 32% of those completed a second after treatment. Educational content was delivered through Wellprept, with an average of 12 min per educational task.

Conclusions: Integrating EPIC Care Companion into ambulatory urology care is feasible and improves pre-visit engagement. This integrated system supports symptom tracking, remote monitoring, with the possibility of providing modifiable and targeted interventions. Future studies will prospectively evaluate clinical efficiency metrics and patient-centered outcomes with Care Companion to facilitate informed, patient-centered decision making.

Poster 88

Initial Experience Using the New Pulsed Thulium:YAG Laser for Endoscopic Enucleation of the Prostate

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Introduction and Objective: Clinical data on the use of the new pulsed Thulium:YAG laser (Thulio by Dornier MedTech) for treating lower urinary tract symptoms secondary to benign prostatic hyperplasia is lacking. Herein, we report the first clinical experience in the United States utilizing Thulio for endoscopic enucleation of the prostate.

Methods: We performed a retrospective review to identify all consecutive patients undergoing enucleation of the prostate with Thulio between 07/2023 and 9/2024. Surgical success was defined as resolution or improvement of preoperative symptoms. A descriptive analysis was performed on perioperative variables to assess the safety and efficacy of using Thulio for endoscopic enucleation of the prostate.

Results: Overall, 205 patients were included in the analysis (Table 1). Median prostate volume was 88.5 (IQR 61.5–145.5) grams and median preoperative American Urological Association Symptom Score was 20.0 (IQR 11.8–24.0). Intraoperatively, median operative time was 108.0 (IQR 83.0–135.0) minutes and estimated blood loss was 5.0 (IQR 1.0–10.0) milliliters. Postoperatively, median catheter duration was 1.0 (IQR 1.0–1.0) day. There was an improvement in median postoperative American Urological Association Symptom Score (median 6.0, IQR 3.0–10.0). There were 7 (3.4%) patients with postoperative (Clavien > 2) complications. Five (2.4%) patients required postoperative transfusions, 3 (1.5%) patients developed a bladder neck contracture, and 5 (2.4%) patients developed a urethral stricture. At a median follow-up of 5.9 (IQR 4.1–8.8) months, 199 (97.1%) patients were surgically successful.

Conclusions: Utilization of a novel pulsed thulium laser fiber for enucleation of the prostate demonstrates a favorable safety and efficacy profile at intermediate-term follow-up.

Table 1: Perioperative Variables Associated with Thulio Laser Enucleation of Prostate

Variable	N=205
Preoperative	
Median Age (IQR), Years	73.0 (66.0-77.0)
Median Body Mass Index (IQR), Kilograms / Meters^2	27.6 (25.2-31.3)
Median American Society of Anesthesiologists Score (IQR)	3 (2-3)
Median Prostate Volume (IQR), milliliters	88.5 (61.5-145.5)
Number of Prior Outlet Surgery (%)	40 (19.5%)
Median Preoperative Prostate Specific Antigen (IQR), Nanograms / Milliliter	3.5 (1.4-7.4)
Median Preoperative American Urological Association Symptom Score (IQR)	20.0 (11.8-24.0)
Number of Prior Antiplatelet/Anticoagulation Usage (%)	107 (52.2%)
Intraoperative	
Median Operative Time (IQR), Minutes	108.0 (83.0-135.0)
Median Enucleation Time (IQR), Minutes	40.0 (29.0-53.0)
Median Morcellation Time (IQR), Minutes	15.0 (5.0-20.0)
Median Estimated Blood Loss (IQR), Milliliters	5.0 (1.0-10.0)
Number of Intraoperative Complication (%)	4 (2.0%)
Postoperative	
Median Postoperative Catheter Duration (IQR), Days	1.0 (1.0-1.0)
Number of Same Day Discharge (%)	43 (20.9%)
Number of Required Transfusions (%)	5 (2.4%)
Median Postoperative Prostate Specific Antigen (IQR), Nanograms / Milliliter	0.5 (0.2-1.2)
Median Postoperative American Urological Association Symptom Score (IQR)	6.0 (3.0-10.0)
Number of Major Postoperative (Clavien>2) Complications (%)	7 (3.4%)
Number of Bladder Neck Contractures (%)	3 (1.5%)
Number of Urethral Strictures (%)	5 (2.4%)
Median Follow-Up Duration (IQR), Months	5.9 (4.1-8.8)
Number of Surgical Success (%)	199 (97.1%)

Poster 89

Retrospective Review of Endoscopic Enucleation of the Prostate in the Salvage Setting Using the New Thulium: Yttrium-Aluminum-Garnet Laser

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Introduction and Objective: The use of the new solid state pulsed Thulium: yttrium–aluminum–garnet (YAG) laser (Thulio by Dornier MedTech) in the salvage setting for laser enucleation of the prostate (LEP) has not been described. Herein, we analyze the safety and functional outcomes in men undergoing endoscopic enucleation of the prostate with Thulio in men who have had prior bladder outlet surgery.

Methods: A retrospective review was performed of all LEP procedures with Thulio between July 2023 and January 2024. Patients undergoing a salvage procedure were compared to patients undergoing primary LEP. Perioperative outcomes and 30-day complications were compared between groups. Surgical success was defined as improvement of preoperative symptoms based on AUA symptom score or patient satisfaction at 1 month follow up.

Results: Twenty-two patients had LEP in the salvage setting compared to 96 patients who had primary LEP. Patients undergoing LEP in the salvage setting did not experience any blood transfusions or intervention for gross hematuria.

Overall, there was no statistical difference in the proportion of patients with Clavien ≥ 2 Complications (19% vs 9%, $p = 0.35$). No statistical difference was seen in the proportion of patients developing urethral strictures or bladder neck contractures between the groups (2% vs 5% and 2% vs 0% for primary vs salvage, $p > 0.35$). Surgical success was similar between the groups (96% vs 100% in primary vs salvage, $p = 1.0$).

Conclusions: The use of Thulio for LEP in the salvage setting for treatment of lower urinary tract symptoms is a safe and effective treatment with a high success rate. Men undergoing salvage LEP using Thulio were not at a higher risk of bleeding complications or scar tissue formation in the postoperative period.

	Primary ThuLEP				Salvage ThuLEP				
Preoperative Patient Characteristics	*N*	%	Mean (SD)	Median (Range)	*N*	%	Mean (SD)	Median (Range)	p value
Age (years)	96		72 (8.9)	72 (53-94)	22		73.6 (8.3)	75.5 (53-88)	0.19
Patients failing at least one prior intervention	0				22	100			
Urolift					7	32			
TURP					5	23			
Unknown Intervention					4	18			
Rezum					2	9			
Aquablation					2	9			
Greenlight					1	5			
PAE					1	5			
Body Mass Index (kg/m^2)	96		29 (5)	27.5 (17-44)	22		28.8 (5.0)	28.4 (18.8-38.6)	0.62
Prostate Volume (ml)	75		104.3 (58.2)	87 (18-293)	17		114.8 (75.8)	100 (37-350)	0.71
Prostate specific antigen (ng/mL)	85		5.7 (6.0)	3.7 (.01-29.1)	17		3.8 (3.9)	2.5 (0.7-13)	0.19
American Urological Association Symptom Score	49		19.1 (8.3)	20 (1-34)	11		16.5 (8.9)	20 (3-30)	0.34
Hemoglobin (g/dL)	95		13.2 (1.8)	13.4 (6.9-16.9)	22		14.1 (1.2)	14.4 (11.4-15.9)	**p<0.05**
Creatinine (mg/dL)	95		1.1 (.37)	1.02 (0.64-2.54)	22		1.2 (.32)	1.1 (0.8-1.8)	0.35
Maximum flow rate (Qmax) (ml/s)	18		6.8 (5.6)	7.6 (0-23.8)	3		9.9 (10.5)	4.7 (3-22)	0.88
American Soceity of Anesthesiologists Classification	96		2.7 (0.55)	3 (2-4)	22		2.7 (0.6)	3 (2-4)	0.69
Urinary retention (had indwelling catheter or intermittent catheterization dependent)	33	34			3	14			0.11
Patients taking antiplatelet and/or anticoagulant therapy	50	52			9	41			0.47
Follow up duration (days)	96		189 (112)	171 (1-510)	96		215 (86)	184 (115-377)	0.18
Peri-and Post-Operative Variables									
Specimen weight (g)	96		62 (57)	44.5 (1-317.5)	22		74.1 (75.7)	53 (9-351)	0.43
Operative time (min)	96		112 (44)	108 (38-270)	22		116 (43)	107 (63-243)	0.71
Enucleation time (min)	91		43 (25)	40 (5-167)	21		51 (24)	42 (20-120)	0.13
Estimated blood loss (ml)	96		8.6 (16)	5 (0-100)	22		9.9 (14.2)	5 (0-50)	0.66
Presence of obstructing median lobe	94	98			19	86			**p<0.05**
Duration of catheterization (days)	96		1.4 (2.0)	1 (0-17)	22		0.9 (.3)	1 (0-1)	0.15
American Urological Association Symptom Score	30		7.13 (4.04)	6.5 (1-19)	9		7.6 (8.5)	3 (1-28)	0.34
Maximum flow rate (Qmax) (ml/s)	5		8.9 (2.8)	9.4 (4.8-12)	3		10.9 (7.8)	11 (3.1-18.7)	0.61
Developed urethral stricture	2	2			1	5			0.46
Developed bladder neck contracture	2	2			0	0			1
Surgical Success	92	96			22	100			1
30 Day Post-Operative Complications									
Number of patients with Clavien > 2 Complications	18	19			2	9			0.35
Highest Grade Clavien Dindo Complication (CDC) per patient									
II	13	14			2	9			
IIIb	2	2			0				
IV	1	1			0				
V	2	2			0				
Total Number of Complications	24				2				
Urinary Tract Infection (CDC II)	14	15			2	9			
Transfusion (CDC II)	4	4			0				
Reintervention for hematuria, operating room clot evacuation (CDC IIIb)	2	2			0				
Transient Ischemic Attack (CDC IV)	1	1			0				
NSTEMI (CDC IV)	1	1			0				
Death during post-operative course (enucleation performed with palliative intent) (CDC V)	2	2			0				

Poster 90

Initial Experience with Single-Port Robotic Surgery for Urological Procedures: Analysis of the First 50 Cases at the University of Pennsylvania

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Introduction and Objective: ingle-port (SP) robotic surgery has emerged as an innovative approach within urologic surgery, promising reduced morbidity and improved cosmetic outcomes. However, its real-world implementation, learning curve, and perioperative outcomes in a newly established SP program require evaluation. We aimed to analyze the initial perioperative outcomes and experiences from the first 50 SP urologic surgical cases performed at the University of Pennsylvania.

Methods: Retrospective data were collected from the first 50 SP robotic urological surgeries conducted from September 2022 to March 2025 at the University of Pennsylvania. Patient demographics, operative times, estimated blood loss (EBL), length of hospital stay (LOS), intraoperative complications, conversion rates, and 30-day postoperative complications were analyzed. Procedures included radical prostatectomy, partial nephrectomy, simple prostatectomy, and pyeloplasty.

Results: Of the initial 50 patients, median age was 63 years (range 28–77). Procedures performed included 32 radical prostatectomies, 10 simple prostatectomies, 3 partial nephrectomies, and 5 pyeloplasties. Median operative time decreased significantly from 225 min in the first 15 cases to 185 min in the subsequent 35 cases ($p < 0.05$). Median estimated blood loss was 178 mL (range 20–450 mL), and median hospital stay was 1 day (range 1–14 days). No cases required conversion to open surgery. Minor postoperative complications (Clavien-Dindo I–II) occurred in 8% ($n = 4$), and major complications (Clavien-Dindo III) in 2% ($n = 1$).

Conclusions: The initial experience at our institution demonstrates that SP robotic surgery for urological procedures is safe and feasible with favorable perioperative outcomes. Continued procedural refinement and surgeon experience may further enhance efficiency and outcomes in SP robotic surgery.

Poster 91

Association between Differences in Area Deprivation Index and Surgical Management Patterns for Patients with Muscle-Invasive Bladder Cancer

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Introduction and Objective: Social determinants of health (SDOH) significantly impact bladder cancer outcomes. Timely radical cystectomy (RC) is essential for improved survival in muscle-invasive bladder cancer (MIBC). Our institution implemented a physician review for all bladder cancer referrals to improve care coordination. This study examines the association between SDOH, measured by the Area Deprivation Index (ADI), and RC timing for MIBC patients at a rural academic center.

Methods: A retrospective review of 128 MIBC patients undergoing RC at the University of Virginia from February 2018 to November 2023 was completed. ADI, calculated using the University of Wisconsin's Neighborhood Atlas. Cohort was divided into three groups; low-(most disadvantaged), moderate, high-(most advantaged)). Analyses included One-way ANOVA, Fisher's exact test, and cumulative incidence plots for time to RC and Kaplan-Meier curves for survival, both with log-rank tests.

Results: The cohort included 28 ADI-low, 59 ADI-moderate, and 41 ADI-high patients. There were no significant differences in demographic or clinical features across groups. Fig. 1 shows that time to cystectomy within 12 weeks was notably shorter for the ADI-low group ($p = 0.094$). Additionally, Fig. 2 suggests that those in ADI-low may fare better overall survival compared to those in ADI-moderate and ADI-high, which appear to perform similarly ($p = 0.46$) with a median follow-up of cohort 26 months.

Conclusions: Our findings highlight the efficacy of targeted review processes in ensuring timely RC at a rural academic center. Surprisingly, patients from lower socioeconomic backgrounds underwent RC sooner than their more advantaged counterparts, possibly contributing to better survival outcomes.

Figure 1: Time to Cystectomy for Patients Deemed Appropriate for Radical Cystectomy by Area Deprivation Index

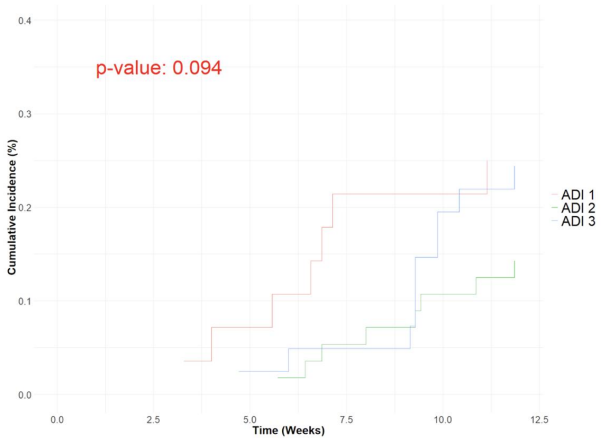
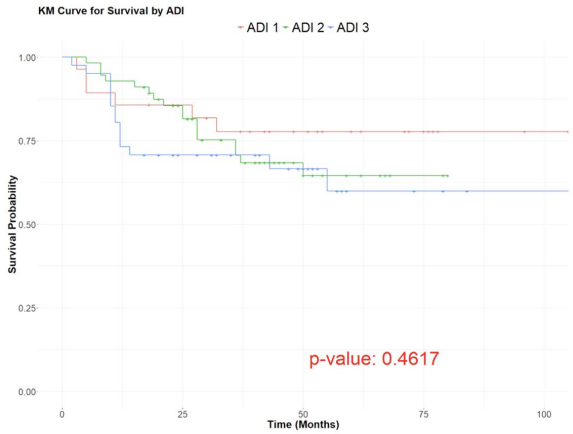


Figure 2: Overall Survival of Patients with Muscle-Invasive Bladder Cancer by Area Deprivation Index



Poster 92

Repeat Pelvic Osteotomy Improves the Management of Failed

Poster 93

Optimizing Postoperative Pain Management in Bladder

Bladder Closure in Cloacal Exstrophy

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Introduction and Objective: We evaluated the operative benefits of repeat pelvic osteotomy in patients with cloacal exstrophy (CE) undergoing secondary or tertiary bladder closures.

Methods: CE patients undergoing secondary or tertiary closures between 1975–2025 were identified. Primary pelvic osteotomy was defined as the initial osteotomy, while repeat osteotomy referred to a subsequent osteotomy performed during reclosure. Patient demographics, surgical factors, and outcomes were collected.

Results: Among 35 secondary closures, 19 succeeded while 16 failed. A longer interval between primary and secondary closures was associated with higher success of secondary closures compared to failures (1.72 years vs. 0.64 years, $p = 0.0031$). Primary and repeat pelvic osteotomies were significantly associated with successful secondary closures while secondary closures without osteotomy had higher failure rates ($p = 0.02$). Regarding the type of osteotomy, combined vertical and transverse anterior innominate osteotomies were associated with higher successes in secondary closures, whereas posterior iliac-only osteotomies were more likely to result in failure ($p = 0.02$). In terms of immobilization techniques, the use of Buck's traction with external fixation improved success of secondary closures while the use of a spica cast led to a higher failure rate ($p = 0.02$).

Conclusions: Repeat pelvic osteotomy enhanced secondary closure success in CE patients. Osteotomy techniques, particularly combined vertical and transverse anterior innominate osteotomies, as well as the use of Buck's traction with external fixation, were particularly beneficial. These findings suggest that repeat osteotomy, when appropriately utilized, can enhance surgical outcomes in complex CE management of secondary bladder closures.

Table 1. Outcomes of secondary closure.

	All	Success	Failure	*p*-value
No.	N=35	N=19	N=16	
Reason for primary closure failure				
Dehiscence	10 (28.57)	5 (26.32)	5 (31.25)	>0.99
Bladder Prolapse	24 (68.57)	13 (68.42)	11 (68.75)	>0.99
Vesicocutaneous fistula	3 (8.57)	1 (5.26)	2 (12.50)	0.58
Unknown	6 (17.14)	4 (21.05)	2 (12.50)	0.67
Time between primary and secondary closure, median (IQR), years	1.23 [0.42, 2.40]	1.72 [0.27, 1.72]	0.64 [0.13, 1.25]	**0.0031**
Secondary Closures, n (%)				
Primary osteotomy	16 (45.71)	10 (52.63)	6 (37.50)	**0.02**
Repeat osteotomy	11 (31.43)	8 (42.11)	3 (18.75)	
No osteotomy	8 (22.86)	1 (5.26)	7 (43.75)	
Type of osteotomy, n (%)				
Posterior iliac	12 (44.44)	5 (27.78)	7 (77.78)	**0.02**
Anterior innominate	3 (11.11)	2 (11.11)	1 (11.11)	
Combined vertical iliac & transverse anterior innominate	12 (44.44)	11 (61.11)	1 (11.11)	
Immobilization technique, n (%)				
Buck's traction with external fixation	16 (45.71)	12 (63.16)	4 (25.00)	**0.02**
Spica cast	13 (37.14)	3 (15.79)	10 (62.50)	
Mummy wrap	3 (8.57)	2 (10.53)	1 (6.25)	
Modified Bryant's traction	2 (5.71)	1 (5.26)	1 (6.25)	
Not used	1 (2.85)	1 (5.26)	0 (0.00)	

Exstrophy: The Role of OnabotulinumtoxinA

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Introduction and Objective: We sought to evaluate postoperative benefits of OnabotulinumtoxinA (Botox) injections in patients with classic bladder exstrophy (CBE) and cloacal exstrophy (CE) undergoing bladder reconstruction or exstrophy closure.

Methods: CBE and CE patients who underwent bladder reconstruction or exstrophy closure between 2018–2024 were identified from an institutional database. Bladder reconstruction was defined as any combination of the following procedures—bladder neck reconstruction, bladder neck transection, Mitrofanoff or Monti catheterizable channel creation, and bladder augmentation. Reconstructive patients were stratified by concurrent ureteral reimplants necessitating ureteral stent placement. Data on postoperative course, medications, and complications were collected.

Results: Among 49 patients undergoing bladder reconstruction, 15 received Botox and 34 did not. Of the 34 exstrophy closures, 12 received Botox and 22 did not. In patients undergoing bladder reconstruction without ureteral reimplants necessitating ureteral stents, Botox significantly reduced anticholinergic use (0.11 mg/kg/day, IQR 0.00–0.12 vs. 0.15 mg/kg/day, IQR 0.11–0.20, $p = 0.02$) and oxycodone use (0.00 mg/kg/day, IQR 0.00–0.12 vs. 0.24, IQR 0.13–0.52 mg/kg/day, $p = 0.03$). These patients also experienced fewer days with pain scores above 0 (4.00, IQR 2.00–8.00 vs. 10.00, IQR 6.00–12.00, $p = 0.03$) and above 4 (1.00, IQR 0.00–4.00 vs. 6.00, IQR 2.50–8.50, $p = 0.02$). In contrast, bladder reconstruction patients with ureteral reimplantation necessitating ureteral stents showed no significant differences in medication use or pain scores (all $p > 0.05$). Complication rates were comparable across groups ($p > 0.05$). Botox did not significantly impact postoperative course, medication requirements, or complication rates in exstrophy closures ($p > 0.05$).

Conclusions: Intraoperative Botox reduced opioid and anticholinergic use, as well as postoperative pain, among exstrophy patients undergoing bladder reconstruction without ureteral reimplants requiring ureteral stents. This demonstrates its potential as an effective adjunct for postoperative pain in exstrophy patients undergoing select reconstruction.

Table 1. Postoperative course and medications for bladder reconstruction

	No Ureteral Stent			Ureteral Stent		
	No Botox	Botox	*p*-value	No Botox	Botox	*p*-value
Postoperative Course						
Pain score						
Scores greater than 0, d, median (IQR)	10.00 [6.00, 12.00]	4.00 [2.00, 8.00]	**0.03**	6.00 [2.00, 9.00]	5.50 [4.25, 9.75]	0.53
Scores greater than 4, d, median (IQR)	6.00 [2.50, 8.50]	1.00 [0.00, 4.00]	**0.02**	2.00 [0.00, 5.00]	2.50 [0.25, 4.00]	0.89
Length of stay, d, median (IQR)	13.00 [8.50, 21.00]	12.00 [8.00, 19.00]	0.90	12.00 [9.00, 13.00]	11.00 [8.25, 13.75]	0.84
Return to feeding, d, median (IQR)	4.50 [3.25, 6.00]	6.00 [4.00, 7.00]	0.41	6.00 [4.00, 7.00]	4.00 [3.00, 4.75]	**0.03**
Return to bowel movement, d, median (IQR)	4.00 [2.50, 6.00]	2.00 [2.00, 7.00]	0.58	3.00 [1.50, 4.00]	1.50 [1.00, 3.75]	0.34
Patients receiving TPN, n (%)	1.00 (11.11)	4.00 (57.14)	**0.05**	5.00 (20.00)	1.00 (12.50)	0.63
TPN duration, d, median (IQR)	0.00 [0.00, 0.00]	8.00 [0.00, 12.00]	0.11	0.00 [0.00, 0.00]	0.00 [0.00, 0.00]	0.91
ICU management needed, n (%)	1.00 (11.11)	3.00 (42.86)	0.15	7.00 (28.00)	0.00 (0.00)	0.15
ICU duration, d, median (IQR)	0.00 [0.00, 0.00]	0.00 [0.00, 5.00]	0.26	0.00 [0.00, 1.50]	0.00 [0.00, 0.00]	0.15
Postoperative Medications						
Anticholinergic use, mg/kg per d, median (IQR)	0.15 [0.11, 0.20]	0.11 [0.00, 0.12]	**0.02**	0.17 [0.11, 0.21]	0.18 [0.10,0.36]	0.76
Patients discharged with anticholinergic, n (%)	7.00 (77.78)	4.00 (57.14)	0.37	25.00 (100.00)	8.00 (100.00)	>0.99
Diazepam use, mg/kg per d, median (IQR)	0.40 [0.18, 0.50]	0.35 [0.20, 0.54]	>0.99	0.38 [0.27, 0.52]	0.42 [0.42, 0.49]	0.40
Oxycodone use, mg/kg per d, median (IQR)	0.24 [0.13, 0.52]	0.00 [0.00,0.12]	**0.03**	0.23 [0.12, 0.35]	0.11 [0.00,0.24]	0.13
Patients receiving methadone, n (%)	1.00 (11.11)	0.00 (0.00)	>0.99	0.00 (0.00)	0.00 (0.00)	>0.99
Morphine use, mg/kg per d, median (IQR)	0.17 [0.00, 0.22]	0.00 [0.00, 0.25]	0.64	0.00 [0.00, 0.13]	0.00 [0.00, 0.09]	0.62
Hydromorphone, mg/kg per d, median (IQR)	0.00 [0.00, 0.11]	0.01 [0.00, 0.09]	>0.99	0.00 [0.00, 0.07]	0.03 [0.00, 0.10]	0.36
Epidural duration, d, median (IQR)	6.00 [5.00, 8.00]	5.00 [0.00, 7.00]	0.26	7.00 [4.50, 8.00]	6.00 [4.25, 7.00]	0.34
Patients receiving epidural, n (%)	8.00 (88.89)	5.00 (71.43)	0.37	23.00 (74.19)	8.00 (100.00)	**0.41**

TPN: total parenteral nutrition; **ICU**: intensive care unit

Poster 94

Impact of Dilating Vesicoureteral Reflux and Circumcision Status on Breakthrough Urinary Tract Infection Risk in Males: A Retrospective Analysis

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Introduction and Objective: Vesicoureteral reflux (VUR) outcomes in pediatric patients vary by disease-specific and patient-specific factors such as age, gender, and circumcision status. We hypothesized that dilating VUR in males increases the risk of breakthrough urinary tract infections (UTIs), with circumcision providing a significant protective effect.

Methods: This IRB-approved retrospective study included 261 boys diagnosed with primary VUR between 2012 and 2020, categorized into non-dilating (Grades I-II, $n = 85$) and dilating VUR (Grades III-V, $n = 176$). Secondary VUR cases were excluded. Data analyzed included circumcision status, age, race, duplex collecting systems, antenatal hydronephrosis (ANH), voiding cystourethrogram (VCUG) indication, and history of breakthrough UTIs. Cox proportional hazards regression assessed time to breakthrough UTI, while logistic regression evaluated circumcision's impact on UTI risk.

Results: Boys with dilating VUR were significantly more likely to have duplex collecting systems (15.9% vs. 4.7%, $p = 0.009$) and be diagnosed due to ANH (59.1% vs. 45.9%, $p = 0.048$). Renal scarring was observed in 9.7% of the dilating group, compared to 0% in the non-dilating group ($p = 0.37$). Dilating VUR was associated with longer continuous antibiotic prophylaxis (CAP) duration (median 37 vs. 17 months, $p < 0.001$) and follow-up (median 55 vs. 35 months, $p < 0.001$). Circumcised boys with dilating VUR had an 82% reduced risk of breakthrough UTIs (HR = 0.18, $p = 0.020$). Logistic regression confirmed circumcision lowered the odds of breakthrough UTIs by 5.56-fold (OR = 0.18, $p = 0.001$).

Conclusions: Dilating VUR in boys correlates with increased anatomical abnormalities, prolonged CAP, and extended follow-up. Circumcision provides significant protection against breakthrough UTIs, highlighting its role in tailored management strategies for high-grade VUR.

Table 1. Logistic Regression Analysis of Breakthrough UTI Incidence Post-Circumcision

Logistic regression looking at breakthrough UTI incidence post-circumcision			
Variable	Odds Ratio	p-value	95% Conf. Interval
B-UTI after circumcision	0.18	0.001	0.065 - 0.50

Key finding: In the dilating VUR group, the odds of having a breakthrough UTI **after** circumcision are significantly lower compared to before circumcision, with an **odds ratio of 0.18** (0.18).

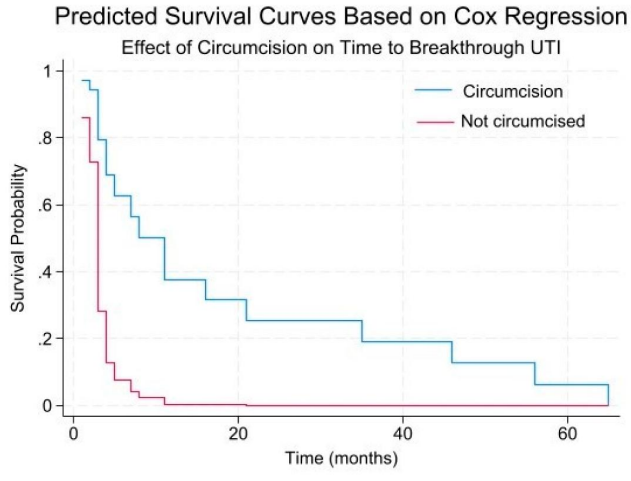

Figure 1. Effect of Circumcision on Time to Breakthrough UTI

Poster 95

Predicting Operative Intervention in Pediatric Hemorrhagic Cystitis: A Retrospective Analysis

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Introduction and Objective: Pediatric hemorrhagic cystitis (HC) is a significant morbidity in oncology and bone marrow transplant (BMT) populations, often requiring invasive intervention due to anatomical constraints limiting endoscopic management. While chemotherapy, radiation, and viral infections contribute to HC, risk factors for operative intervention remain poorly defined. This study aims to identify predictors of inpatient admission and surgical management to enhance early risk stratification.

Methods: A retrospective review of pediatric HC cases (2014–2024) was conducted. Patients with microscopic hematuria, urinary tract infections, or upper tract bleeding were excluded. Clinical, laboratory, imaging, and treatment data were analyzed using univariate and multivariate logistic regression to identify predictors of admission and operative intervention.

Results: Among 93 patients, 69 were analyzed for admission predictors, and all were included for operative intervention analysis. Significant predictors of admission included hematocrit <29% ($p = 0.004$) and hemoglobin <9.7 g/dL ($p = 0.012$). Busulfan exposure was also associated with admission ($p = 0.045$). The strongest predictor of operative intervention was an organized clot on ultrasound (OR 121.5, $p < 0.0001$), with clot size >41 mL, >64 mL, and >104 mL corresponding to 50%, 75%, and 95% surgical probabilities. Other independent predictors included male sex ($p = 0.023$), platelet count <70k ($p = 0.029$), busulfan exposure ($p = 0.011$), BMT history ($p = 0.031$), GVHD ($p = 0.027$), and BK virus positivity ($p = 0.01$)

Conclusions: Ultrasound-confirmed organized clot presence is the most robust predictor of surgical intervention in pediatric HC. Incorporating clot size and hematologic trends into clinical decision-making could improve early risk stratification, guiding timely imaging and urologic referral. Prospective validation is needed to refine management strategies and reduce morbidity

Poster 96

Predictors of Renal Replacement Therapy in Patients With Posterior Urethral Valves

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Introduction and Objective: Patients with posterior urethral valves (PUV) are at risk for progressive kidney dysfunction, potentially necessitating renal replacement therapy (RRT), including dialysis and/or renal transplantation. Identifying early predictors of kidney failure in this population is crucial for optimizing management and counseling.

Methods: A retrospective analysis was conducted on PUV patients, comparing those who progressed to kidney failure (requiring RRT) to those who did not. Parameters analyzed included perinatal characteristics, imaging findings, nadir creatinine, and lowest estimated glomerular filtration rate (eGFR) within a year of life. Multivariate logistic regression was performed to assess independent predictors of RRT.

Results: Of the 158 patients analyzed, 16 (10.1%) developed kidney failure. Prematurity was significantly associated with kidney failure (75.0% vs. 26.1%, $p < 0.001$). Nadir creatinine was markedly higher in the kidney failure group (median 1.3 vs. 0.30 mg/dL, $p < 0.001$). Early eGFR was significantly lower in those requiring RRT (median 12.55 vs. 72.7 mL/min/1.73 m^2, $p < 0.001$).

On multivariate logistic regression analysis, prematurity remained a strong independent predictor of kidney failure (OR 11.04, $p = 0.005$). Higher nadir creatinine was also independently associated with kidney failure (OR 5.77, $p < 0.001$). Hydronephrosis severity and vesicoureteral reflux grade were not significantly associated with RRT risk.

Conclusions: Prematurity, elevated nadir creatinine, and low early eGFR are strong predictors of kidney failure in PUV patients. Radiological parameters like degree of hydronephrosis or grade of vesicoureteral reflux did not impact need for RRT.

Poster 97

Long-Term Incidence of Mental Health Conditions Following Urodynamic Procedures in Adult Women: A 10-Year Cohort Analysis

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Introduction and Objective: Urodynamic procedures are commonly performed in adult women to assess lower urinary tract dysfunction. Despite evidence linking invasive procedures to subsequent mental health challenges, the long-term psychological impact of urodynamic interventions remains underexplored. This study investigates the incidence of new-onset mental health conditions, specifically anxiety, depression, and stress-related disorders, among adult women following urodynamic procedures, comparing outcomes to a matched control group.

Methods: Using the TriNetX database, we conducted a retrospective cohort study of women over 18 who underwent a urodynamic procedure in 2014 (CPT 1008280). A control group matched on age at procedure, race, and baseline health excluded those with pre-existing mental health conditions, chronic pain, severe disabilities, cancer, or prior urodynamic procedures. Mental health outcomes were defined using ICD-10 codes for all mental health conditions (F01-F99), depression (F32, F33), anxiety (F41), and stress disorders (F43). Risk differences, risk ratios, and statistical significance were calculated at 1-, 5-, and 10-year intervals.

Results: At 1-year follow-up, the urodynamics group had a 2.07-fold increased risk of any mental health diagnosis compared to controls ($p < 0.001$, 95% CI: 1.835, 2.335). Risk remained elevated at 5 years (RR = 1.352) and 10 years (RR = 1.192), though it declined over time. By 5 years, 16.4% of urodynamic patients had a mental health diagnosis versus 12.1% of controls. The urodynamic group was 2.69 times more likely to develop depression ($p < 0.001$), 2.10 times more likely to be diagnosed with anxiety ($p < 0.001$), and had a 3.12-fold higher risk of stress disorders ($p < 0.05$) at 1 year.

Conclusions: These findings indicate an elevated risk of mental health conditions, particularly stress and adjustment-related disorders, in the short-term following urodynamic procedures. This underscores the importance of mental health support and monitoring for women undergoing urodynamic procedures. Further prospective studies are warranted to understand the mechanisms and to develop strategies for mitigating potential psychological impacts.

Poster 98

Bladder Neck Transection Following Bladder Neck Reconstruction in Bladder Exstrophy Patients: Incidence and Predictors

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Introduction and Objective: Bladder neck reconstruction (BNR) is a critical component of continence management in bladder exstrophy patients. However, some patients require bladder neck transection (BNT) due to persistent incontinence or bladder dysfunction. This study evaluates the incidence of BNT following BNR and identifies factors associated with progression to BNT.

Methods: A retrospective review of our institutional REDCap database identified bladder exstrophy patients who underwent primary closure followed by BNR. Patients with incomplete data were excluded. Demographic and clinical data, including age at BNR, number of BNRs, progression to BNT, and subsequent cystectomy, were analyzed using descriptive statistics and logistic regression.

Results: A total of 318 patients met inclusion criteria (236 male, 82 female) with an average age of 6.2 years at first BNR. Of these, 25 patients underwent more than one BNR, and 53 (16.7%) progressed to BNT. Three patients ultimately required cystectomy. Patients who underwent multiple BNRs were significantly more likely to require BNT ($p = 0.015$). While age at first BNR was not a predictor of BNT, those undergoing a second BNR at a youjnger age had an increased likelihood of progression. Gender was not associated with BNT risk.

Conclusions: Approximately 17% of bladder exstrophy patients undergoing BNR required subsequent BNT, with multiple BNRs increasing the risk of progression. These findings highlight the need for careful patient selection and counseling regarding long-term continence outcomes. Further research is needed to optimize surgical strategies and reduce the need for BNT in this population.

Poster 99

Cost-Effectiveness of Perioperative Durvalumab in Muscle-Invasive Bladder Cancer Treatment

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Introduction and Objective: For cisplatin-eligible patients with clinically localized muscle-invasive bladder cancer (MIBC), cisplatin-based neoadjuvant chemotherapy (NAC) followed by radical cystectomy (RC) has long been the standard treatment. In a recent, landmark phase-3 randomized trial (NIAGARA), adding perioperative durvalumab to the standard treatment for cisplatin-eligible MIBC patients significantly improved event-free survival (EFS) and overall survival (OS). We evaluated the cost-effectiveness of this potentially new standard treatment for cisplatin-eligible patients with localized MIBC.

Methods: We developed a decision-analytic Markov model using clinical efficacy and safety data from the NIAGARA trial for neoadjuvant gemcitabine-cisplatin plus durvalumab followed by RC and adjuvant durvalumab (durvalumab arm), and neoadjuvant gemcitabine-cisplatin followed by RC alone (comparison arm). We calculated life years, quality-adjusted life years (QALYs), and direct medical costs from Medicare perspective in 28-day model cycles over a 5-year time horizon. We evaluated the incremental cost-effectiveness ratio against a willingness-to-pay (WTP) threshold of $100,000/QALY. We conducted a probabilistic sensitivity analysis to assess the joint uncertainty of model parameter estimates.

Results: The durvalumab arm achieved greater life years (incremental improvement 7% over 5 years) and QALYs (9%) than comparison. The durvalumab arm incurred higher neoadjuvant and adjuvant treatment costs but led to greater savings of post-progression therapy costs, resulting in lower overall costs. In the base-case cost-effectiveness analysis, the durvalumab arm dominated comparison (Table). In the probabilistic sensitivity analysis, the durvalumab arm had a >50% probability of being cost-effective at all WTP thresholds.

Conclusions: Our modeling robustly demonstrated that adding perioperative durvalumab to the traditional standard treatment for cisplatin-eligible patients with localized MIBC is life-extending and cost-saving in the US. This highlights the health economic benefit of adopting this potentially new standard treatment for cisplatin-eligible MIBC.

Table. Base-case cost-effectiveness analysis results over a five-year time horizon from Medicare perspective

Per-patient outcome	Comparison	Durvalumab	*Incremental*
Life years			
Pre-progression	2.83	3.31	*0.48*
Post-progression	0.78	0.54	*–0.24*
Total	**3.61**	**3.85**	***0.24***
QALYs			
Pre-progression	2.38	2.78	*0.41*
Post-progression	0.48	0.33	*–0.15*
AE and cystectomy-related disutilities	–0.0139	–0.0141	*–0.0003*
Total	**2.85**	**3.10**	***0.26***
Costs			
Neoadjuvant treatment	$3,404	$52,833	*$49,429*
Cystectomy (with complications)	$11,878	$12,563	*$685*
Adjuvant treatment	$0	$82,665	*$82,665*
Disease surveillance	$8,990	$9,618	*$628*
AE management	$3,871	$3,885	*$14*
Post-progression therapy	$580,410	$400,507	*–$179,903*
Terminal care	$6,490	$5,121	*–$1,369*
Total	**$615,043**	**$567,192**	***–$47,851***
ICER, $/QALY			***Dominant***

Note: Life years, QALYs, and costs were discounted at 3% annually. All costs were inflation-adjusted to 2025 United States Dollars.
Abbreviations: AE: adverse event; ICER: incremental cost-effectiveness ratio; QALY: quality-adjusted life year.

Poster 101

Growth Kinetics and Long-Term Outcomes of cT1b and cT2 Renal Masses Under Active Surveillance

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Introduction and Objective: Active surveillance (AS) for cT1b/cT2 renal masses has been extrapolated from cT1a lesions; but long-term outcomes remain limited. We report our institution's experience managing this cohort and compare outcomes between those on AS versus had delayed surgical intervention (DSI).

Methods: We queried our database for patients with cT1b/cT2 renal masses initially managed with AS with ≥ 2 imaging studies from 2005 to 2023. Demographic, imaging, biopsy, surgery, and outcome data were obtained and compared between the AS and DSI groups. Linear growth rate (LGR) were calculated and compared.

Results: We identified 197 tumors in 189 patients. 144 (73%) tumors remained on AS while 53 (27%) received DSI. Significant differences were seen in size of tumor at presentation (5.7 vs 4.3 cm, $p < 0.01$), number of images during AS (7 vs 4, $p < 0.01$), mean monthly LGR (0.04 vs 0.07, $p < 0.01$), and mean annual LGR (0.44 vs 0.8, $p < 0.01$) (Table 1). A total of 3 (2%) patients in the AS group progressed to T3 disease while on surveillance, whereas 8 (15%) patients in the DSI group progressed to T3 (Table 2). With a median follow up of 81 months (range 48–112), 52 patients died (28%) from other causes and 5 died (3%) from primary tumor metastasis.

Conclusions: Active surveillance appears to be a safe strategy for management of cT1b/T2 renal tumors in a select patient population, with low local (15%) and distant (3%) progression rates. While multiple factors must be considered, linear growth rate, biopsy results, and clinical stage are important factors in decision making.

	Overall (%)	Active Surveillance (%)	Surgical Intervention (%)	p-value
No. Patients	189	137 (72)	52 (28)	
No. Tumors	197	144 (73)	53 (27)	
Sex (male/female)	124/65	89/48	37/16	0.63
Median Age (IQR)	73 (66-79)	74 (67-79)	70 (61-78)	0.13
Median Charlson Comorbidity Index (IQR)	6 (4-7)	6 (5-7)	5 (4-7)	0.65
Median Tumor Size on Presentation (cm)	4.9 (4.2-6.9)	5.7 (4.7-7.5)	4.3 (3.5-5.3)	<0.01
Median Tumor Size at Last Follow up/Surgery (cm)	5.6 (4.5-7)	5.7 (4.7-7.5)	5.5 (4.5-6.5)	0.15
Median Nephrometry Score (IQR)	9 (8-10) n=106	9 (7-10) n=58	9 (8-10) n=48	0.27
No. Solitary Kidney	4 (2)	0	4 (4)	<0.01
No. Bilateral Tumors	13 (7)	6 (4)	7 (13)	0.052
Median Images During AS (IQR)	6 (4-8)	7 (5-9)	4 (3-5)	<0.01
Median Months of Follow Up (IQR)	81 (48-112)	78 (45-103)	87.7 (60.3-115.1)	0.14
Mean Linear Growth Rate				<0.01
Monthly (cm/month)	0.05	0.04	0.07	
Annual (cm/year)	0.54	0.44	0.80	
Tumor Type				0.625
Solid	123 (62)	87 (60)	36 (68)	
Bosniak III/IV Cyst	70 (36)	54 (38)	16 (30)	
Solid/Cystic	4 (2)	3 (2)	1 (2)	
Biopsy Performed	74 (39)	52 (38)	22 (42)	<0.01
Benign	33 (45)	31 (60)	2 (9)	
Malignant	41 (55)	21 (40)	20 (91)	
Clinical Stage				0.04
cT1b	164 (83)	114 (79)	50 (94)	
cT2a	26 (13)	24 (17)	2 (4)	
cT2b	7 (4)	6 (4)	1 (2)	

Pathology	No. (%)
Benign	**9 (17)**
Cystic	2 (22)
Oncocytoma	2 (22)
Angiomyolipoma	1 (11)
Other	4 (44)
Malignant	**44 (83)**
Clear Cell	32 (73)
Papillary	7 (16)
Other (combination, chromophobe, translocation)	5 (11)
Stage	
T0	6 (11)
T1a	7 (13)
T1b	28 (53)
T2	4 (8)
T3	8 (15)
Nuclear Grade	
1	3 (6)
2	16 (30)
3	16 (30)
>3	8 (15)
Unknown	10 (19)
Type of Surgery	
OPNx	13 (25)
ONx	2 (4)
LPNx	4 (7)
RALPNx	9 (17)
LNx	18 (34)
RARNx	4 (7)
Ablative	3 (6)

OPNx: open partial nephrectomy; ONx: Open nephrectomy; LPNx: Laparoscopic Partial Nephrectomy; RALPNx: Robotic-Assisted Laparoscopic Partial Nephrectomy; LNx: Laparoscopic Radical Nephrectomy; RARNx: Robotic Assisted Radical Nephrectomy

Poster 102

Survival Outcomes after Surgical Resection for Grade 4 Renal Cell Carcinoma without Rhabdoid or Sarcomatoid Features: Institutional and Population-Based Analyses

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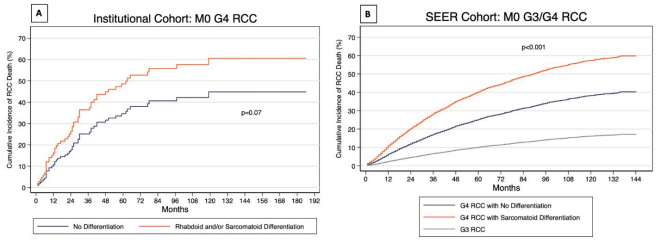
Introduction and Objective: The presence of rhabdoid or sarcomatoid features in renal cell carcinoma (RCC) classifies these tumors as ISUP grade 4 (G4) disease and is associated with worse prognosis. Relative outcomes in patients with G4 RCC without these features are less well-described; our study, therefore, aims to characterize survival outcomes after surgical resection in this patient population.

Methods: A retrospective analysis of adult patients who underwent nephrectomy for non-metastatic G4 RCC at our institution between 2003 and 2023 was performed. The Surveillance, Epidemiology, and End Results (SEER) database was used to identify a validation cohort (2010–2021). Multivariable Fine-Gray competing-risk regression analysis was used in both cohorts to compare the cumulative incidence of cancer-specific mortality (CSM) between patients with and without differentiation.

Results: Of 135 institutional patients, 66 (49%) had rhabdoid and/or sarcomatoid differentiation. Over a median follow-up of 30 months, 51 (38%) patients died due to RCC. Tumor stage distribution was comparable in patients with and without differentiation (p = 0.3). On multivariable analysis, the presence of differentiation predicted an increased hazard of CSM, although this association lacked statistical significance (subhazard ratio (SHR) = 1.6, 95% CI:0.9–2.4, p = 0.07) (Fig. 1A). In the SEER cohort (N = 4267), 1209 (28%) patients had sarcomatoid differentiation; 1040 (24%) died due to RCC over a median follow-up of 30 months. The hazard of CSM was significantly increased with differentiation (SHR = 1.4, 95% CI:1.2–1.6, p < 0.001); when compared to patients with G3 RCC, patients with G4 RCC and absent sarcomatoid features demonstrated worse hazard of CSM (SHR = 2.7, 95% CI:2.5–3.0, p < 0.001) (Fig. 1B).

Conclusions: Patients who undergo surgical resection with curative intent for G4 RCC in the absence of sarcomatoid and/or rhabdoid differentiation exhibit better cancer-specific survival compared to stage-matched patients harboring these features.



Poster 103

Changes in urine cytology during Bacillus Calmette-Guérin induction predict persistent disease: A strategy for Conservation?

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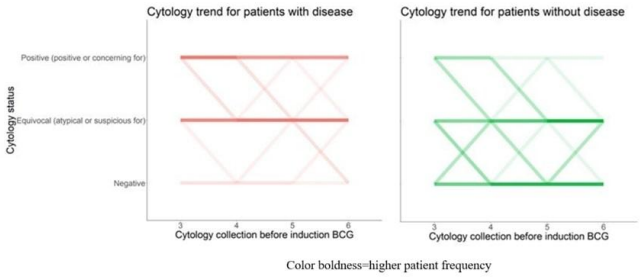
Introduction and Objective: Bacillus Calmette-Guérin (BCG) is the standard treatment for high-risk non-muscle invasive bladder cancer (NMIBC), but a global shortage has led to dose rationing. The utility of urine cytology in predicting BCG response isn't well established. We investigated how urine cytology changes during induction BCG (iBCG) predicted persistent disease after treatment.

Methods: We retrospectively identified 78 patients who underwent iBCG for high-grade NMIBC between 2004 and 2022 with urine cytology collected during treatment. Excluded were patients with muscle-invasive or low-grade disease, <5 doses of iBCG, BCG failure, and non-TURBT bladder surgery or radiation. Urine cytology was classified as positive ("positive" or "consistent with"), equivocal ("suspicious" or "atypical"), or negative ("negative") for high-grade urothelial carcinoma. We examined disease status at 1st post iBCG cystoscopy compared to cytological result before each iBCG dose and change from pre-iBCG cytology using appropriate tests.

Results: Positive cytology prior to 5th and 6th iBCG doses predicted persistent disease at post-iBCG cystoscopy (p < 0.05). Non-responders tended to have persistent positive or equivocal cytology during treatment, whereas responders had more cytological variation (Fig. 1). In patients with equivocal pre-BCG cytology, change to positive or negative cytology before 4th and 5th iBCG doses predicted presence or absence of persistent disease, respectively (trend, p < 0.05 for both) (Table 1)

Conclusions: Positive cytology during iBCG predicts persistent disease after 4 or 5 doses. Patterns of cytology change can predict response as early as after 3 doses. This may inform early termination of iBCG in likely non-responders, preserving limited resources and permitting earlier transition to second-line therapies.



Color boldness=higher patient frequency

		All	Disease free at first cystoscopy after BCG?				
			No		Yes		
		N	N	%	N	%	p-value
All		66	35	53.0	31	47.0	
Pre-BCG Cytology Result	Cytology Change from pre-BCG to before 4th dose						
Positive	Down	15	9	60.0	6	40.0	FE p=1.00
	Same	14	8	57.1	6	42.9	
Equivocal	Down	10	3	30.0	7	70.0	**FE p=0.062**
	Same	14	6	42.9	8	57.1	**CMH test p=0.033**
	Up	4	4	100.0	0	0	
Negative	Same	6	3	50.0	3	50.0	FE p=1.00
	Up	3	2	66.7	1	33.3	

		All	Disease free at first cystoscopy after BCG?				
			No		Yes		
		N	N	%	N	%	p-value
All		68	36	52.9	32	47.1	
Pre-BCG Cytology Result	Cytology Change from pre-BCG to before 5th dose						
Positive	Down	14	7	50.0	7	50.0	FE p=0.44
	Same	13	9	69.2	4	30.8	
Equivocal	Down	10	1	10.0	9	90.0	**FE p=0.004**
	Same	19	12	63.2	7	36.8	**CMH test p=0.002**
	Up	2	2	100.0	0	0	
Negative	Same	6	2	33.3	4	66.7	FE p=0.52
	Up	4	3	75.0	1	25.0	

Note: Down=Positive to Equivocal & Positive to Negative; Same=Same result as pre-BCG; Up=Negative to Positive & Equivocal to Positive

FE=Fisher's Exact Test | CMH test: Cochran-Mantel-Haenszel Test for association of cytology change with cytoscopy, controlling for preBCG value=4.45 & 10.44, p=0.108 & 0.005, respectively for 4th and 5th BCG doses

Poster 104

IsoPSA Prospective Validation Study: Performance of the IsoPSA Test in Patients with Abnormal DRE

A. Milbank[1], A. Gadzinski[2], G. Rao[3], J. Kaminetsky[4], J. Pearl[5], L. Belkoff[6], L. Karsh[7], M. Pliskin[8], M. Truesdale[9], P. Dato[10], P. Ilbeigi[11], S. Lawindy[9] and S. Freedman[12]

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Introduction and Objective: IsoPSA is a structure-based (blood) assay with negative and positive predictive characteristics for csPCa (≥GG2) in patients with abnormal digital rectal examination (DRE) findings.

Methods: Prospective validation study of IsoPSA, 750 patients ≥50 years & tPSA ≥4 ng/mL undergoing PCa early detection.

Patients received prostate biopsy and IsoPSA.
IsoPSA performance was assessed for csPCa:
prevalence based likelihood ratio analysis of pre-test risk (prevalence) and post-test risk at IsoPSA Index lower cutoff = 6.0 and upper cutoff = 10.0
sensitivity (SN) and negative predictive value (NPV) at lower cutoff; specificity (SP) and positive predictive value (PPV) at upper cutoff

Results: 188 (25%) of 750 had abnormal DRE findings.

IsoPSA displays highly statistically informative negative and positive predictive characteristics:
post-test risk point estimates at lower cutoff of ≤6.0 (2.44%) and at upper cutoff of >10.0 (56.52%) are substantially below and above the pre-test risk (prevalence) point estimate (37.23%).
pre-test risk point falls outside of the 95%CI for post-test risk at both lower and upper cutoffs by likelihood ratio (LR) analysis.
SN and NPV at lower cutoff = 98.57% and 97.56%; SP and PPV at upper cutoff = 66.10% and 56.52%.

Conclusions: IsoPSA displays statistically informative negative and positive predictive value for patients with abnormal DRE.

IsoPSA Performance: Abnormal DRE

	# of Subjects				Likelihood of Gleason Score ≥ 7					
IsoPSA Index	Total Subjects	Negative HG-PCa	HG-PCa (GS≥7)	Frequency	LR	95% LB	95% UB	Probability Estimate (Post-Test Risk)	95% LB	95% UB
≤ 6.0	41	40	1	1.43%	0.04	0.00	0.15	2.44%	0.06%	12.86%
≥6.0 – ≤ 10.0	55	38	17	24.29%	0.75	0.29	1.22	30.91%	19.14%	44.81%
>10.0	92	40	52	74.29%	2.19	1.41	2.98	56.52%	45.78%	66.83%
Total	188	118	70		Pre-Test Risk			37.23%		

Poster 105

IsoPSA Prospective Validation Study: Performance of the IsoPSA Test in Patients with No Prior Biopsy

A. Milbank[1], A. Gadzinski[2], G. Rao[3], J. Kaminetsky[4], J. Pearl[5], L. Belkoff[6], L. Karsh[7], M. Pliskin[8], M. Truesdale[9], P. Dato[10], P. Ilbeigi[11], S. Lawindy[12] and S. Freedman[13]

[1]Minnesota Urology, Woodbury, MN, USA; [2]Comprehensive Urology, Royal Oak, MI, USA; [3]First Urology, Jeffersonville, IL, USA; [4]Integrated Medical Professionals, New York, NY, USA; [5]UroPartners, Glenview, IL, USA; [6]MidLantic Urology, Bala Cynwyd, PA, USA; [7]AdventHealth Urology, Denver, CO, USA; [8]The Urology Group, Cincinnati, OH, USA; [9]Advanced Urology Institute, Largo, FL, USA; [10]Genesis Healthcare Urology, San Diego, CA, USA; [11]Urologic Institute of the Desert, Palm Desert, CA, USA; [12]Advanced Urology Institute Daytona, Daytona Beach, FL, USA; [13]Sheldon Freedman MD, Las Vegas, NV, USA

Introduction and Objective: IsoPSA is a structure-based (blood) assay with negative and positive predictive characteristics for csPCa (≥GG2) in patients with no prior biopsy.

Methods: Prospective validation study of IsoPSA, 750 patients with age ≥50 years & total PSA ≥4 ng/mL undergoing prostate cancer (PCa) early detection.

All patients received prostate biopsy and IsoPSA.
IsoPSA performance was assessed in relation to csPCa outcome:
prevalence based likelihood ratio analysis of pre-test risk (prevalence) and post-test risk at lower cutoff = 6.0 and upper cutoff = 10.0
sensitivity (SN) and negative predictive value (NPV) at lower cutoff; specificity (SP) and positive predictive value (PPV) at upper cutoff

Results: 624 (83%) of 750 had no prior biopsy.

IsoPSA displays informative negative and positive predictive characteristics:
post-test risk point at lower cutoff of ≤6.0 (8.94%) and at the upper cutoff of >10.0 (51.11%) are below and above the pre-test risk point estimate (34.94%).
pre-test risk point falls outside of the 95%CI for post-test risk at both lower and upper cutoffs by likelihood ratio (LR) analysis.
SN and NPV at lower cutoff = 94.95% and 91.06%; SP and PPV at upper cutoff = 62.07% and 51.11%.

Conclusions: In patients with no prior prostate biopsy, IsoPSA demonstrates negative and positive predictive characteristics.

IsoPSA Performance: No Prior Bx

	# of Subjects				Likelihood of Gleason Score ≥ 7					
IsoPSA Index	Total Subjects	Negative HG-PCa	HG-PCa (GS≥7)	Frequency	LR	95% LB	95% UB	Probability Estimate (Post-Test Risk)	95% LB	95% UB
≤ 6.0	123	112	11	5%	0.18	0.05	0.32	8.94%	4.55%	15.44%
≥6.0 – ≤ 10.0	186	140	46	21%	0.61	0.39	0.83	24.73%	18.71%	31.58%
>10.0	315	154	161	74%	1.95	1.59	2.31	51.11%	45.44%	56.76%
Total	624	406	218		Pre-Test Risk			34.94%		

Poster 106

Comparison of Cognitive vs. Software Guided MRI Prostate Biopsy in Estimating Surgical Grading and Staging of Prostate Cancer

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Introduction and Objective: MRI before prostate biopsy has been shown to be a valuable tool for detecting clinically significant prostate cancer. While cognitive and software-guided MRI biopsy techniques are both used, literature suggests minimal difference in their effectiveness at detecting disease. This study aimed to compare cognitive vs. software-guided biopsies in estimating grade (Grade Group, GG) and stage of prostate cancer using surgical pathology as the reference.

Methods: We conducted a retrospective chart review of patients who underwent prostate MRI, targeted biopsy, and radical prostatectomy (RP) since 2018. Patients with prostate imaging-reporting and data system (PI-RADS) 4 or 5 scores on MRI prior to RP were included. The cohort was divided into two groups based on the type of MRI-guided biopsy (cognitive or software). The groups were matched 1:1 based on the highest random biopsy GG values. Fisher's exact test was used for statistical analysis.

Results: A total of 130 patients were identified, with 48 patients per group after matching. A significant association between PI-RADS score and clinically significant disease (≥GG2) on targeted biopsy was observed ($p < 0.01$), validating the cohort. No significant difference was found between cognitive and software-guided biopsies in estimating surgical pathology GG ($p = 0.6$) or stage ($p = 0.1$). Additionally, similar rates of upgrading from random or targeted biopsy to surgical GG were observed in both groups.

Conclusions: Our findings suggest that cognitive and software-guided MRI prostate biopsies have similar effectiveness in estimating surgical grade and stage. Although a larger sample size is needed to confirm these results, cognitive-guided biopsies remain a viable option and are not obsolete.

Poster 107

Poster 108

How Does PSA Predict Prostate Cancer Risk in the Era of MRI and Genomics?

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Introduction and Objective: This study examines the interplay between MRI-derived PI-RADS scores, Decipher genomic risk scores, high-risk mutations (e.g., TP53, PTEN, RB1), race, and PSA levels in prostate cancer (PCa) risk. By assessing PSA as a potential confounder, we aim to identify independent predictors of PCa aggressiveness to inform tailored diagnostics and treatment.

Methods: We analyzed data from 322 PCa patients (May 2019–January 2023): 45% White, 40% Black, and 15% Other. PI-RADS scores ≥4 and Decipher scores >0.6 were classified as high-risk. Chi-square tests and Cox proportional hazards models (adjusting for PSA) assessed associations between PI-RADS, Decipher, mutations, race, and disease progression.

Results: Black patients had higher rates of PI-RADS ≥4 (38% vs. 25%) and Decipher >0.6 (37% vs. 22%) than White patients ($p < 0.05$). They also showed increased TP53 (HR = 2.5, $p < 0.01$) and RB1 mutations (HR = 1.8, $p < 0.05$). Adjusted for PSA, PI-RADS ≥4 (HR = 1.4, $p < 0.05$), Decipher >0.6 (HR = 1.6, $p < 0.01$), and TP53 mutations (HR = 2.3, $p < 0.01$) remained significant independent risk factors.

Conclusions: Black patients more frequently present with high-risk imaging, genomic scores, and mutations. Adjusting for PSA, PI-RADS, Decipher, and TP53 mutations independently predict PCa progression. These findings highlight the need for race-conscious, multi-factorial diagnostic strategies to improve personalized care and address disparities in PCa outcomes.

Poster 109

Perioperative Outcomes of Same-Day Discharge After Robot-Assisted Laparoscopic Radical Prostatectomy: An National Cancer Database Analysis

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Introduction and Objective: Robot-assisted laparoscopic prostatectomy (RALP) is the standard surgical approach for localized prostate cancer, offering benefits such as reduced blood loss and faster recovery. Same-day discharge (SDD) has been proposed to enhance convenience and reduce costs while maintaining safety. However, concerns persist regarding complications and readmission risk. This study evaluates perioperative outcomes, including 30- and 90-day mortality and readmission rates, for SDD versus later discharge.

Methods: A retrospective cohort study using the National Cancer Database (NCDB) identified patients who underwent primary RALP from 2010 to 2022. Salvage prostatectomy cases were excluded. Baseline demographics included age, race, geographic region, treatment center, and Charlson Comorbidity Index (CCI). Clinical factors included pelvic lymph node dissection (pNx vs. pN0-3), Gleason grade group (GGG), and prostate-specific antigen (PSA) levels. Perioperative outcomes, including 30-day readmission and 30- and 90-day mortality, were compared between SDD and non-SDD patients using Student's *t*-test, Chi-square test, and Cox proportional hazards model.

Results: Among 461,617 RALP patients, 34,223 (13.4%) had SDD. Median hospital stay was 1.5 days overall and 1.62 days for non-SDD patients. SDD patients had lower mean CCI (0.21 vs. 0.25, $p < 0.001$), but age, race, PSA levels, and GGG ≥3 rates were similar. SDD was more common at academic centers (47.3% vs. 41.2%) and in the Middle Atlantic region (24.6% vs. 13.8%) ($p < 0.001$). Perioperative outcomes were comparable: 30-day readmission (2.14% vs. 2.28%, $p = 0.197$), 30-day mortality (0.23% vs. 0.16%, $p = 0.010$), and 90-day mortality (0.31% vs. 0.26%, $p = 0.140$).

Conclusions: SDD after RALP appears safe and feasible, with no significant differences in 30-day readmission or 90-day mortality. SDD patients were more likely treated at academic centers and had known nodal status, though selection bias may favor healthier patients. Institutional perioperative/ERAS pathways were not standardized in NCDB. Further studies are needed to refine selection criteria for SDD.

Outcomes Of Intravesical Gemcitabine and Docetaxel for Bacillus Calmette-Guerin exposed High-Risk Non-Muscle Invasive Bladder Cancer: Results from a High-Volume Institution

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Introduction and Objective: Intravesical gemcitabine/docetaxel (GEMDOCE) is a promising therapy for high-risk non-muscle invasive bladder cancer (NMIBC), but long term data remains limited. We present our experience utilizing GEMDOCE to treat Bacillus Calmette-Guerin (BCG) exposed patients with high-risk NMIBC.

Methods: We retrospectively reviewed our bladder cancer database, identifying BCG exposed patients from 2013 to 2024 who received sequential intravesical GEMDOCE via the Iowa protocol for high-risk and very high risk NMIBC. Clinicopathologic variables and outcomes were recorded.

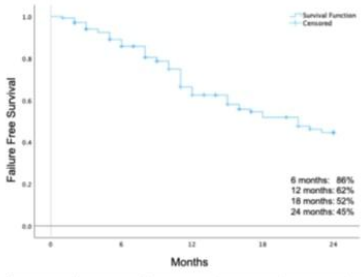
Failure Free survival (FFS) was defined as disease progression (Ta/CIS to ≥ T1, T1 to T2), early cystectomy, or recurrence requiring treatment change; we also evaluated cystectomy free survival (CFS).
Kaplan-Meier curves analyzed FFS and CFS from first induction dose.

Results: Among 143 BCG exposed patients with high risk NMIBC receiving GEMDOCE, median (interquartile range-IQR) follow up was 15 (10–26) months. Pre-GEMDOCE pathology included 42 (29%) CIS, 22 (15%) High Grade (HG) T1, 85 (59%) with multifocal disease, and 11 (7%) with large tumor burden.

Of 137 (96%) patients completing induction, 105 (73%) started maintenance doses (median (IQR) 11 (5–13)). Fourteen (10%) patients discontinued due to adverse events. 12- and 24-months FFS was 62% and 45% (Fig. 1a) and CFS was 86% and 76% respectively. Patients who received GEMDOCE > 12 months experienced significantly better FFS ($p < 0.001$) (Fig. 1b). FFS didn't differ when stratified by initial pathology ($p = 0.095$).

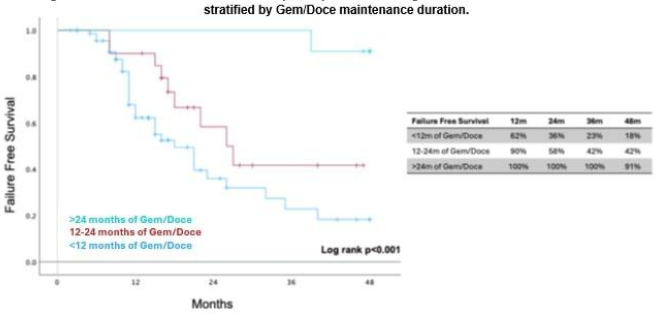
Conclusions: Intravesical GEMDOCE is a well-tolerated and effective treatment in BCG-exposed patients with high-risk NMIBC. Extended maintenance (24 vs 12 months) improves FFS rates. Despite retrospective limitations, FFS rates here exceed those reported in recent BCG unresponsive trials. As the post-BCG treatment landscape increases, randomized trials including GEMDOCE are necessary to better optimize patient risk stratification.

Figure 1a. Failure Free Survival of BCG exposed patients with high risk NMIBC treated with Gem/Doce



Months	0	6	12	18	24
At risk	137	106	68	41	29

Figure 1b. Failure Free Survival of BCG exposed patients with High Risk NMIBC treated with Gem/Doce stratified by Gem/Doce maintenance duration.



Failure Free Survival	12m	24m	36m	48m
<12m of Gem/Doce	62%	36%	23%	18%
12-24m of Gem/Doce	90%	58%	42%	42%
>24m of Gem/Doce	100%	100%	100%	91%

Poster 110

Prospective Association of Bladder Decipher Testing in Muscle-Invasive Bladder Cancer

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Introduction and Objective: The Cancer Genome Atlas Project (TCGA) has identified several molecular subtypes of bladder cancer. Decipher Bladder, a genomic test analyzing 219 genes, classifies BCa but lacks prospective validation for medical decision-making. This study used Decipher to examine the association between molecular subtype and final pathology progression in muscle-invasive bladder cancer (MIBC).

Methods: This study included patients from an IRB-approved bladder cancer database at the University of Virginia with urothelial carcinoma who underwent Decipher testing. Tumors were classified into three molecular subtypes: Luminal, Infiltrative, and Basal/Basal Claudin-Low. Cohort of interest was pT2 on TURBT who opted for radical cystectomy Patients were prospectively followed for pathologic stage and upstaging, defined as an increase from TURBT to final cystectomy pathology. Neoadjuvant chemotherapy (NAC) was included as a covariate due to its potential impact on staging.

Results: Twenty patients had Decipher completed, of which 14 proceeded to radical cystectomy. The cohort represented the standard cystectomy patient as they were predominately male, Caucasian, with an ECOG performance status of 0 to 1. A majority (75%) of the cohort received platinum-based NAC. Table 1 displays the rate of NAC and upstaging on final pathology stratified by the genomic classifier. There were no instances of Luminal subtype upstaging, but the Basal or Basal Claudin-Low had the highest upstaging percentage (60%) despite more than half receiving NAC.

Conclusions: This prospective evaluation suggests that genomic subtypes may influence final cystectomy pathology despite patients receiving guideline-recommended platinum-based NAC. These findings are provocative but need to be substantiated in a larger cohort before informing clinical decision making.

Table 1. Decipher Results

	Molecular Subtype		
	Luminal (N=3)	Infiltrative (N=4)	Basal or Basal Claudin-Low (N=5)
NAC N (%)	2 (67)	4 (100)	3 (60)
Upstaging N (%)	0 (0)	2 (50)	3 (60)

Poster 111

Impact of High Tumor Grade on Prognosis in Organ-Confined Prostate Adenocarcinoma Undergoing Surgical Resection

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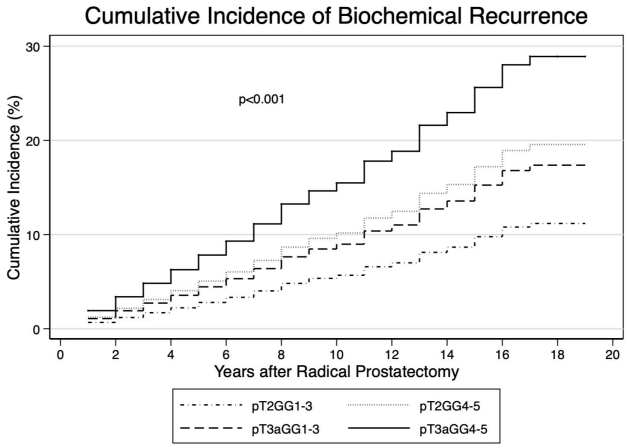
Introduction and Objective: Organ-confined (pT2N0) prostate cancer (PCa) treated with radical prostatectomy (RP) portends favorable outcomes. In patients with high-grade (grade group (GG) 4–5) organ-confined disease treated surgically, it remains unclear whether grade or pathologic stage plays a more significant role in driving outcomes. We sought to characterize the oncologic outcomes of patients with high-grade, organ-confined PCa after RP.

Methods: A retrospective analysis of patients with PCa who underwent RP at our institution between 2005–2024 was performed. Patients were categorized into four groups based on pathology: pT2GG1-3, pT2GG4-5, pT3aGG1-3, and pT3aGG4-5. Patients with seminal vesicle invasion (pT3b), node-positive (pN1) disease, or positive surgical margins were excluded. Multivariable Fine-Gray competing-risk regression was performed to compare the cumulative incidence of biochemical recurrence (BCR) between groups.

Results: A total of 6756 men were identified: 5011 (74%) with pT2GG1-3, 331 (5%) with pT2GG4-5, 1154 (17%) with pT3aGG1-3, and 260 (4%) with pT3aGG4-5 PCa; of these, 177 (4%), 42 (13%), 159 (14%), and 89 (34%) patients received postoperative radiation, respectively. Overall, 663 (10%) patients developed BCR over a median follow-up of 4 years. Five-year BCR-free survival was 95.3% (95% CI:94.5–95.9%) for pT2GG1-3, 78.8% (95% CI:72.5–83.8%) for pT2GG4-5, 81.9% (95% CI:80–84.4%) for pT3aGG1-3, and 51.7% (95% CI:44–58.9%) for pT3aGG4-5. On multivariable analysis, pT2GG4-5 (subhazard ratio (SHR) = 1.8, 95% CI:1.4–2.5) and pT3aGG1-3 (SHR = 1.6, 95% CI:1.3–1.9) were associated with significantly increased hazard of BCR compared to pT2GG1-3 ($p < 0.001$, Figure). There was no significant difference in risk of BCR between pT3aGG1-3 and pT2GG4-5 (SHR = 0.9, 95% CI:0.7–1.2).

Conclusions: Oncologic outcomes after RP appear to be driven more by grade than stage, despite surgery with curative intent. Our findings support the need for closer postoperative surveillance in patients with high-grade organ-confined PCa.



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