Syllabus

40th Annual J.K. Wyatt Urology Residents Research Day

Friday, April 11, 2025
Ivey Spencer Leadership Centre
London, Ontario

London Health Sciences Centre

St Joseph's HEALTH CARE LONDON

Schulich MEDICINE & DENTISTRY

Western

Remembering Dr. John (Jack) Kenneth Wyatt

Jack Wyatt completed his undergraduate and medical school training at Western. During his university days he excelled in sports and was captain of the Western football team. His medical school classmates described him as the class prankster.

After completion of residency training Dr. Wyatt began his urological career in 1960 at Victoria Hospital, practicing general urology with a special interest in cancer and reconstructive surgery. He later went on to serve as Residency Program Director and Division Chair, and aided the building of the Western Urology division into a strong clinical and academic program.

Dr. Wyatt is fondly remembered by alumni for his care in their well being as residents, and his sharp clinical acumen. He was also a great storyteller with a razor-sharp wit and dry sense of humor. He is remembered by former patients for his common sense approach, easy -going nature and empathy.

During his career Dr. Wyatt was actively involved in both the Northeastern Section of the American Urological Association and Canadian Urological Association. He served as CUA President in 1984.

Dr. Jack Wyatt passed away in 2004 after a long and distinguished urological career. We are indebted to his many contributions to Urology in London and beyond. His legacy is celebrated through our annual Research Day.

2025 Guest Professor:
Dr. Chandru P. Sundaram

Director of Minimally Invasive Surgery
Tenured Welch Professor of Urology and Urology Residency Program Director, Indiana University

Dr. Sundaram is director of minimally invasive surgery, tenured Welch Professor of Urology at Indiana University and Program Director of the Urology Residency Program. He is also Vice Chair (QI) and Service Line Leader of Urology at the University Hospital. He is Co Editor in Chief of the Journal of Endourology and was the founding co-editor of Videourology (2010-19). He is Treasurer and member of the Executive Committee of the Endourological Society. He was Co-director of the fellowship in minimally invasive surgery at Washington University in St. Louis before moving to Indiana University in 2002.

He is a member of the American Association of Genitourinary Surgeons, an examiner for the ABU Certifying examination and the recipient of the AUA's 2022 Distinguished Contribution Award. He received teaching awards from Washington University and Indiana University for his commitment to training of residents and fellows. He was the North Central Section's (NCS) representative on the Board of the AUA 2015-2020 and the President of the NCS in 2013. He was on the Board of Directors of the Society of Academic Urologists. He has over 200 publications and has been the President of the Society of Urologic Robotic Surgeons. He has been visiting professor, invited faculty and speaker at multiple institutions and meetings. He specializes in kidney cancer and other conditions of the kidney, adrenal tumors and surgical management of prostate cancer.

2025 Talk Titles:

1. *Management of Adrenal Masses*
    Objectives:
    - i) List the indications for Adrenalectomy
    - ii) Describe the radiologic and metabolic work-up of an adrenal mass
    - iii) Name the steps of adrenalectomy

2. *Minimizing Burnout for Urologists*
    Objectives:
    - i) Define the features of burnout
    - ii) List the strategies to prevent burnout
    - iii) Achieve greater fulfillment at work with an optimal work life balance

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Objectives:

1. At the conclusion of the program, participants will be capable of describing indications for adrenalectomy, the radiologic and metabolic work-up of an adrenal mass, and the procedural steps of the surgery
2. At the conclusion of the program, participants will be capable of analyzing the features of burnout among urologists and evaluate strategies for its prevention and management to promote professional fulfillment and work-life balance
3. At the conclusion of this program, participants will be capable of describing the clinical and basic science projects conducted by Western University Trainees in the following areas: 1. Pediatrics; 2. Oncology; 3. Endourology; 4. Transplantation; 5. Medical Education; 6. Functional Urology

AGENDA

7:00 - 7:50   Registration

8:00 - 8:10   Welcome and Introductions: Dr. S. Pautler, Dr. P. Wang, Dr. A. Sener

SESSION I: **Fundamental Sciences and Surgical Innovation Node**   **Moderator: Dr.J.Burton**
5 minute presentation + 5 minute Question/Answer Period

08:10-08:20   W.Luke: Comparison of Efficacy and Efficiency of Open and Robotic Approaches to Complicated Ureteral Reconstruction (Dr.P.Luke)

08:20-08:30   E.Afenu: Transversus Abdominis Plane (TAP) Block as a Suitable Post-Renal Transplant Analgesic Technique: Our Local Experience (Dr.A.Sener)

08:30-08:40   J.Wong: Catheter-Free!: Short-term Outcomes of REZUM in Catheter Dependent (Dr.J.Campbell)

08:40-08:50   M.Smith: Comparison of Clinical Outcomes and Cost: Mini vs Standard PCNL for Renal Calculi (Dr.J.Denstedt)

08:50-09:00   I.Janes: A Feasibility Study Assessing a Novel Approach to Inguinal Lymph Node Dissection in Patients with Wquamous Cell Carcinoma of the Penis (Dr.N.Power)

09:00-09:10   M.Igbokwe: Evaluating the Accuracy of Infrared Thermometry for Assessing Renal Temperatures in Porcine Models During Kidney Surgery (Dr.P.Luke)

09:10-09:35   **Faculty Lecturer, Dr. Brant Inman:** *Prostate cancer genetics in 2025*
Objectives: i) Describe the differences in germline and somatic mutations in prostate cancer; ii) Recognize how genetic changes in prostate cancer influence tumor behavior and treatment responses   *15 minute presentation + 5 minute Question/Answer Period*

09:35-10:05 Refreshment/Health Break (30 minutes)

SESSION II: **Surgical Education Node**   **Moderator: Dr.P.Wang**
5 minute presentation + 5 minute Question/Answer Period

10:05-10:15   C.MacLeod: Evaluating Satisfaction and Utility of a Novel Catheterization Simulator for Difficult Urethral Catheterization: A Quality Improvement Initiative (Dr.P.Wang)

10:15-10:25   D.Matti: Assessing the Efficacy and Clinical Utility of Artificial Intelligence Scribes in Urology (Dr.Y.Guo)

10:25-10:35   V.Turnbull: The Effect of Learner Handover on Surgeon Entrustment Decision Making (Dr.J.Bjazevic)

10:35-10:45   E.Li: Decoding Digital Discourse: A Qualitative Analysis of Online Sentiments and Thematic Trends in Urology Residency Program Discussions (Dr.P.Wang)

SESSION IV: Big Data/ICES Node   **Moderator: Dr.B.Welk**
5 minute presentation + 5 minute Question/Answer Period

10:45-10:55 H.Rotz: Optimizing Long-Term Follow-up After Surgical Correction of Vesicoureteral Reflux: A Population-Based Cohort Study (Dr.P.Wang/Dr.S.Dave)

10:55-11:05 S.Ierides: The Risk of Post-Operative Sepsis in Patients Undergoing Ureteroscopy and PCNL for Upper Urinary Tract Stones: A study from the American College of Surgeons National Surgical Quality Improvement Database (Dr.J.Bjazevic, Dr.H.Razvi)

11:05-11:15 M.Kailavasan: Suicide Risk Amongst Patients Diagnosed with Urological Malignancy: A Population-Based Analysis i(Dr.N.Power)

11:15-11:25 L.Stringer: Does Distance from Treating Tertiary Care Hospital Impact Post-Operative Anxiety in Caregivers of Pediatric Surgical Patients: A Prospective Cohort Study to Assess Quantitative and Qualitative Outcomes (Dr.S.Dave)

11:25-11:30 Dr. John Denstedt to introduce Dr. Chandru Sundaram

11:30-12:00 **Guest Professor, Dr. Chandru Sundaram:** *Management of Adrenal Masses*
Objectives: i) List the indications for Adrenalectomy; ii) Describe the radiologic and metabolic work-up of an adrenal mass; iii) Name the steps of adrenalectomy   *– 20 minute presentation + 10 minute Question/Answer Period*

12:00-01:00 Lunch Break and Social Networking

01:00 -01:20 **Alumni Lecturer, Dr. Trustin Domes:**
Physician Assistants in the Canadian Healthcare System: Impact, Value, and Challenges
Objectives: i) Outline the current landscape of Physician Assistants (PAs) in Canada; ii) Discuss the value PAs add to the healthcare system and to physicians; iii) Identify the key barriers to integrating PAs into the Canadian healthcare system and strategies to overcome these barriers. *15 minute presentation + 5 minute Question/Answer Period*

SESSION III: Quality Improvement & Patient Centered Research   **Moderator: Dr.N.Power**

01:20-01:30 H.Abed: Electrical Stimulation for Male Stress Urinary Incontinence: A Systematic Review (Dr.B.Welk)

01:30-01:40 A.Gupta: Development of a Novel Imaging-based Surgical Complexity Score for Radical Cystectomy (Dr.J.Izawa)

01:40-01:50 M.NejadMansouri: Utilizing Predictive Analytics to Identify Patient Phenotypes in Overactive Bladder Interventions (Dr.B.Welk)

01:50-02:00 R.Ferreira: Outcomes of Prostatic Artery Embolization for Lower Urinary Tract Symptoms in BPH Patients (Dr.J.Campbell)

02:00-02:10 T.Alotaibi: Quality of Life Assessment in Cystinuria Recurrent Stone Formers (Dr.J.Bjazevic, Dr.H.Razvi)

02:10-02:40 **Guest Professor, Dr. Chandru Sundaram:** *Minimizing Burnout for Urologists*
Objectives: i) Define the features of burnout; ii) List the strategies to prevent burnout; iii) Achieve greater fulfillment at work with an optimal work life balance *– 20 minute presentation + 10 minute Question/Answer Period*

02:40-02:50 Thank you, wrap up, surveys

03:00-04:00 Resident Round Table with Guest Professor

Western University
Jack Wyatt Urology Residents' Research Day
2025

RESIDENTS:

PGY5
Haider Abed
William Luke
Carolyn MacLeod
Matthew Playfair

PGY4
Bruce Li
Heather Rotz
Jennifer Wong

PGY3
Edem (Andy) Afenu
Danny Matti
Victoria Turnbull

PGY2
Aurinjoy Gupta
Mehran Nejad Mansouri
Mckinley Smith

PGY2
Roseanne Ferreira
Ian Janes
Ai (Erica) Li

FELLOWS:

Andrology/Reconstruction
none

EndoUrology
Tariq Alotaibi
Solon Ierides
Alvin Low

Pediatrics
Leandra Stringer

Transplant
Martin Igbokwe
Abdullah Alfaifi

UroOncology
Peter Jenjitranant
Mithun Kailavasan

COMPARISON OF EFFICACY AND EFFICIENCY OF OPEN AND ROBOTIC APPROACHES TO COMPLICATED URETERAL RECONSTRUCTION

William Luke, Patrick Luke

With increasing access to robotic platforms, ureteral reconstruction surgeries including pyeloplasty and reimplantation have transitioned from open to minimally invasive techniques. In this study, we aim to assess the differences in outcomes and effectiveness of laparoscopic robot-assisted reconstruction (LRR) for complex ureteral reconstruction compared to open procedures (OP). We aimed to use our experience with robotic pyeloplasty (RP) as a benchmark for these procedures.

We retrospectively assessed electively managed complicated upper tract reconstruction in adults from our tertiary care institution from 2013-2022. Comparison was drawn between patients undergoing LRR (14) and OP (10) techniques. Reconstruction was considered complicated if there was a prior history of LRP or OP of the urinary tract, multiple ureteral strictures or ureteral defects requiring grafts. Primary outcomes including length-of-stay (LOS) and success rate (symptom and stent free at 1 year, no additional procedure, T1/2 improved with stable differential function). Median operative time was assessed as a secondary outcome.

In this series the majority of LRR and OP patients (16/24) underwent upper tract reconstruction for iatrogenic stricture. Patient characteristics are described in table 1.

Patients undergoing LRR and RP had a shorter LOS (figure 1), compared to OP (3.0 vs 2.1 vs 6.4 days, p=<0.001), with a similar success rate at 12 months (86% vs 93% vs 80%, p=0.35). Blood loss during LRR was significantly different from RP (p=0.002) but not from OP (p=0.484). Median operative time was fastest in the RP group, and there no significant difference between LRR and OP (156 min vs 220 min vs 240 min, p<0.001).

LRR for ureteral reconstruction is an efficacious and less invasive alternative to OP. Using modern techniques robotic techniques have similar outcomes in both complex and simple scenarios. Where robotic technology is available, LRR may be the preferred technique with patients experiencing a decreased length of stay and similar success rates as OP. Selection of a surgical technique may be influenced by surgeon experience and preference.

	Robotic Pyeloplasty	Laparoscopic Robot-Assisted Procedure	Open Procedures
Number	61	14	10
Age (Median)	44	52	55
M:F	22:39	6:8	4:6
Etiology	Congenital: 22 Stone/Endourologic: 24 Unknown: 15	Redo Pyeloplasty: 6 Iatrogenic Surgery: 7 Iatrogenic Radiation: 1	Redo Pyeloplasty: 2 Iatrogenic-Surgery: 7 Iatrogenic-Radiation: 1
Side (L/R/Transplant)	29/31/0	10/4/0	4/4/2
Median Operative Length (min) (IQR)	155.5 (127.5-180.75)	205 (185.25-248.25)	198.5 (166.5-279)
Procedure	Pyeloplasty: 61	Pyeloplasty: 6 Ureteral Reimplant: 4 Graft Ureteroplasty: 4	Ureteral Reimplant: 9 Ureteroureterostomy: 1

Table 1. Patient characteristics of those undergoing ureteral reconstruction

TRANSVERSUS ABDOMINIS PLANE BLOCK AS A SUITABLE POST KIDNEY TRANSPLANT ANALGESIC TECHNIQUE: OUR LOCAL EXPERIENCE

Edem Afenu, Jirong Lu, Atheer Alqahtani, Martin Iblokwe, Cathy Wang, Roseanne Ferreira, Pavel Roshanov, Patrick Luke, Alp Sener

Introduction:
Opioid-based intravenous patient-controlled analgesia (PCA) is the standard for postoperative pain management in kidney transplant recipients but is associated with significant side effects. Transversus abdominis plane (TAP) catheters provide regional analgesia and have been shown to reduce opioid use in other surgical populations, though data in kidney transplantation remain limited. This study evaluates the impact of TAP catheters on opioid consumption, pain scores, length of hospital stay, and postoperative complications.

Methods:
This retrospective cohort study includes kidney transplant recipients (≥18 years) from a single center between 2019-2022. Postoperative opioid consumption (oral morphine milligram equivalents - OMME), pain scores, hospital stay, and complications were compared between TAP and non-TAP groups. Statistical analyses included t-tests or Wilcoxon-Mann Whitney tests for continuous variables and Fisher test for categorical outcomes.

Results: Among 290 kidney transplant recipients with median age of 51.6±15.0 years, 75.2% (218) received a TAP catheter (table 1). Hydromorphone PCA use was high in both groups, with no significant difference in PCA usage between TAP and non-TAP patients (91.7% vs. 95.7%, p = 0.43). Median OMME PCA use was significantly lower in the TAP group on POD 1 (57.6 mg, IQR :28.8-115.2 vs. 97.2 mg, IQR: 55.8-165.6 p=0.003), but no significant differences were observed on PODs 2-4 (p=0.08 -0.68) (table 2). Median total OMME was significantly lower in the TAP group on POD 1 (61.2 mg, IQR: 32.4–118.8 vs. 97.2 mg, IQR: 55.8–165.6, p = 0.008), but no significant differences were observed on PODs 2–4 (p = 0.12–0.76) (table 2). Pain scores were significantly lower in the TAP group on POD 0 (3.7, IQR: 2.0–5.0 vs. 5.0, IQR: 3.0–6.0, p = 0.001) and POD 1 (3.0, IQR: 2.0–4.5 vs. 4.0, IQR: 2.5–6.0, p < 0.001), with no differences from POD 2 onward. Postoperative complications were similar between groups (38.7% vs. 37.7%, p = 1.00).

Conclusion: TAP catheter use in kidney transplant recipients was associated with lower opioid consumption on POD 1 and reduced early postoperative pain, without affecting overall, length of stay, or major complications. However, overall opioid consumption was similar between groups.

Table 1. Patient characteristics

Characteristics	non - TAP N=72	TAP N=218	p-value
Age	50.1±16.0	52.1±14.6	0.31
Sex			
Male	50 (69.4%)	150 (68.8%)	1
Female	22 (30.6%)	68 (31.2%)	
Weight (kg)	79.5±19.7	81.7±19.8	0.42
History of liver disease?			
No	66 (94.3%)	190 (93.1%)	1
Yes	4 (5.7%)	14 (6.9%)	
History of dialysis?			
No	6 (8.3%)	38 (17.4%)	0.087
Yes	66 (91.7%)	180 (82.6%)	
History of OSA?			
No	67 (94.4%)	176 (87.1%)	0.12
Yes	4 (5.6%)	26 (12.9%)	
Opioid doses in last 7 days			
0.5		1 (20%)	
3		1 (20%)	
7		2 (40%)	
14		1 (20%)	
Donor type			
DCD	14 (19.4%)	44 (20.2%)	0.79
LD	20 (27.8%)	69 (31.7%)	
NDD	38 (52.8%)	105 (48.2%)	

Data are presented as mean ± SD for continuous measures, and n (%) for categorical measures.

Table 2. Postoperative analgesia requirements

Characteristics	non - TAP N=72	TAP N=218	p-value
Pain score on POD 0 (0-10)	5.0 (3.0-6.0)	3.7 (2.0-5.0)	0.001
Pain score on POD 1 (0-10)	4.0 (2.5-6.0)	3.0 (2.0-4.5)	<0.001
Pain score on POD 2 (0-10)	2.0 (0.9-5.0)	2.3 (1.0-4.0)	0.63
Pain score on POD 3 (0-10)	2.0 (0.0-5.0)	2.0 (0.0-4.0)	0.44
Pain score on POD 4 (0-10)	0.0 (0.0-3.0)	1.3 (0.0-3.5)	0.2
Pain score on POD 5 (0-10)	0.0 (0.0-3.0)	0.0 (0.0-2.0)	0.54
PCA used?			
No	3 (4.3%)	18 (8.3%)	0.43
Yes	67 (95.7%)	199 (91.7%)	
Type of PCA used			
Hydromorphone	67 (100.0%)	199 (100.0%)	
OMME (PCA HM) at 0 to 24 hours (mg)	97.2 (55.8-165.6)	57.6 (28.8-115.2)	0.003
OMME (PAC HM) at 24 to 48 hours (mg)	27.0 (0.0-73.8)	21.6 (0.0-64.8)	0.68
OMME (PCA HM) at 48 to 72 hours (mg)	0.0 (0.0-0.0)	0.0 (0.0-0.0)	0.12
OMME (PCA HM) at after 72 hours (mg)	0.0 (0.0-0.0)	0.0 (0.0-0.0)	0.08
Non PCA hydromorphone used?			
No	18 (26.1%)	55 (25.3%)	0.88
Yes	51 (73.9%)	162 (74.7%)	
Non PCA tramadol used?			
No	45 (65.2%)	172 (79.3%)	0.023
Yes	24 (34.8%)	45 (20.7%)	
Total OMME (POD 1)	97.2 (55.8-165.6)	61.2 (32.4-118.8)	0.008
Total OMME (POD 2)	36.0 (14.4-86.4)	38.0 (10.8-78.4)	0.76
Total OMME (POD 3)	10.0 (0.0-30.0)	20.0 (0.0-38.8)	0.12
Total OMME (POD 4)	12.5 (0.0-54.0)	15.0 (0.0-60.0)	0.7

Data are presented as median (IQR) for continuous measures, and n (%) for categorical measures.

CATHETER-FREE!: SHORT-TERM OUTCOMES OF REZŪM IN CATHETER DEPENDENT PATIENTS

Jennifer Wong, Jeffrey Campbell

Introduction:
Rezūm is a well-known minimally invasive procedure that uses water vapor to treat benign prostatic hyperplasia (BPH). Success of Rezūm in catheter dependent patients varies from 70-100%. We sought to evaluate the efficacy and retreatment rate of Rezūm in patients with catheter-dependent urinary retention locally.

Methods:
All patients who had undergone Rezūm under a single urologist between the dates of August 2021 to December 2024 were reviewed. Each patient was assessed for catheter dependence and subsequent catheter dependence and retreatment rate post Rezūm.

Results:
A total of eleven patients were included in this retrospective chart review. They were all catheter dependent, with at least one failed trial of void prior to their treatment. The average age was 67 and average prostate volume was 65 grams. Within two weeks after treatment, nine out of eleven patients were catheter free and ten out of eleven patients had post void residuals ≤200mL and were voiding spontaneously at three months. One patient continued with self-catheterization as he had known neurogenic bladder and Rezūm was meant to make clean intermittent catheterization easier. None of the patients required a repeat procedure. Our catheter-free rate post Rezūm was 91%.

Conclusion:
Rezūm is a minimally invasive BPH procedure with a high catheter-free rate in patients with urinary retention. It is a feasible option for catheter dependent patients who want a low-risk outpatient procedure without a general anesthetic.

COMPARISON OF CLINICAL OUTCOMES AND COST: MINI VS STANDARD PCNL FOR RENAL CALCULI

Mckinley Smith, Alvin Low, Linda Nott, Naved Altaf, Dr. John Denstedt

Background:
Treatment of renal stone disease is estimated to cost over 10 billion dollars annually in the US. There is a paucity of data comparing the relative cost of various surgical interventions for urolithiasis. Since the first reports in 2000, mini PCNL has became a well established alternative to standard percutaneous renal stone removal. A hallmark of less invasive approaches to surgical conditions is the benefit of a decreased hospital stay and thus a potential decrease in costs. This retrospective analysis aims to compare the efficacy, safety and cost of an outpatient mini approach to PCNL as an alternative to standard PCNL in a Canadian context.

Hypothesis:
Mini-PCNL has similar stone-free rates compared to PCNL with the benefit of a shorter hospital stay, fewer complications, and lower cost.

Primary Objective:
Comparing the economic implications of mini-PCNL to standard PCNL.

Secondary Objective:
Compare efficacy, safety, and stone-free rate (zero fragments) and clinically insignificant fragments (<3mm) on postoperative imaging; safety of an outpatient approach, Clavien-Dindo perioperative complications, post-operative pain, and transfusion rates; operative parameters, operative time.

Methods:
This is a retrospective matched cohort study conducted at St. Joseph's Hospital, with patients from July 2019 – July 2024 with ethics approval from the REB. Patient data from the electronic health record were reviewed for those who met the inclusion criteria and underwent a mini-PCNL and those of a matched cohort who underwent a standard PCNL, in the same time frame. Inclusion criteria included those aged 18 years or older having undergone a PCNL procedure to treat a stone, within the study time frame. Exclusion criteria included those with abnormal coagulation profiles, untreated urinary tract infections, and those without pre-operative data or postoperative imaging. Costing data was extracted from the hospital's General Ledger system. Length of stay, procedures details, OR time, supplies usage, medications dispensed, diagnostic imaging obtained, and laboratory tests were included. Data was collected on REDCap and entered by two reviewers. Data was analyzed with SPSS with chi-squared and t-test.

Results:
A total of 48 patients were included in the PCNL, and 42 in the mini-PCNL groups. Mini-PCNL was more cost effective than standard PCNL. The average overall outpatient mPCNL cost was $5128, and $9017 for sPCNL. Maximal stone dimension was larger in the sPCNL group (30.04 ± 15.92mm vs 18.84 ± 4.70mm, <0.001). Stone free rates (72.9% sPCNL, 88.4% mPCNL), complications (2.1% sPCNL, 0% mPCNL), and OR time (62.25m sPCNL, 62.26m mPCNL were similar between groups.

Conclusions:
Mini-PCNL was non inferior in the main clinical parameters compared to standard PCNL while offering a less invasive approach and decreased disruption of renal parenchyma. In addition there was a significant cost benefit due to the decreased hospital stay and limited use of disposable surgical equipment. The costing methodology utilized in this study can be applied for comparisons to other interventions for renal stones and non lithiasis conditions.

A FEASIBILITY STUDY ASSESSING A NOVEL APPROACH TO INGUINAL LYMPH NODE DISSECTION IN PATIENTS WITH SQUAMOUS CELL CARCINOMA OF THE PENIS

Ian Janes, Nicholas Power

Background:
Squamous cell carcinoma (SCC) of the penis is a rare, debilitating malignancy with well documented patterns of disease spread. Radical inguinal lymph node dissection (ILND) offers complete tumour staging and noted survival benefit, however, possesses significant associated morbidity. Despite various technical modifications, rate of lymphatic complications following ILND remains high. Recent research has demonstrated positioning of the superficial inguinal nodes within a 6cm radius of the saphenofemoral junction with suggestion that reduction in the size and extent of the resection may reduce morbidity. Therefore, the purpose of the proposed study is to employ a novel ILND technique within these parameters to assess impact on post-operative lymphatic complications.

Objectives:
The objectives of this study are 1) determine the short and long-term morbidity of the proposed novel ILND technique; and 2) to assess the impact of this technical modification on oncologic outcomes in patients with penile SCC. We hypothesize that the incidence of post-operative lymphatic complications will be reduced without compromising oncologic control.

Proposed Methods:
Eligible Participants will be recruited from Victoria Hospital – London Health Sciences Centre during initial consultation with Urologic Oncology. Patients will undergo baseline screening prior to primary resection and novel ILND to determine eligibility. Standardized assessment tools will be used to assess degree of lymphedema, functional ability, and quality of life over the subsequent two-year period following surgery.

Future Applications/Directions:
The outcome of this research will be instrumental in determining the feasibility of a novel ILND technique in reducing post-operative complications while ensuring preserved oncologic control in patients with penile SCC.

EVALUATING THE ACCURACY OF INFRARED THERMOMETRY FOR ASSESSING RENAL TEMPERATURES IN PORCINE MODELS DURING KIDNEY SURGERY

Martin Igbokwe, John Wang, Cory Byrne, Mahmoud Richard-Mohammed, Abdullah Alfaifi, Alp Sener, Patrick Luke

Background:
Controlled rewarming of the kidney during transplantation is a critical area of research aimed at improving graft outcomes. Infrared thermometry (IRT) offers a non-invasive method for intraoperative renal temperature assessment; however, its accuracy in reflecting core renal temperature remains uncertain. This study evaluates the correlation between IRT-measured surface temperatures and core renal temperatures in porcine models during kidney surgery.

Methods:
In a controlled surgical setting, renal temperatures of porcine models were measured using both IRT and standard thermocouple probes. Temperature recordings were taken at multiple time points across different surgical phases, including baseline, cold perfusion, and rewarming. Agreement between IRT and thermocouple readings was analyzed using Bland-Altman plots and correlation coefficients.

Results:
Four kidneys from four pigs (50–55 kg) were studied. During the cooling phase, core renal temperature initially exceeded surface temperature by 3–5°C but aligned closely after 5–6 minutes of cold perfusion ($r = 0.774$, $p = 0.0411$)(Figure 1). In the rewarming phase, a strong correlation was observed between core and surface temperatures ($r = 0.991$, $p = 1.58E-06$) (Figure 2).

Conclusion:
IRT demonstrates strong correlation with core renal temperature, supporting its potential as a reliable, non-invasive tool for intraoperative renal temperature monitoring. Its application may enhance strategies for controlled kidney rewarming in transplantation.

Keywords: *Infrared thermometry, renal temperature, kidney surgery, porcine model, temperature monitoring*
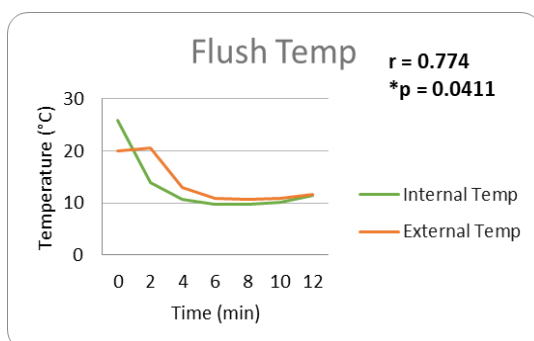

Figure 1:
Line graph showing core and surface renal temperatures during renal cooling using cold flush
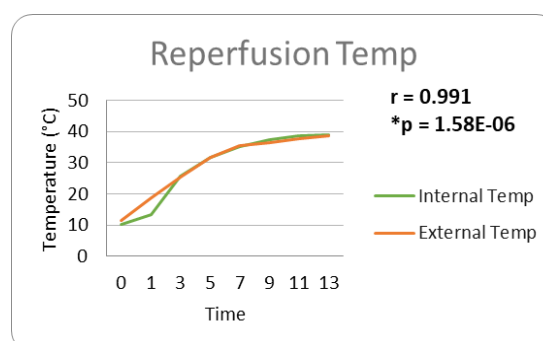
Figure 2:
Line graph showing renal core and surface temperatures during the rewarming phase

EVALUATING SATISFACTION AND UTILITY OF A NOVEL CATHETERIZATION SIMULATOR FOR DIFFICULT URETHRAL CATHETERIZATION: A QUALITY IMPROVEMENT INITIATIVE

Carolyn MacLeod, Abhirup Biswas, Claire Parent, Jake Davidson, Mackenzie Quantz, Peter Wang

Introduction:
Urethral catheterization is a common procedure used both for diagnostic and therapeutic purposes. However, it is the leading cause of nosocomial infections and if performed improperly can lead to significant trauma. Catheter-related injuries are frequently a result of difficult catheterizations. To address these concerns, a novel high-fidelity urethral catheterization simulator was developed to enhance training of normal and difficult catheterization.

Methods:
This quality improvement project involved bootcamp training sessions using the novel simulator for registered nurses (RNs) and first-year Urology residents from 2020 to 2023. Post-session surveys assessed anatomical realism of the model and utility as a training tool. Participants were asked to rate realism and utility on a scale of 1 (not at all real/useful) to 5 (very real/useful).

Results:
A total of 34 Urology residents and 7 RNs completed the survey following the bootcamp. Overall, participants felt the simulator was moderately realistic, with median anatomic realism scores ranging from 3.0 to 4.0. Feel of the tissue by dilation/cystoscopy/catheter insertion was rated the least realistic with an overall median of 3.0. Despite this, the participants felt the model was very useful as a training tool with median scores ranging from 4.0 to 5.0. Lastly, most participants agreed this model could improve trainee confidence (Mdn: 5.0), should be incorporated into Urology curriculum (Mdn: 5.0), and that the skills were transferable to an in vivo setting (Mdn: 5.0).

Conclusions:
This QI project identified areas where anatomical realism of the simulator could be improved. Nonetheless, the model was well-received as a useful training tool and most agreed it would be a valuable addition to urethral catheter training.

ASSESSING THE EFFICACY AND CLINICAL UTILITY OF ARTIFICIAL INTELLIGENCE SCRIBES IN UROLOGY

Joseph Moryousef, **Danny Matti**, Praveen Nadesan, Michael Uy, Yanbo Guo

Objective:
To assess the quality of artificial intelligence (AI) scribes and to evaluate their impact on urologic practice.

Methods:
Standardized reference consultation notes were created for common urologic referrals (urolithiasis, benign prostate hyperplasia, and prostate-specific antigen screening) were created. Audio recordings of these simulated patient encounters were played for five freely accessible AI scribes. The outputs generated by these scribes were evaluated using a standardized survey completed by Canadian urology faculty and trainees across two academic sites.

Results:
Twenty urologists responded, of which 75% reported clinical documentation as a significant source of burnout. 90% expressed openness to using AI scribes to facilitate documentation. Among the AI tools assessed, Nabla was ranked the most effective, with a favorable composite score of 68% and lowest critical error composite score (28%). Three-quarters of respondents indicated a willingness to implement AI scribes in their current form, and 89% believed AI scribes would significantly alter their practice in the future.

Conclusion:
AI scribes have the potential to substantially alleviate the administrative burden associated with clinical documentation, thereby reducing burnout. However, challenges remain, particularly in ensuring accuracy, and addressing medicolegal and privacy concerns. AI scribes represent a valuable tool for reducing the documentation burden and improving patient-clinician interac- tions. However, they should complement, rather than replace, clinician-led documentation to maintain the quality and safety of patient care.

THE EFFECT OF LEARNER HANDOVER ON SURGEON ENTRUSTMENT DECISION MAKING

Victoria Turnbull, Andrea Gingerich, Jennifer Bjazevic

Introduction and Objectives:
The current Post-Graduate Surgical Medical Education system presents many limitations for providing recurring learning opportunities in the context of Competency Based Medical Education (CBME). Specifically, increasing pressures in the training environment including the need for operative efficiency, increased medico-legal liability, and work hour restrictions can restrict trainee case exposure and hinder the development of surgical competency. Learner handover (LH), or the sharing of information regarding learners amongst clinical supervisors, has been proposed to allow assessments from different supervisors to form a longitudinal education strategy and thereby mitigate some of these barriers. However, there remains concern that LH may negatively bias supervisors towards trainees; therefore, our study aimed to examine the effect of LH on entrustment decisions during endoscopic urological procedures.

Methods:
Participants were randomized to receive a clinical vignette of either positive or negative LH and watch an anonymized video of resident performance during ureteroscopy and laser lithotripsy for a renal stone. The type of entrustment decision and the timing when it occurred were recorded. Following the video, participants completed a standardized entrustable professional activity (EPA) assessment on the trainees' performance.

Results:
There was no difference in the entrustment decisions reached between the positive and negative LH groups, with most participants (88%) choosing to "verbally prompt the resident to change their actions". However, there was a trend towards a longer mean time to reach an entrustment decision in the positive LH group (52 vs. 32 seconds). There was no difference in the overall EPA assessment between groups. Participants who were less frequently involved in supervising trainees, were more likely to reach an entrustment decision sooner.

Conclusions:
LH, either positive or negative, did not affect the overall entrustment decision made by participants. However, there was a trend towards a longer time to the entrustment decision in the positive LH group, suggesting that supervisors were more likely to provide trainees a longer time to "struggle" when accompanied with positive LH. The utilization of LH may mitigate some of the challenges in modern Post-Graduate Medical Education; however, further study is required to determine how this can be optimized to improve surgical teaching while minimizing the potential for bias.

Source of Funding:

DECODING DIGITAL DISCOURSE: A QUALITATIVE ANALYSIS OF ONLINE SENTIMENTS AND THEMATIC TRENDS IN UROLOGY RESIDENCY PROGRAM DISCUSSIONS

Mike Ding, **Erica Ai Li,** Peter Wang

Background:
Recent popularity of online public discussion forums (OPFs) amongst medical students and resident trainees has inadvertently given rise to large repositories of novel qualitative online sentiment data. Yet, the relationship between expressed online sentiment and interest in urology residency programs remain unexplored.

Purpose:
This study sought to use generative AI in a novel approach to conduct sentiment and thematic analysis on qualitative data from two OPFs to determine trends in the discussion of urology residency programs from 2004 to 2024.

Methods:
Python v3.13 was used to conduct web scraping from January 01, 2014–December 31, 2024, on two OPFs (StudentDoctorNetwork and Premed101) that matched a list of search terms related to surgical residency training. ChatGPT was used to standardize informal language and emojis into appropriate standardized text. A database of emotional ratings of words was used for sentiment analysis to quantify whether each comment expressed a positive, negative, or neutral attitude. Thematic analysis was done via inductive coding by using ChatGPT to cluster text data into parent categories (lifestyle, program difficulty, urology specific) and subsequent manual thematic analysis was performed by two assessors.

Results and Conclusion:
Between January 01, 2004 – December 31, 2024, 26,766 threads related to discussion on surgery were posted on the OPFs. From these surgery related threads, 252,352 comments were extracted. Of these comments, 4,892 (1.94%) were specific to urology. Amongst the surgical specialties, ophthalmology and had the most amount of interest, while urology had the lowest. Over time, there was increasing discussion on lifestyle. Generative AI streamlines analysis of large quantities of data.

OPTIMIZING LONG-TERM FOLLOW-UP AFTER SURGICAL CORRECTION OF VESICOURETERAL REFLUX: A POPULATION-BASED COHORT STUDY

Heather Rotz, J Andrew McClure, Melody Lam, Britney Le, Blayne Welk, Sumit Dave, Peter Wang

Introduction:
Follow-up protocols after vesicoureteral reflux (VUR) surgery vary widely, with no consensus on duration or type of surveillance. This study aims to define the postoperative period capturing at least 99% of complications requiring reoperation and to identify predictors for extended follow-up needs.

Patients and Methods:
This retrospective, population-based cohort study included pediatric patients who underwent open or endoscopic VUR surgery between 2002 and 2018. Patients were identified using procedural and billing codes. Patients were followed for 5-years after surgery and the primary outcome was reoperation related to VUR surgery. We also captured a composite outcome representing early complications occurring within 30-to-180 days after surgery. We explored time from VUR surgery to reoperation and used multivariable regression to assess patient- and procedure-related predictors of reoperation more than 2-years after the initial surgery.

Results:
The study included 787 patients (open: 332; endoscopic: 455), with a mean age of 3.92 years (SD ± 2.95). Early complications occurred in 25.4%, including unplanned emergency visits (14.1%) and hospital readmissions (3.4%), whereas 15.2% of patients underwent a reoperation. The median time to secondary intervention was 313 days (IQR: 140–661) and 3.2% underwent a secondary intervention after >2 years of follow-up. Early complications and younger patient age significantly predicted later interventions beyond two years (Table 1).

Table 1. Results from regression analysis predicting secondary intervention after >2 years

Covariate	OR	95% CI	p-value
Patient age	0.83	0.69 - 0.99	0.04
Surgical approach (open vs endoscopic)	0.99	0.39 - 2.50	0.98
System complexity (complex vs normal)	1.05	0.34 - 3.27	0.93
Early complication (yes vs no)	3.85	1.66 - 8.91	0.002

Conclusion:
Most postoperative complications and secondary interventions occur within the first 2 years, though a subset remains at risk beyond this period. Individualized follow-up protocols based on patient- and procedure-specific risk factors could improve care while reducing unnecessary healthcare costs.

THE RISK OF POST-OPERATIVE SEPSIS IN PATIENTS UNDERGOING INTERVENTIONS FOR UPPER URINARY TRACT STONES: A STUDY FROM THE AMERICAL COLLEGE OF SURGEONS NATIONAL SURGICAL QUALITY IMPROVEMENT DATABASE

Solon Ierides, Jennifer Bjazevic, Hassan Razvi

Introduction:
The incidence of urinary stone disease continues to increase. Co-existent with the heightened incidence of urinary stone disease, there is also evidence to suggest patient co-morbidities and frailty are becoming more common among patients requiring surgical intervention, potentially placing them at higher risk for post-operative complications. In light of this changing clinical paradigm, we wished to quantify the post-operative complication rate of urinary sepsis following ureteroscopy (URS) and percutaneous nephrolithotomy (PCNL), and to identify predictive risk factors using the American College of Surgeons (ACS) National Surgical Quality Improvement Database (NSQIP).

Methods:
The NSQIP database was used to identify all coded URS and PCNL procedures carried out by participating institutions between 2005-2023. Data collected included: patient demographics, co-morbidities, pre-operative blood work results, procedural and anesthetic details and the occurrence of post-operative sepsis defined as the presence of two or more systemic inflammatory response (SIRS) criteria. Chi-squared test was used quantify changes in post-operative sepsis rates over time. Multivariate logistic regression analysis was performed to identify potential patient and operative risk factors predictive of the development of sepsis.

Results:
A total of 3997 procedures were identified including 3702 URS and 295 PCNLs. The overall sepsis rate in patients undergoing URS was 1.43% compared to a rate of 1.02 % in those undergoing PCNL. A trend towards an increasing rate of sepsis among the URS cohort was observed (p=0.05). Factors associated with the occurrence of post-operative sepsis for the entire cohort included a higher American Society of Anesthesiologists (ASA) score, active smoking status and dialysis. Prior history of bleeding disorder, congestive heart failure and a greater number of days from hospital admission to operation were associated with sepsis following URS but not PCNL.

Conclusions
The overall incidence of post-operative sepsis following URS and PCNL remains low, however a trend towards increasing rates of sepsis among patients undergoing URS was noted. Several pre-operative patient characteristics were also identified as potential risk factors. Further investigation should be conducted to determine the reason(s) for this increasing trend, and to aid in the development of reliable predictive models to help mitigate the risk of post-operative sepsis in this patient population.

SUICIDE RISK AMONGST PATIENTS DIAGNOSED WITH UROLOGICAL MALIGNANCY—A POPULATION-BASED ANALYSIS

Mithun Kailavasan, Ina Palii, Michael Haan, Nicholas Power

Introduction:
Globally, suicide accounts for between 1-2% of deaths worldwide per year with approximately 4,500 deaths per year in Canada alone. Studies have established that suicide rates are higher amongst patients who have cancer compared with the general population, with specific risk factors including male gender, advanced cancer diagnosis, suicide risk, unmarried status and psychiatric comorbidity. A previous study using Ontario-based data (ICES) demonstrated that bladder cancer patients had an increased risk of suicidal death compared to non-cancer patients after matching for confounding variables.[4] The objective of this study is to examine the incidence of suicide deaths amongst patients diagnosed with (urological) malignancy across Canada and investigate the socio-demographic and health-related predictors of suicide in this cohort. Specifically, we would like to investigate if the stage of cancer, and type of cancer were predictors of suicidal death.

Methods:
We conducted a population-based retrospective cohort study using administrative data from Statistics Canada: the 2016 Canadian Census Health and Environment Cohort (CanCHEC). Our primary outcome of interest is suicidal death. Secondary outcomes include trend of suicidal deaths over time, early suicidal death (<2 years of diagnosis) vs late suicidal death (>2 years of diagnosis), age groups and sex.

Results:
Results will be presented at the JK Residents Research Day on 11th April (analysis currently ongoing)

DOES DISTANCE FROM TREATING TERTIARY CARE HOSPITAL IMPACT POST-OPERATIVE ANXIETY IN CAREGIVERS OF PEDIATRIC SURGICAL PATIENTS: A PROSPECTIVE COHORT STUDY TO ASSESS QUANTITATIVE AND QUALITATIVE OUTCOMES

Leandra Stringer, Peter Wang, J. Davidson, T. Rizvi, Sumit Dave

Background:
A surgical procedure on a child is a stressful experience for caregivers. Studies have shown that lack of preoperative counseling, length of procedure and degree of pain are the key factors associated with parental anxiety. Distance from treating hospital can impact follow up adherence. To date, there are no studies assessing the impact of distance from tertiary hospital on parental anxiety and complication rates.

Methods:
Participants (caregivers/SDMs of pediatric urology patients) were recruited from the pediatric urology clinics at Children's Hospital, LHSC. A REDCap survey collecting demographic information, average time to travel to hospital, post operative complications, satisfaction, open ended questions about their procedure and anxiety (including the State Trait Anxiety Inventory) was distributed.

A descriptive analysis was performed and we compared those living <2hours from LHSC to those >2hours. A logistical regression was performed to assess if distance form hospital is an independent risk factor for anxiety when adjusted for age, caregiver status, education and occupation. Statistical significance was determined based on p-values of <.05.

Results:
Eighteen patients have been enrolled thus far. The median age is 3 years old. Distance from hospital in our current population ranged from 20 to 75 minutes. Operative procedures were all inguinal and genital surgery performed as day surgery. Parents from closer to LHSC (20 minutes) rated their anxiety regarding post operative pain and complications higher than those living further away (45 minutes).

Discussion:
Overall, parental and caregiver anxiety around the time of pediatric surgery is normal and expected. Our data from this sample identifies that distance from hospital is not necessarily associated with parental anxiety for concerns such as pain and complications. Currently, our sample size is still small. We believe our results will be more applicable as we gather more participants, and those that live further from LHSC.

ELECTRICAL STIMULATION FOR MALE STRESS URINARY INCONTINENCE: A SYSTEMATIC REVIEW

Haider Abed, Blayne Welk

Introduction:
Extracorporeal magnetic stimulation (EMS) is effective for urinary incontinence (UI) in women; however, its use in men has not been well studied. Our objective was to conduct a systematic review to understand the evidence supporting EMS in the treatment of men with urinary incontinence.

Methods:
A systematic review was performed using MEDLINE, CINAHL, and PEDro databases. Studies examining the use of EMS, either in in isolation, or compared to other treatments, in adult men with UI were included. Two independent reviewers screened the articles. Double data extraction was performed to ensure accuracy. A qualitative analysis of the data was performed.

Results:
A total of 280 studies were screened, and 9 were included. Across all studies, 181 men were treated with EMS. Eight of nine studies investigated the use of EMS following prostatectomy. There were four randomised controlled trials (RCT) identified, all of low-moderate quality, and with small sample sizes (n=16-36); in these RCTs EMS resulted in earlier continence compared to traditional pelvic floor muscle therapy (PFMT) and was superior to sham treatment. Only one of the studies (n=10 men) included urodynamic measures, which showed significant increases in maximum cystometric capacity (56.8%), and Valsalva leak point pressure (44.2%) following a 2-month course of EMS. In another study in men post prostatectomy (n=56), EMS reduced 24-hour pad usage by 48% with persistent reductions at 12.5 months following the initial treatment. Four studies showed that EMS can improve lower urinary tract symptoms and UI quicker than PFMT.

Conclusions:
The literature supporting the use of EMS to treat men with UI is limited, however results are generally positive. Long-term results seem similar to PFMT; however, EMS may result in a quicker return to continence. Larger prospective studies are necessary.

DEVELOPMENT OF A NOVEL IMAGING-BASED SURGICAL COMPLEXITY SCOREFOR RADICAL CYSTECTOMY

Jonathan Izawa, **Aurinjoy Gupta**

Purpose:
Evaluation systems have been developed for renal masses to determine feasibility and safety of partial nephrectomy, such as the RENAL score, PADUA score, and simplified PADUA system. A similar evaluation system does not exist for radical cystectomy (RC), despite open radical cystectomy being a challenging surgery significantly influenced by patient anatomy. Our study aims to use imaging and patient factors to develop a scoring system for radical cystectomy, to identify cases prone to challenging patient anatomy.

Methods:
We will include adult male and female patients who underwent RC for bladder cancer at Western University. Our primary endpoints will include operative time (normalized as ratio to surgeon's average operative time), intraoperative blood transfusion, intraoperative complications (bowel, vascular or nerve injury), postoperative complications (Clavien-Dindo grade III or higher) within 30-days of RC.

Results:
A total of 427 patients underwent RC within the study period. The mean operative time was 267 minutes and the average age at time of cystectomy was 68 years.

Our dataset will be randomly partitioned into a training set and a testing set. A predictive model will be created using multivariate logistic regression on our training dataset. We will perform final evaluation of the model on the test set to demonstrate the utility of our scoring system. The quality of the scoring system will be measured against our testing dataset using receiver operating characteristic curves.

Conclusion:
An imaging-based evaluation system for RC has not yet been developed. We aim to develop such a metric to mirror the numerous scoring systems used to evaluate surgical complexity for partial nephrectomy. We plan to use the Western University cystectomy database to develop this. Ethics approval has been received and data analysis is underway.

UTILIZING PREDICTIVE ANALYTICS TO UNDERSTAND VARIATIONS IN NEUROGENIC BLADDER SYMPTOM SCORE (NBSS) QUALITY OF LIFE SATISFACTION SCORES IN ADULTS WITH ACQUIRED SPINAL CORD INJURY

Mehran NejadMansouri, Blayne Welk

Purpose:
Individuals with spinal cord injury (SCI) experience varying bladder health trajectories, resulting in a continuum of satisfaction with bladder function. We explored whether a predictive machine learning model could identify the determinants associated with patient-reported quality of life.

Methods:
Using the Neurogenic Bladder Research Group SCI registry, we evaluated 226 variables in a Decision Tree analysis. A cross-validated exhaustive Chi-Squared Automatic Interaction Detection (eCHAID) technique was used as the tree-growing mechanism. The primary outcomes were baseline NBSS satisfaction score (ranging from 0=pleased to 4=unhappy) and relative change in NBSS satisfaction score at 1-year follow up when compared to baseline.

Results:
Among the 1451 participants, baseline NBSS satisfaction score was nearly evenly distributed, with 33% reporting negative satisfaction, 32% reporting positive satisfaction, and 35% reporting mixed satisfaction with their bladder function. Satisfaction scores improved with time since injury, with negative reported satisfaction declining from 51% in patients within 4 years of injury to 40% at 4–8.2 years, 31% at 8.2–14.8 years, and 21% at 14.8+ years (p<0.01). Our decision tree observed that patients with no urinary tract infections (UTIs) who had surpassed 25 years since injury reported the highest proportion of positive satisfaction scores at 70% (node 21, Figure 1). Conversely, patients within 4 years of injury who performed >5 daily clean intermittent catheterizations (CICs) had a 65% likelihood of reporting negative satisfaction scores (node 6, Figure 1). Across the tree groups, prior genitourinary surgery was observed to predict more positive satisfaction scores in two groups: (1) patients with <4 UTIs per year who were 4–8.2 years post-injury (39% vs. 18% compared to those without surgery, p<0.01), and (2) patients with chronic pain issues who were 8.2–14.8 years post-injury (39% vs. 20%, p<0.01). Abstinence from alcohol in patients with longstanding injuries (>14.8 years) who experienced 1-3 UTIs per year also demonstrated a higher proportion of positive satisfaction scores when compared to those who consumed alcohol (62% vs 43%, p<0.01). In contrast, females within 4 years of injury who performed CICs between 0-5 times per day tended to report more negative satisfaction scores compared to their male counterparts (53% vs 39%, p<0.01). For those with longstanding injuries and >4 UTIs per year, paraplegia was also associated with a higher likelihood of negative satisfaction scores when compared to quadriplegia or injuries below L3 combined (48% vs 27%, p<0.05). Our second decision tree evaluated changes in NBSS satisfaction at 1-year follow up. Overall, 30% of patients reported improved satisfaction, while 20% reported a decline in their satisfaction scores. The median change in satisfaction score was 0 (IQR -1 to 0). Patients who were 'mostly unsatisfied' at baseline had the highest likelihood of improvement (48%). Among them, non-smokers on medications accounted for 60% of the reported improvements.

Conclusion:
These decision trees help predict bladder satisfaction in people with SCI by elucidating the complex interplay of patient and disease characteristics. However, the predictive capacity for forecasting future satisfaction changes from these models remains limited.
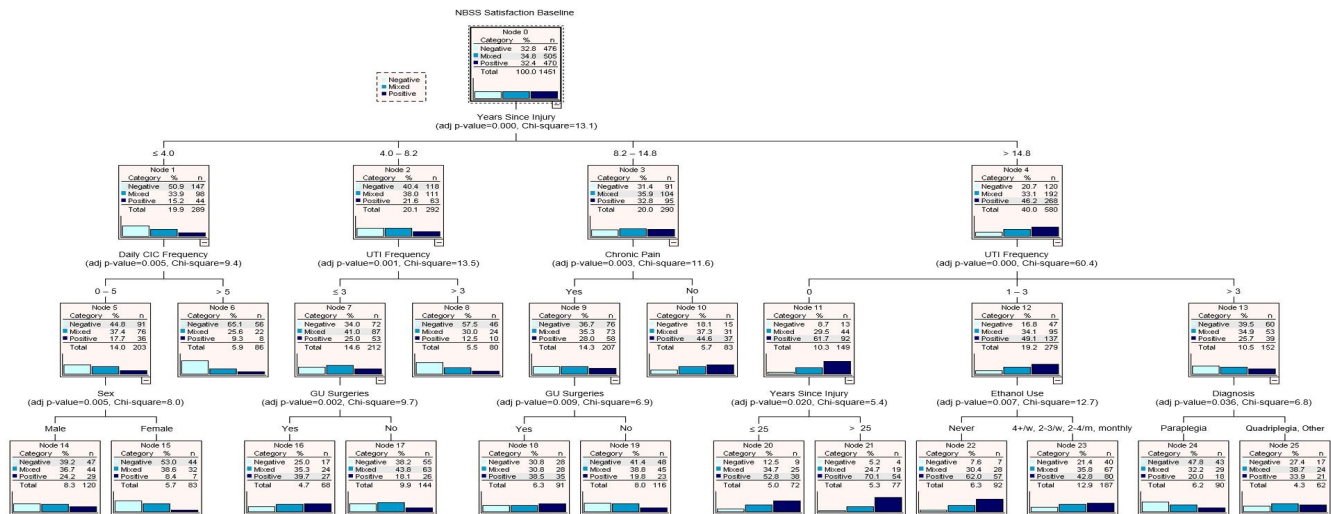
Figure 1. Decision tree model of baseline NBSS satisfaction scores with positive category representing the individuals who rated their satisfaction as pleased/mostly satisfied, and negative category representing the individuals who rated their satisfaction as unhappy/mostly unsatisfied. Node values are represented as n, and a relative percentage of each
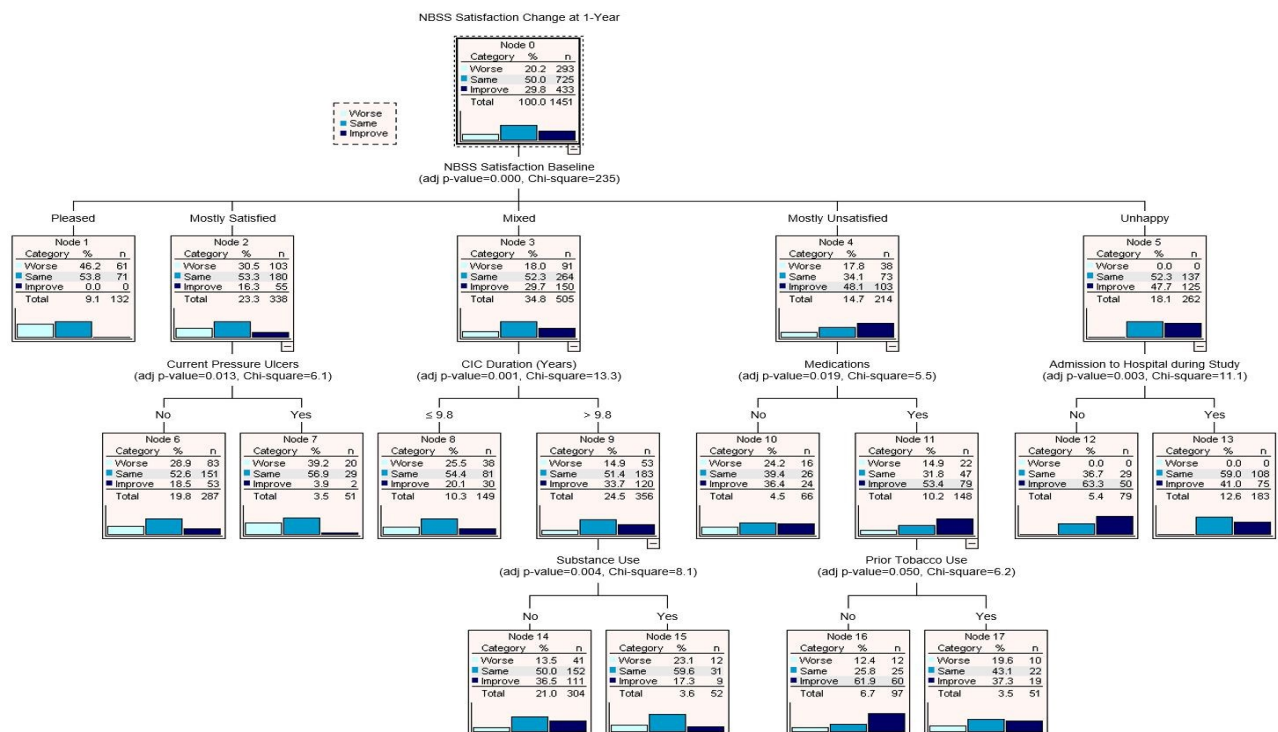

Figure 2. Decision tree model of the relative change in NBSS satisfaction score at 1-year follow-up when compared to baseline levels. The improve category represents a positive change in satisfaction score (lower Likert grading). Node values are represented as n, and a relative percentage of each category's performance within each node.

OUTCOMES OF PROSTATIC ARTERY EMBOLIZATION FOR LOWER URINARY TRACT SYMPTOMS IN BPH PATIENTS

Roseanne Ferreira, Leandro Cardarelli Leite, Derek Cool, Jeffrey Campbell

Introduction:
Prostatic artery embolization (PAE) is a minimally invasive alternative to surgery for benign prostate hyperplasia (BPH); however, its long-term effectiveness in symptom durability, sexual function, and safety remains unclear. We conducted a systematic review of prospective studies evaluating long-term outcomes of PAE vs. standard transurethral surgical procedures.

Methods:
A comprehensive literature search was conducted using Medline, Embase, Cochrane Library, and Scopus. Two independent reviewers screened studies, extracted data, and included prospective studies with ≥1-year follow-up comparing PAE vs. standard transurethral surgical procedures. Outcomes assessed included International Prostate Symptom Score (IPSS), peak urinary flow rate (Qmax), quality of life (QoL), sexual function (IIEF-5), and safety outcomes. Statistical analysis was performed using a random-effects model, and certainty of evidence was rated using GRADE methodology.

Results:
In total, 1058 papers were screened and 7 included, incorporating 2 prospective non-randomized studies and 5 randomized controlled trials, totaling 696 patients (PAE: 426, TURP: 255, HoLEP:15). At 12 months, all procedures led to significant improvements in IPSS and QoL.

Holmium laser enucleation of the prostate (HoLEP) showed superior early Qmax improvement at 3 months (+12.8 vs. +6.7, p=0.02), while Transurethral resection of the prostate (TURP) maintained superior urinary flow at 5 years (Qmax MD -4.80, 95% CI -9.07 to -0.53, p=0.03). PAE and HoLEP provided comparable symptom relief at 1 year (IPSS: -17 vs. -15, p=0.16; QoL: -3 vs. -3, p=0.54), with PAE better preserving erectile function (IIEF-5: +5 vs. 0, p=0.14). At 24 months, no significant difference was found in IPSS or QoL, though TURP showed a trend toward better Qmax improvement. At 60 months, TURP provided more sustained symptom relief (IPSS MD 4.69, 95% CI 1.20 to 8.18, p=0.009), while PAE continued to preserve erectile function more effectively (IIEF-5 MD 6.20, 95% CI 1.53 to 10.87, p=0.009). QoL remained comparable between groups (MD 0.31, 95% CI -0.34 to 0.96, p=0.35)

Conclusion:
PAE, HoLEP and TURP provide similar symptom relief in the short and moderate term, with no significant difference in QoL at 5 years for PAE vs TURP. TURP offers superior long-term symptom control and urinary flow improvements, while PAE better preserves erectile function. These findings support PAE as a viable alternative for patients prioritizing minimally invasive treatment and sexual function preservation.

QUALITY OF LIFE ASSESSMENT CYSTINURIA RECURRENT STONE FORMS

Tariq Alotaibi, Jennifer Bjazevic, Hassan Razvi

Introduction:
Cystinuria is a autosomal recessive genetic disease that leads to failure of reabsorption of essential amino acids cystine, orthionine, lysine, arginine in the proximal renal tubule and epithelial cell of the gastrointestinal tract[1,2]. Due to the failure of reabsorption of these dibasic amino acids in the proximal tubule, cystine amino acids will crystalize when supersaturation of the urine occurs, leading to stone formation[1]. This chronic disease leads to recurrent stone formation within the urinary tract and accounts for 1% of adult urolithiasis and 7% of urolithiasis occurring in the pediatric population. In our study we will look at if metabolic parameters, including 24-hour urine collection and serum blood work up affect the quality of life in cystine stone formers.

Methods:
We identified a total of 24 patients diagnosed to have cystinuria through stone analysis. Inclusion criteria for our study included patients aged 18 years or older and diagnosed to have cystinuria through confirmed stone analysis. We contacted the patients via mail with an introduction letter and the Wisconsin quality of life questionnaire, asking for their participation, a spearman test was done to assess for any correlation between the overall quality of life score and each subdomain and full metabolic work up. Using u-mann-whitney test, we tried to assess for any correlation between medications used including potassium citrate and penicillamine D and if this affected their quality of life. A P-value of < .05 was statistically significant.

Results:
A total of 23 patients were enrolled in our study with 100% return back rate for the WISQoL questionnaire. Both genders were evenly distributed, 47.8% (11) were male and 52.2% (12) were females. Spearman correlation test revealed no correlation between total Qol or its domains with any of the parameters (p>0.05) except for serum calcium and domain 1 (social function) p=.024 (weak correlation r=-.54). U-Mann-Whitney test was done to assess for any correlation between WISQoL total scores and each of its sub domains against cohorts taking/not taking penicillamine D and cohorts taking/not taking potassium citrate also comparing cystine patients with stones vs. without stones. There was no statistical significance between either cohorts but it did show individuals on these aforementioned medications had a worse off quality of life in total WISQoL scores and each of its subdomains

Conclusion:
Patients suffering from cystinuria suffer from recurrent stones leading to and overall poor quality of life. In our study, our cohort have a worse off quality of life compared to other patients suffering from recurrent stone disease. We proved in our study that overall, for the most part, metabolic parameters seem to not affect the overall quality of life in cystine stone formers.

PAST RESIDENTS' DAY GUEST PROFESSORS
1985 – 2023

2024	Dr. Pramod Reddy	2004	Dr. Anthony Atala
2023	Dr. Stacey Loeb	2003	Dr. Peter T. Scardino
2022	Dr. Andrew Hung	2002	Dr. Inderbir Gill
2021	Dr. Robert Uzzo	2001	Dr. Shlomo Raz
2020	no guest professor (Covid-19)	2000	Dr. Donald Lamm
2019	Dr. Douglas A. Husmann	1999	CUA in London, no Residents' Day
2018	Dr. Bernie H. Bochner	1998	Dr. Patrick Walsh
2017	Dr. Arthur L. Burnett	1997	Dr. Joseph Oesterling
2016	Dr. Philipp Dahm	1996	Dr. Michael Marberger
2015	Dr. E. Ann Gormley	1995	Dr. E. Darracott Vaughan
2014	Dr. Joel B. Nelson	1994	Dr. Martin Resnick
2013	Dr. Stephen Nakada	1993	Dr. Andrew Novick
2012	Dr. Lawrence Klotz	1992	Dr. Howard Winfield
2011	Dr. Gerald Andriole	1991	Dr. Moneer Hanna
2010	Dr. John Michael Fitzpatrick	1990	Dr. Drogo Montague
2009	Dr. Antoine Khoury	1989	Dr. Ralph Clayman
2008	Dr. Margaret Pearle	1988	Dr. Gerald Sufrin
2007	Dr. Martin Gleave	1987	Dr. Alvaro Morales
2006	Dr. Leonard Zinman	1986	Dr. J. Edson Pontes
2005	Dr. Joseph A. Smith Jr.	1985	Dr. Alan Perlmutter

Western University
Jack Wyatt Urology Residents' Research Day